



Smartphone Usage Among Millennial in Finland and Implications for Marketing Segmentation Strategies: Lessons for Nigeria

Sunday Adewale Olaleye^{1(✉)}, Ismaila Temitayo Sanusi²,
Dandison C. Ukpabi³, and Oladapo Aina⁴

¹ Marketing, Management and International Business,
University of Oulu, Oulu, Finland
sunday.olaleye@oulu.fi

² Philosophical Faculty, University of Eastern Finland, Joensuu, Finland
ismails@uef.fi

³ Digital Marketing and Communication Research Group,
University of Jyväskylä, Jyväskylä, Finland
dandison.c.ukpabi@jyu.fi

⁴ Kingfisher Plc, Chandler's Ford, Eastleigh, UK
oladapo@aina.me

Abstract. The study examines smart phone usage by millennial based on different criteria of operating system, Wi-Fi, text messaging, internet surfing and social media. The study used quantitative methodology and data were gathered with online questionnaires with 391 young smartphone users in Finland. The Millennial were clustered into five levels. The results reveal the prominent status of profiling in a developed market and how marketers in emerging markets can apply segmentation and targeting strategies using instant messaging, text messages, email, mobile app, gamification and social media based on the profile of each segment. Nigerian policy makers should adopt a framework to make smartphone affordable for people as it constitutes a goldmine for marketing professionals on their segmentation and targeting strategies.

Keywords: Smartphone · Millennial · Social media · Segmentation Targeting

1 Introduction

Mobile technologies are gaining rapid increase globally. These technologies such as computers and mobile telephones have revolutionized communication and by extension interpersonal relationship hence influencing intimacy and the closeness that exist between people [1]. Mobile device usage is more relevant in all aspects of our daily lives, especially with significant impact in the business sector. As mobile phones get more and more popular, their capabilities increase as they are no more simple voice centric handsets; they rather provide mobile computing power that can be used for several purposes [2]. Smartphones especially as stressed by the authors, represent a possibility of moving appropriate applications from the PC to mobile devices, as they mostly provide large bandwidth wireless network access, office tools, and the

possibility of installing third party programs. According to [3], smartphones with multi-touch screens have been widely adopted all over the world and become one of the fastest spreading technologies of mankind since the introduction of the first ever iPhone in 2007 [4]. Reference [5] pointed out in a graph showing smartphone penetration by age where only 62% of young people between the age 18–24 have smartphones and 66% of young people (25–34) have smartphone out of the 48% of mobile subscribers in USA using smartphone as at the time. This shows high rate of smartphone usage by young people in the US.

The primary objective of this study is to examine the degree of smartphones usage by the young people with focus on Finland. To get the clear picture of this objective, the study explores the nature of smartphone, motivating factors for its frequent usage, its benefits and limitation to the youth. Characteristics of the young people that affect the usage of smartphone positively or negatively were also discussed. The effective use of smartphone is determined by the features and functions of available applications on the phone which are already in use or proposed to use. The types of smartphone used, the operating systems, the number of applications installed and the frequent of usage are also examined. Additionally, this study shows the rapid usage of smartphone among the young people and its implication on other sectors like smartphone manufacturers, network operators and the advertisers. Online survey in form of questionnaire is conducted to the young people within the age bracket 16 to 30 to determine the extent of degree the young people use their smartphones. The survey takes place to know the young people motivation towards smartphone usage. As the youth typify the frequent usage of the smartphone, the questionnaire was administered to different young people in different location to assess the extent of their smartphone usage. Finally, this research resulted into pertinent findings and provides astute recommendations on smartphone usage by the young people. To accomplish the researchers' objective for this study, a research question was formulated as to what degree do young people use their smartphone?

2 Literature Review

2.1 Theory of Segmentation and Targeting

Overtime, marketing theorists have posited a given market as constituting consumers with varying demand patterns, lifestyles, needs, values, motivations and interests [6, 7]. Thus, marketing segmentation is defined as the process of dividing homogenous market into groups to understand their product and service preferences and then developing the right marketing mix such as product, pricing, delivery channel and promotional strategies for those segments [8]. According to [8], segmentation criteria could be geographic, demographic, psychographic and behavioural. Scholars have also argued that a condition for effective segmentation implies that the segment must be measurable, accessible, sustainable, profitable and actionable [6]. Similarly, targeting has been defined as the concentration of the marketing mix elements into selected segments that matches the marketers' offerings [7]. With the emergence and diffusion of the information and communication technology (ICT), scholars have adopted different

segmentation and targeting strategies to effectively reach users. In evaluating the users of mobile phones in Finland, [9] attitudinally segmented the Finnish mobile phone market into conservatives, medium and innovatives with female users dominating in the conservatives and medium segments. Majority of pensioners were also in the conservatives segment while those possessing smartphones dominated in the innovative segment. Additionally, [10] using a latent class analysis for measuring smartphone usage reported that major segments such as traditionalists, career-makers, socially concerned and Yuppies exhibited different behavioural typologies in their use of smartphones.

2.2 Smartphone and Young People

For young people, they can go to any extent to secure a smartphone even when their budget is tight. Remarkably, this group whose income is also lower than the older ones own the greatest volume in the smartphone market [10]. The research conducted by [11] further supports the claim that more young people own a smartphone compared to adults. It was also noted in their research that more teens are highly addicted to their smartphones. This addiction has led them ignoring or participating less in other activities such as watching TV and reading books. Reference [12] used Emily Hooley as an example of an addicted smartphone user. Emily once recalled an event which she narrated by saying, “We went to Wales for a week at half term to revise. There was no mobile, no TV, no broadband. We had to drive into town just to get a signal. It was hard, knowing people were texting you, writing on your Wall, and you couldn’t respond. Loads of my friends said they’d just never do that.” Young people in the age bracket of consideration love to talk together among their peers and most particularly to share their daily experience through call, text messages and mobile chat. Communication is a strong affinity among the youth and since smartphone has multiples features and functions, many youths can do anything to buy a smartphone so that they can fit in to their youthful status. Ariel Young, a 20 years old biology student from George Washington University participated in [13] survey and confirmed that she exchanged a text messages with her peers for about 75 times in a day. Reference [14] observed that gender play a dominant role in smartphone usage as he pointed out that girl’s converse more than the boys but [15] believed that young males are getting Smartphone’s than the young females and based his result on “53% as against 47%”. The youthful age is a point of developing emotion and love for the opposite sex, both boys and girls seize this opportunity for familiarity and to fulfil their love desire. They are trying to shift their attention from physical contact relationship to online mobile love. Reference [16] opined that above 70% of the young people use their smartphone to take decision.

Another important factor that makes the youth the focus of smartphone is its ubiquity. Youth do not need to make a trip before they make a call, send text messages or chat with their peers. Reference [17] observed that smartphone usage among the young people in Scotland is diminishing their interest in obtaining driver’s license and to make use of taxi services since smartphone is helping them to reach their friends at distance. It was further noticed by [18] that “young people off cars” is a contributory factor to high insurance and fuel costs in Scotland. Reference [15] discovered that youthful age is a period that the youth desire independence and freedom from parental

control. Some of them prefer to communicate with their parents at distance with a smartphone, therefore avoiding having a physical contact with their parents and the author concluded that smartphone usage can build home or break it. Reference [19] in their study designed a mobile telephone model and group the factors that motivate the young people in using smartphone into three, they are “appropriation criteria, which emphasize social management, critical mass, lifestyle organizer, leisure, security and contact.” The authors opined that these factors are appropriate to the young when considering the usage of smartphone because they love to manage their social life, they want to organize their lifestyle, and they want to use the phone for their pastime. They also want to use it for safety by using the mobile application for tracking messages and goods. Reference [19] also talk about “disadvantage criteria which entails usage costs, health, reception, usability and ease of learning.” The authors mentioned these factors as the negative criteria that can discourage the young people to maximize the usage of smartphone. Though smartphone is nice and have multiple functions but it cost a lot at the end of the month when the bill rolls in, most especially if it is contractual. It was also argued by [20] that smartphone applications cause a lot of distraction for the young people while driving. It was observed that the young people are fascinated with smartphone applications and thus making using of it on the wheel (Fig. 1).

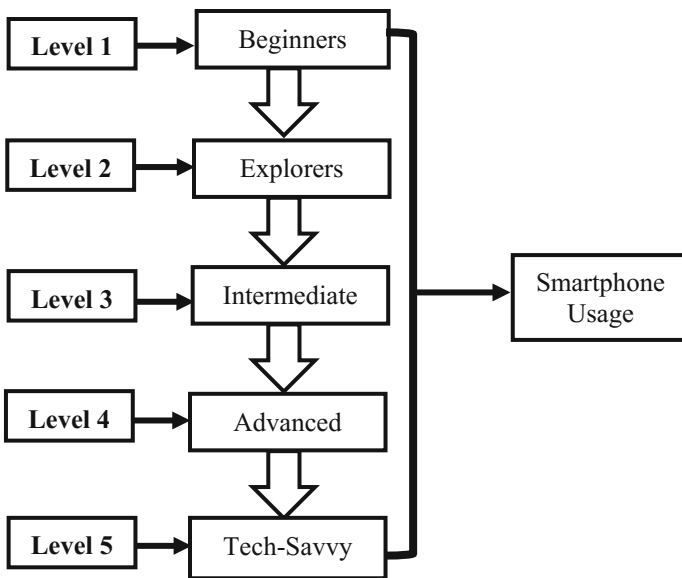


Fig. 1. Smartphone usage segmentation

The youth are prompt to learning new things, but if the design of the smartphone is too cumbersome, it may be discouraging. Smartphone usage hazard to health of its users is another point of consideration by the authors [19]. Non-appropriation is another criteria considered by [19] and it was divided into attractors and repellents.

According to the authors “purchase cost, convenience, usefulness, fashion, adaptability and familiarity are factors that determine the usage of smartphone by the young people.” In their opinion factor like cost will repel smartphone usage while convenience will attract its usage. The researchers’ assume most companies are aware that the younger generations consist of the greatest revenue booster. Reference [21], reports that HTC’s market target is divided into two, which are the young enthusiast and pragmatic business users (p. 15). With their primary focus being on the young ones between the ages of 18–34. They have chosen segment because they are the highest users and most enthusiastic about technology. While the surge of purchases of smartphones by young people seems to be good revenue for mobile vendors to make profit, this also comes with some problems. PR Newswire in 2012 reported that, a survey conducted by a car insurance company, Ingenie, indicates that 58% of people between the ages 17–25 have been distracted by their smartphone application while driving.

3 Methodology/Data Collection and Description

The study utilized descriptive-quantitative methodology based on observation and survey distributed among the millennials. Descriptive data technique concentrates in reporting mean, median, mode, central tendency, percentage, correlation and draw inferences from the descriptive statistics output. The study research questions, design and data analysis align with the descriptive-quantitative methodology and the goal of the study is to describe, explain and validate different levels of smartphone users. To find out the level of usage of smartphone by young people, a questionnaire was designed and made accessible online to young people, with various characteristics. The total number of respondents was 391, with 69.8% being male and 30.2% females. Majority of the respondents are students, they have a university education and earn less than 10,000 euros per annum. The most common data subscription is flat rate, and monthly subscriptions are usually below 10 euros. Android is the most commonly used operating system making up for approximately 33%, iOS occupying close second at approximately 32%, third is Symbian at approximately 14%. Approximately 95% of respondents would buy a smartphone over a cell phone if they were to purchase a phone today.

The most common reason for choosing their present smartphone is Wi-Fi functionality. Touch screen, camera, and possibility to install application follow closely. TV and anti-virus were the least desired functionalities. 80% of the respondents believe that a smartphone should have a Wi-Fi, 76% are in support of E-mail and good battery life, while TV with 10% and Symbian operating system with 5% take the last positions. 92.4% have downloaded software, games or other application on their smartphone, with 41% downloading only free applications, and 51.3% having both free and paid application. The respondents often use their mobile vendor’s app store to find and download applications and sources from their mobile operator being the least used. Usefulness of the smartphone is the most important feature followed by usability, while social aspect and entertainment value takes the least position. More than half of the respondents update their operating systems, and most agreed it was easy and fast to update. More time was spent on the smartphone doing something else than surfing the

internet. About 85% agreed downloading application has increased the functionality of their smartphone and would gladly recommend smartphones to others. The most used functionalities daily are text messaging, internet surfing, and social media, while gambling is the least. Music player is the highest number of device completely replaced by the smartphone, followed by navigation devices and camera. The laptop and PC are the least affected and the smartphone complements them the most. To reach the objective of this research, the collected data was examined. Based on our observation and user characteristics, five distinctive level of users were identified, with level 5 being the highest level of use and level 1 being the lowest level use of smartphones.

4 Results

4.1 Observations of Users on Each Level

The total data collected was 391, while the usable data was 390. The distributions of the correspondence into their respective level of use are shown in Fig. 2 below.

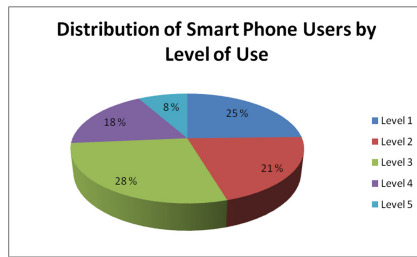


Fig. 2. Percentage of level of use from the total sample

4.2 Level 1 (Beginners) Observation

The users on this level consists of 66% male and 34% female, about half of them use a flat rate data and just about the other half do not use a flat rate data as shown in Fig. 3.

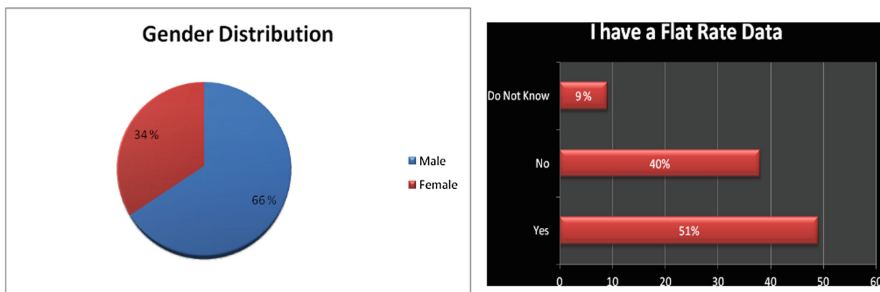


Fig. 3. Level 1 users by gender and data plan

Mainly consisting of beginners, majority of level 1 user will buy a smartphone if they have a chance to buy a phone today, as depicted in Fig. 4. The most used operating system is Android followed closely by Symbian, with Windows Mobile and Windows Phone being the least used as shown on Fig. 5.

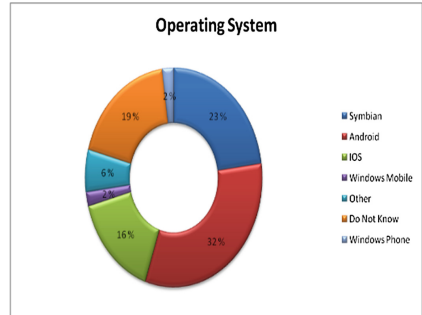
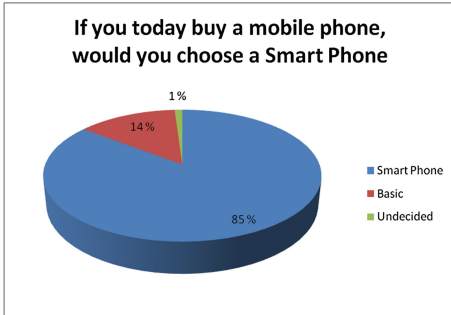


Fig. 4. Level 1 users by potential purchase of mobile phone

Fig. 5. Level 1 users by operating system

For Level 1 users, their smartphone has not replaced other devices such as Desktop, Laptop, and Game Console. Camera, however, seems to have been partially replaced for many, while navigation devices have the highest number of users who use their mobile as a complete replacement. Other comparisons are visible on Fig. 6.

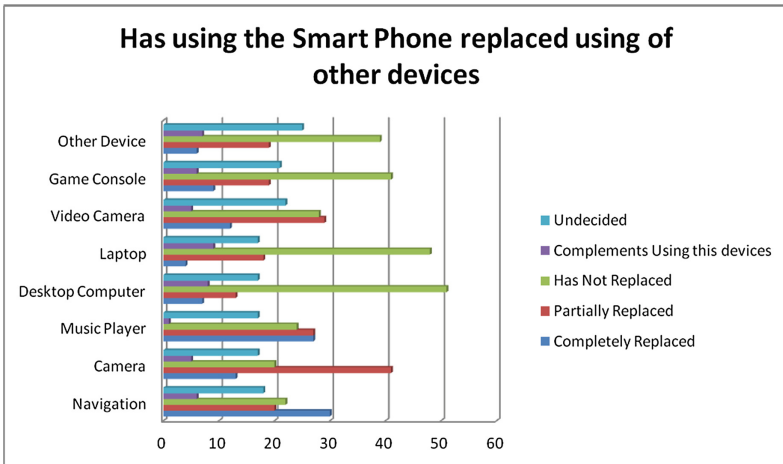


Fig. 6. Level 1 devices replaced by smartphone

4.3 Level 2 (Explorers) Observation

As illustrated on Figs. 7 and 8, these constitute explorers, with more than half of them made up of male and 61% have a flat rate data. The most used operating system is Android, followed closely by iOS and Symbian respectively, with Window Phone taking the least position at 1%. Almost all users on this level will buy a smartphone ahead of a basic phone.

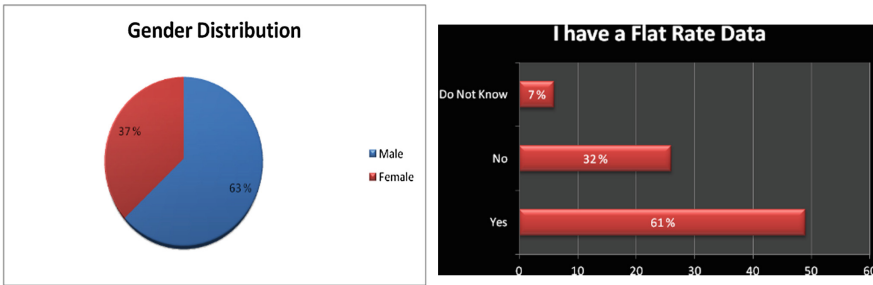


Fig. 7. Level 2 users by gender and data plan

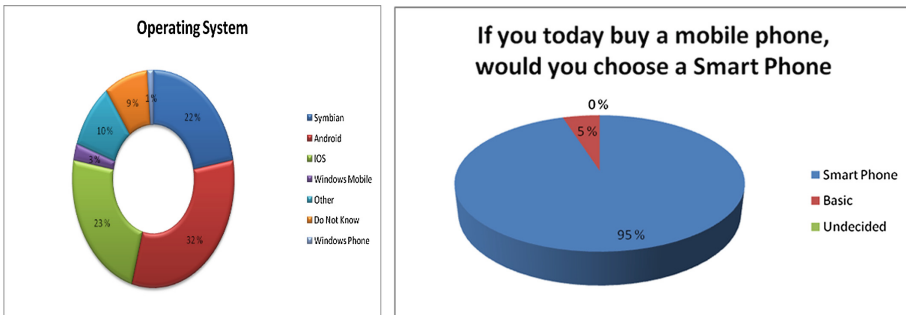


Fig. 8. Level 2 users by operating system and potential mobile phone purchase

Figure 9 shows that, for the users in this group, more than half have their Music player, video camera, navigation devices and camera either completely replaced or partially replaced by their smartphone. Game console, desktop computer, laptop, and other devices are irreplaceable by their smartphones.

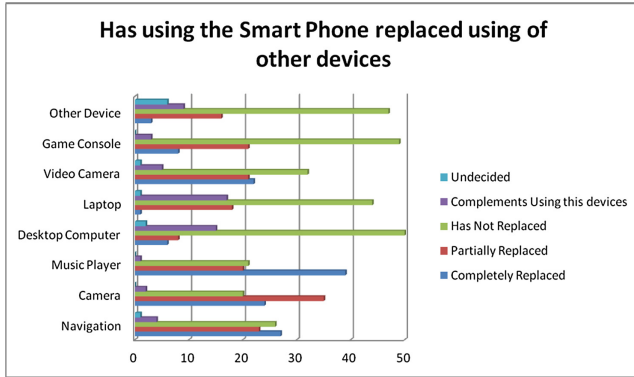


Fig. 9. Level 2 devices replaced by smartphone

4.4 Level 3 (Intermediate) Observation

About three quarter of the users in these group are male, and 79% using a flat rate data plan as illustrated on Fig. 10. From Fig. 11, as intermediate users, we found that almost all the users on this level will buy a smartphone if they are opportune to buy one today. Three quarter of these users are either using an iOS or android based operating system, with iOS having the majority share.

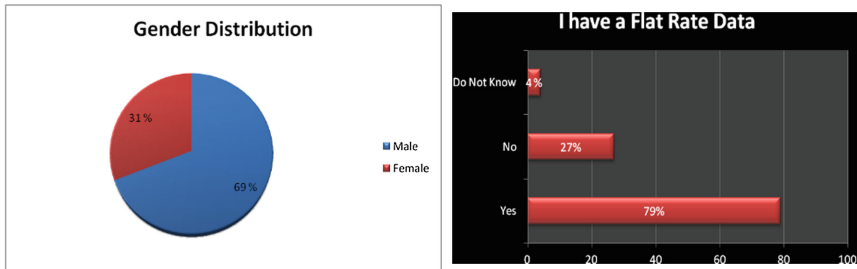


Fig. 10. Level 3 users by gender and data plan

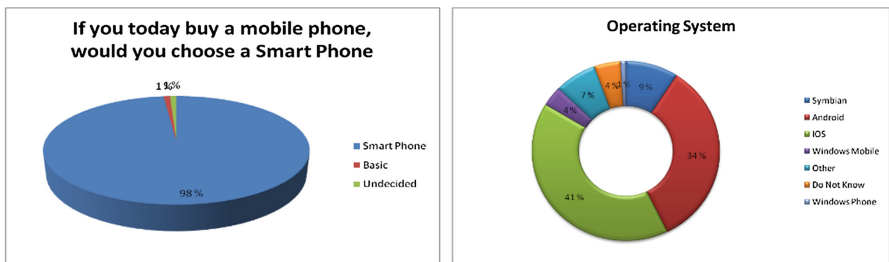


Fig. 11. Level 3 users by potential phone purchase and operating system used

A great percentage of these users have had their navigation device, camera, music player replaced by their smartphones. The sum of users who have had their laptop partially replaced by a smartphone or who see smartphone as a complement to it seem to be more than users who believe otherwise. Desktop computer remains irreplaceable with smartphone, so is the game console. The Fig. 12 below gives a more detailed overview.

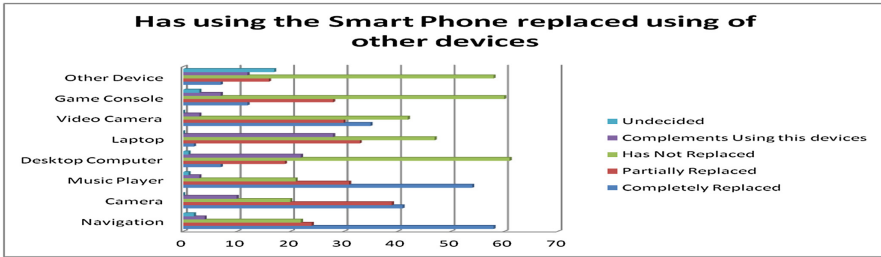


Fig. 12. Level 3 devices replaced by smartphone

4.5 Level 4 (Advanced) Observations

After analysing the data of users in level 4, the following deductions were made as shown in Figs. 13 and 14; more than three quarter of users in level 4 are male, with 80% using a flat rate data plan. Almost all respondent in this group will choose a smartphone over a basic phone, with only 1% undecided. iOS and android are the major operating system being used by this level of users.

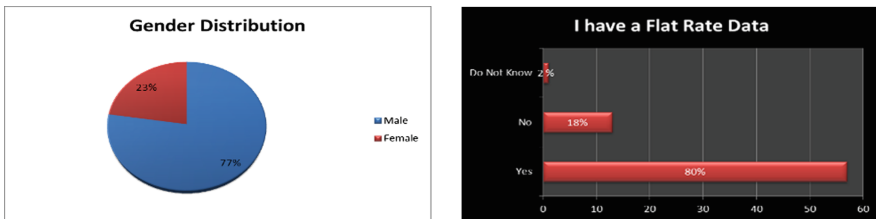


Fig. 13. Level 4 users by gender and data plan

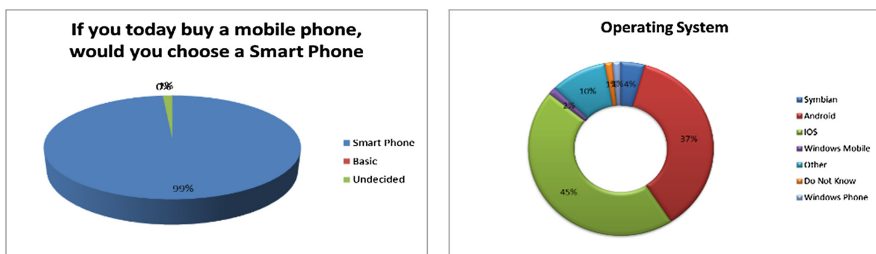


Fig. 14. Level 4 users by potential phone purchase and operating system used

Figure 15 gives us a more detailed overview of devices which are being replaced by a smartphone. At this level, navigation devices, camera, music player have almost being completely or partially replace by a smartphone. High percentage of users believe that their smartphone complements their laptop. Game console and other devices still remains highly irreplaceable.

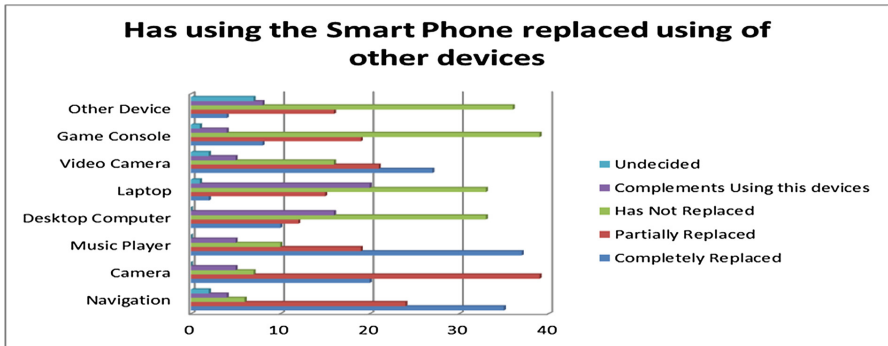


Fig. 15. Level 4 users’ devices replaced by smartphone

4.6 Level 5 (Tech-Savvy) Observations

Figure 16 indicates that level 5 users are mainly male, and most have a flat rate data plan. Almost all of them will choose a smartphone again as seen on Fig. 17, while 3% will go for a basic phone. iOS and android are still the dominant operating system, with iOS being the most used of the two.

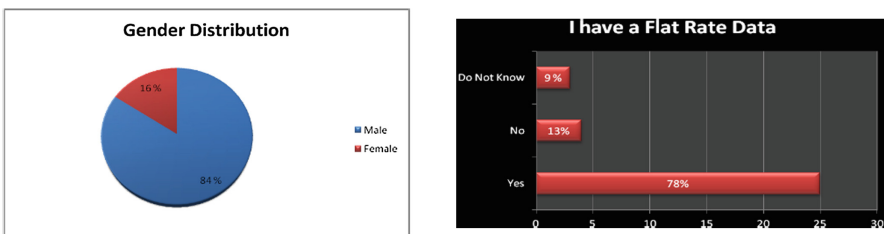


Fig. 16. Level 5 users by gender and data plan use

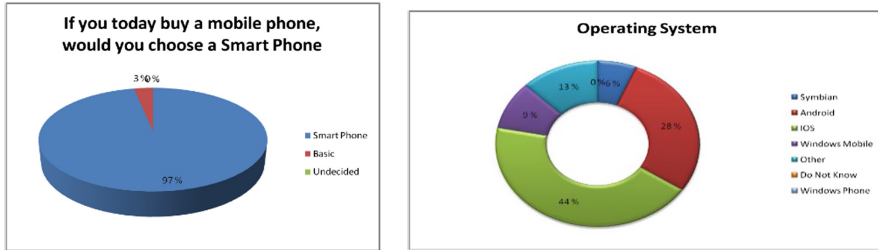


Fig. 17. Level 5 users by potential phone purchase and operating system in use

They are the most sophisticated group of users. At this level, music player seem to be the most used functionality, since it has almost being completely replaced by a smartphone. One can also observe that the summation of number of users who have their smartphone as a partial or complete replacement for all listed devices outweighs the number of users who think otherwise. Hence, majority of this users find all devices partially or completely replaceable with their smartphone. All these variables are further illustrated on Fig. 18.

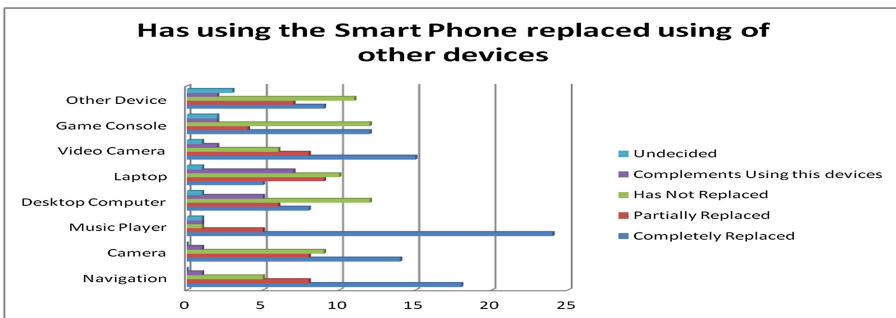


Fig. 18. Level 5 users by devices replaced by smartphone

5 Implication and Conclusion

The result reveals the prominent status of profiling in international market and how businesses can target the millennial with different promotional strategy most especially advertising through instant messaging, text messages, email, mobile app, gamification and social media based on the profile of each segment. About a quarter of young Finnish smartphone users fall into beginners (level 1), who do not use most of the advanced functions of their smartphones. The higher users who are on level 4 or 5 only consist of 26% of the total respondent. This demonstrates that most young Finnish smartphone users do not actually make use of the advanced functionality of their smartphone. Some identified reasons include choice or operating system and data plan. The smartphone operating system of Finnish youth seems to also be a determining

factor for the level of usage. We assume that the more the usage of advanced functionality, the more value-added service the operating system has provided. For instance, the use of Symbian operating system is only noticeable on the lower levels of users (level 1 and 2) and becomes obscure as we move to higher level of users. Thus, the Symbian operating system is perceived to have little value-added services. The Android operating system is noticeable in all level of usage and it remains the most used operating system in total. iOS became more visible as we progressed to higher level of users, which indicates that the operating system provides more quality value-added services compared to another operating system.

The data plan being used has also proven to be a determining factor while accessing the level of usage of smartphone. Nearly half of the least users (level 1), do not have a flat rate data and just more than half of level two users. Also, a quarter of the mid-range users at level 3, do not use a flat rate. For the high-level users, approximately 80% are on flat rate data plan. Most common advanced functionalities being used on smartphone by young Finns are navigation devices, music player, and camera. Advanced smartphone functionalities have not, however, being able to replace devices such as laptop, desktop computer and game console. The study conclude that the young Finns do not use majority of the advanced functionalities of a smartphone. To increase the level of usage of smartphone for young Finns, quality value added services should be provided on various mobile operating systems, as observed in the case of iOS. Flat rate data plan should also be encouraged, through bundling with smartphone purchase and attractive pricing regime. These findings have lots of implications for marketing planners and most importantly Nigeria as an emerging market. The user of smartphones in level 1 (beginners) can be reached with mere sending of promotional messages to their phones since basically they do not necessarily perform more than one functional activity on their smartphone, daily or weekly. For level 2 (explorers) users, business owners can target this set of millennia by sending text as well as making their brand visible online since these set of users can surf the net for information. The level 3 (intermediate) users can receive and send an email which means that these set of users can receive messages through their emails in form of newsletters and advertisement on product or services. Level 4 (advanced) users aside from the fact that they can be contacted for promotion of products and services through the means in other 3 levels, they can be engaged via downloading of games or using social media such as Twitter or Facebook where products are on display and there is an opportunity to interact and bargain. To reach the tech-savvy users (level 5), the youth can be targeted using all the strategies employed in all other levels as the users of this level perform with their smartphones what the other level users does as well. Generally, the users in every level can be contacted through text messaging with promotional messages. This profiling insight will benefit emerging market such as Nigeria.

Managerially, the businesses can target the millennial with different promotional strategies most especially advertising through instant messaging, text messages, email, mobile app, gamification and social media based on the profile of each segment. Mobile commerce merchants and vendors can create a niche market for the smartphone online shopper. The implication for the Nigerian economy is that policy makers should come up with a blueprint on how to make smartphone affordable to people especially the young people who use it for educational, social and business transactions. The

government should work on the internet connectivity tariff and lessen the burden of erratic internet connection and it became obvious through this study that smartphone will be less enjoyable without internet connectivity being a multifunctional mobile device.

5.1 Conclusion

Segmentation and targeting are critical elements of successful marketing strategy. As identified in our study, there are different levels of users of smartphone based on their knowledge and income. The type of smartphone and their functionalities determine what they use it for. Marketers with a good knowledge of these different users will apply the right marketing strategy to reach them. Our study is therefore important and extends knowledge on this research stream as it does not only identify different ways millennials use smartphone, it also profiles and segments them serving as a hands-on tool for marketing professionals.

5.2 Limitations

The study is not without limitations as the focus rest only on the millennials without considering other generation. Also, the study employs descriptive-quantitative methodology, it will be insightful if future studies could adopt the structural equation modeling as an extension of this study and compare different generations. Additionally, future studies can explore cross-market antecedents of smartphone use and how marketers can segment smartphone users for effective marketing programmes.

References

1. Elegbeleye, O.S.: Prevalent use of global system of mobile phone (GSM) for communication in Nigeria: a breakthrough in interactional enhancement or a drawback? *Nordic J. Afr. Stud.* **14**(2), 193–207 (2005)
2. Aubrey-Derrick, S., Frank, P., Florian, L., Christian, S., Seyit, C., Şahin, A.: Monitoring smartphones for anomaly detection. *Mob. Netw. Appl.* **4**(1), 92–106 (2009)
3. Michael, D.: Are Smartphones Spreading Faster than Any Technology in Human History? <http://mashable.com/2012/05/09/smart-phones-spreading-faster/>. Retrieved. Accessed 12 Feb 2013
4. Mathew, H.: Apple unveils iPhone, 9 January 2007. <http://www.macworld.com/article/1054769/iphone.html>. Accessed 31 Jan 2013
5. Nielsen, D.: Survey new U.S smartphone growth by age and income. <http://www.nielsen.com/us/en/newswire/2012/survey-new-u-s-smartphone-growth-by-ageand-income.html>. Accessed 15 Feb 2013
6. Dolnicar, S., Lazarevski, K.: Methodological reasons for the theory/practice divide in market segmentation. *J. Mark. Manag.* **25**(3–4), 357–373 (2009)
7. Quinn, L., Dibb, S.: Evaluating market-segmentation research priorities: targeting re-emancipation. *J. Mark. Manag.* **26**(13–14), 1239–1255 (2010)
8. Jones, S.C., et al.: Using market segmentation theory to select target markets for sun protection campaigns (2005)

9. Sell, A., Mezei, J., Walden, P.: An attitude-based latent class segmentation analysis of mobile phone users. *Telemat. Inform.* **31**(2), 209–219 (2014)
10. Hamka, F., et al.: Mobile customer segmentation based on smartphone measurement. *Telemat. Inform.* **31**(2), 220–227 (2014)
11. Kessler, S.: Even on \$15,000 a Year, Most Young People Buy Smartphones [STUDY]. Mashable, 20 February 2012. <http://mashable.com/2012/02/20/smartphones-young-people/>. 05 May 2012
12. Ofcom: A Nation Addicted to Smartphones. Ofcom, 4 August 2011. <http://media.ofcom.org.uk/2011/08/04/a-nation-addicted-to-smartphones/>. 05 May 2012
13. Henley, J.: Teenagers and Technology: 'I'd Rather Give up My Kidney than My Phone'. The Guardian. Guardian News and Media, 15 July 2010. <http://www.guardian.co.uk/lifeandstyle/2010/jul/16/teenagers-mobiles-facebook-social-networking>. 05 May 2012
14. Freudenheim, M.: As Smartphones Become Health Aids, Ads May Follow. *New York Times*, April 2012. http://www.nytimes.com/2012/04/02/technology/as-smartphones-become-health-aids-ads-may-follow.html?_r=1. Accessed 5 May 2012
15. Villar, E.A.: *Revista De Estudios De Juventud*. A.G. Luis Perez, Spain (2002)
16. Entner, R.: Smartphones to Overtake Feature Phones in U.S. by 2011. *Nielsenwire* (2010). <http://blog.nielsen.com/nielsenwire/consumer/smartphones-to-overtake-feature-phones-in-u-s-by-2011>. Accessed 5 May 2012
17. Dan: 77% of young people use a Smartphone to help decide what film to watch. *Digital Stats* (2012). <http://digital-stats.blogspot.com/2012/02/77-of-young-people-use-smartphone-to.html>. Accessed 5 May 2012
18. McKim, C.: Smartphones linked to decreasing number of young Scottish drivers. *Deadline* (2012). <http://www.deadlinenews.co.uk/2012/04/29/smart-phones-linked-to-decreasing-number-of-young-scots-drivers/>. Accessed 5 May 2012
19. Carroll, J., Howard, S., Peck, J., Murphy, J.: A field study of perceptions and use of mobile telephones by 16 to 22 year olds. *J. Inf. Technol. Theory Appl.* **4**(2), 49–61 (2002)
20. Cummins, D.: Smartphone Apps Creating More Distraction for Young Drivers on the Road. *Ingenie* (2012). <http://finance.yahoo.com/news/smartphone-apps-creating-more-distraction-120000091.html>. Accessed 5 May 2012
21. Kleinmann, T., Chen, X., Jaderstrom, B., Pinkerton, J., O'Neil, S.: HTC Marketing Plan, p. 15 (2012) <http://www.grin.com/en/catalog/business-economics/business-economics-marketing-corporate-communication-crm-market-research/?display=50>