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EFFECT OF MOBILE MARKETING SERVICES ON CUSTOMER'S MOBILE MARKETING ACCEPTANCE

M. Sc. THESIS

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To my family and friends

for their endless support and love.

FOREWORD

The process and execution of this thesis has been a great challenge and has been faced with many obstacles along its journey to completion. It has been both a learning and an inspiring experience. A privilege was given to learn and immerse oneself in a new and exciting area of marketing and consumer behavior, which helped get a better understanding of the personalities and desires of the people of Bosnia and Herzegovina pertaining mobile marketing and its services.

I would like to express gratitude towards my thesis supervisor Asst. Prof. Dr. Ilkay Karaduman and other academic staff that helped me throughout my research process. I would also like to give thanks to my parents Dzevad and Edina Secerbegovic, as well as Elmir and Alma Secerbegovic for their endless encouragement, belief in me, as well as their moral and material help. My thanks also goes out to Amer and Neira Delic for guiding and assisting me patiently through every step of the thesis process, as well as to all my friends for not giving up on me and helping me push through to see the end of this journey.

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ABBREVIATIONS

2G : Second Generation
3G : Third Generation
4G : Fourth Generation
5G : Fifth Generation
AIDC : Automatic Identification and Data Capture
AIPN : All-IP Network
API : Application Programming Interface
ASCII : American Standard Code for Information Interchange
CCR : Cloud Computing Resources
C-HTML : Compact Hyper Text Markup Language
CPA : Cost Per Action
CPC : Cost Per Click
CTR : Clicks Through Rate
DAWN : Dynamic Adhoc Wireless Network
DNT : Do Not Track
DoD : Department of Defense
DPI : Deal Prone Index
eCPM : Effective Cost Per Mile
EDGE : Enhanced Data GSM Environment
GPS : Global Positioning System
GPRS : General Packet Radio Service
GSM : Global System for Mobile Communication
HSPA : High Speed Packet Access
HTML : Hyper Text Markup Language
HTTP : Hyper Text Transfer Protocol
IVR : Interactive Voice Response
LBS : Location Based Services
MID : Mobile Internet Devices
MMS : Multimedia Messaging Service
MMSC : Multimedia Messaging Service Center
OTP : One-Time Passwords
P2P : Peer-to-Peer
PDA : Personal Digital Assistant
PMP : Portable Media Player
PSTN : Public Switched Telephone Network
QoS : Quality of Service
QR : Quick Response (code)
RFID : Radio Frequency Identification
SMS : Short Messaging Service
SMSC : Short Messaging Service Center
TAM : Technology Acceptance Model

TCDMA : Time Code Division Multiple Access
TCP/IP : Transmission Control Protocol/Internet Protocol
TTF : Task Technology Fit
UTAUT : Unified Theory of Acceptance and Use of Technology
W3C : World Wide Web Consortium
WAP : Wireless Application Protocol
W-CDMA : Wideband Code Division Multiple Access
WML : Wireless Markup Language
WPAN : Wireless Personal Area Network
WWWW : World Wide
XML : Extensible Markup Language

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EFFECT OF MOBILE MARKETING SERVICES ON CUSTOMER'S MOBILE MARKETING ACCEPTANCE

ABSTRACT

Marketing has been a never-ending topic of research for many years, and while throughout all these years, it might have changed its shape and form, marketing will still continue to strive and be discussed about as long as there are businesses willing to work and create things and customers and consumers willing to use their products and services. With the latest advancement of mobile devices that have become more personalized and more sophisticated in the recent years, businesses have taken a keen interest in these medium and how it can be utilized for marketing purposes. With the help of the technology advancements, and the availability of wireless Internet, Wi-Fi, GSM, Bluetooth, and many others, it opened up new paths for new mobile marketing services that are more customer centric and has thus helped shaped a new era of marketing and advertising.

This study will focus on analyzing whether mobile marketing services such as those via SMS, social media, and mobile applications, have any impact in whether individuals are more prone to accept mobile marketing or not. To get a better understanding of this, a study was conducted using Bosnia and Herzegovina as the population sample, and their demographic variables, such as gender, age, residence type, education level, and monthly income were used as the primary variables that would guide the results of the study. Bosnia and Herzegovina was used as the sample for it is a developing country with a love for technology, but lacking in terms of customer and business relationships. Marketing done by the companies in this country is seen as a form of raising awareness that a product or service exists, but is not catered towards the needs and wants of potential customers. As such, it was chosen as a country of interest and thus an online questionnaire was conducted, through which a sample population of 422 individuals and their opinions was gathered and analyzed using several statistical programs.

Keywords*:* *mobile marketing, mobile advertising, SMS, social media, mobile application, mobile technology, consumer behavior*

MOBİL PAZARLAMA HİZMETLERİNİN MÜŞTERİNİN MOBİL PAZARLAMA KABULÜNE ETKİSİ

ÖZET

Pazarlama, uzun yıllar hiç bitmeyen bir araştırma konusu olmuştur, ve tüm bu yıllar boyunca kendi şeklini ve formunu değiştirmiş olsa da pazarlama; iş yapmaya ve bir şeyler yaratmaya istekli işletmeler ve onların ürün ve hizmetlerini kullanmak isteyen müşteriler ve tüketiciler olduğu sürece hâlâ varlık göstermeye ve tartışılmaya devam edecektir. Son yıllarda daha kişiselleştirilmiş ve daha sofistike hâle gelmiş mobil cihazların son gelişmeleri ile, işletmeler bu araca ve bu aracın pazarlama amaçları için nasıl kullanılabileceklerine büyük ilgi göstermekteler. Teknoloji gelişmelerinin yardımıyla ve kablosuz İnternet, Wi-Fi, GSM, Bluetooth ve buna benzr birçok diğerlerinin mevcudiyeti sayesinde, daha çok müşteri odaklı yeni pazarlama hizmetleri için yeni yollar açıldı ve böylece yeni bir pazarlama ve reklam dönemi şekillendirilmesine yardımcı oldu.

Bu araştırma; SMS, sosyal medya ve mobil uygulamalar gibi mobil pazarlama servislerinin bireylerin mobil pazarlamayı kabul etmeye daha yatkın olup olmadıkları faktörüne etkisini analiz etmeye odaklıdır.Bu araştırmayı daha iyi anlayabilmek adına, nüfus örneği olarak Bosna-Hersek'i kullanarak bir araştırma yürütülmüştür; ve bu kitlenin cinsiyet, yaş, ikamet türü, eğitim düzeyi ve aylık gelir gibi demografik değişkenleri, çalışmanın sonuçlarına yol açacak birincil değişkenler olarak kullanılmıştır. Bosna Hersek, teknoloji sevgisine sahip ancak müşteri ve iş ilişkileri açısından eksik gelişmekte olan bir ülke olduğu için örnek olarak kullanıldı. Bu ülkedeki şirketler tarafından yapılan pazarlama, bir ürünün veya hizmetin var olduğunu fark etmenin bir biçimi olarak görülmektedir; fakat potansiyel müşterilerin ihtiyaçları ve istekleri doğrultusunda temin edilmemektedir. Bu nedenle, ilgi konusu ülke olarak Bosna Hersek seçildi; böylece internet üzerinden 422 kişiden oluşan örnek nüfus ile bir anket yapıldı, ve onların görüşleri toplanarak çeşitli istatistik programlar yardımıyla analiz edildi.

Anahtar kelimeler: *mobil pazarlama, mobil reklamcılık, SMS, sosyal medya, mobil uygulama, mobil teknoloji, tüketici davranışı*

1. INTRODUCTION

1.1 Main Purpose of the Study

As technology is developing with each year, so is its business and its connecting branches. Likewise, the devices that come out of this technology have seen a steady rise within each year of its conception, and mobile devices in particular have been popular in all areas around the world, especially after the development of smartphones and its related devices. Bosnia and Herzegovina, the country studied in this research paper, has seen a very large increase in mobile-cellular phone and smartphone users in the last decade, going from 1.4 million subscribers in 2004 to 3.44 million in 2015. As such, it is a good platform to observe and see how a small country as itself can connect its own local businesses, as well as foreign businesses, with its growing technology acceptance.

Mobile marketing is a popular and quite highly developed segment of the business industry, and has been seen to be more accepted and recognized in the developed countries compared to other traditional marketing mediums. Seeing as how the mobile industry is growing in Bosnia and Herzegovina, businesses have picked up on the trend to utilize these new devices to promote their products, services, and events in every way possible. However, as it has been seen from past marketing endeavors by many of these companies, there is only so little that they do when it comes to paying attention to what the customers want and need in these marketing campaigns, regardless on which medium they are receiving and seeing the marketing message.

This thesis aims to critically interrogate and evaluate the effect of using various mobile marketing services created by business companies in order to see how customers are willing to accept mobile marketing, and thus help guide companies in how to successfully attract and obtain customers, who will ultimately stay loyal throughout the business's life cycle. Though previous research has been carried out on the said topic,

this study will provide a deeper insight not only in how the mobile marketing services are created and implemented, but also in what ways are those mobile marketing services used by businesses. It will also analyze how effective are the companies in making sure the customers who come in contact with those marketing services perceive them as beneficial or not, and will these services have any effect on the customers' quicker acceptance of mobile marketing. The study also looks at how 'external' factors are influencing customers to shift from traditional approaches to obtain their desired product from businesses to the real-time usage of various mobile services that are offered through their personal mobile device in order to obtain the same article.

1.2 Hypothesis

The aim of this research is to explore and analyze if the effect of mobile marketing via SMS, social media, and via mobile applications marked on an individual has any significant impact on that individual's mobile marketing acceptance. Therefore, the following hypothesis were created and analyzed in this study:

H_1: The effect of mobile marketing via SMS differs according to various demographic variables on mobile marketing acceptance.

$H_{1.1}$: The effect of mobile marketing via SMS differs according to gender on mobile marketing acceptance.

$H_{1.2}$: The effect of mobile marketing via SMS differs according to age on mobile marketing acceptance.

$H_{1.3}$: The effect of mobile marketing via SMS differs according to residence type on mobile marketing acceptance.

$H_{1.4}$: The effect of mobile marketing via SMS differs according to education level on mobile marketing acceptance.

$H_{1.5}$: The effect of mobile marketing via SMS differs according to monthly income on mobile marketing acceptance.

H_2: The effect of mobile marketing via social media differs according to various demographic variables on mobile marketing acceptance.

$H_{2.1}$: The effect of mobile marketing via social media differs according to gender on mobile marketing acceptance.

$H_{2.2}$: The effect of mobile marketing via social media differs according to age on mobile marketing acceptance.

$H_{2.3}$: The effect of mobile marketing via social media differs according to residence type on mobile marketing acceptance.

$H_{2.4}$: The effect of mobile marketing via social media differs according to education level on mobile marketing acceptance.

$H_{2.5}$: The effect of mobile marketing via social media differs according to monthly income on mobile marketing acceptance.

H_3: The effect of mobile marketing via mobile applications differs according to various demographic variables on mobile marketing acceptance.

$H_{3.1}$: The effect of mobile marketing via mobile applications differs according to gender on mobile marketing acceptance.

$H_{3.2}$: The effect of mobile marketing via mobile applications differs according to age on mobile marketing acceptance.

$H_{3.3}$: The effect of mobile marketing via mobile applications differs according to residence type on mobile marketing acceptance.

$H_{3.4}$: The effect of mobile marketing via mobile applications differs according to education level on mobile marketing acceptance.

$H_{3.5}$: The effect of mobile marketing via mobile applications differs according to monthly income on mobile marketing acceptance.

2. LITERATURE REVIEW

2.1 Mobile Telephony and Commerce

2.1.1 The growth of mobile telephony and SMS

Technology and its gadgets, and mobile devices in particular, have had an increased demand for many years now in a country such as Bosnia and Herzegovina. Along with different kinds of mobile devices, such as mobile-cellular telephones and smartphones, its services have had a very lucrative and booming business. When looking at the numbers and statistics, it can be seen that in the last ten years, there has been a steady growth of mobile-cellular telephone subscriptions in Bosnia and Herzegovina, a country with a population of around 3.5 million, where it rose from 1.4 million of subscribers in 2004 to 3.4 million subscribers in 2014 (CRA, 2016). However, in the year 2015 the number of subscribers has dropped a few ten thousand, going from 3.49 million subscribers to 3.44 million, along with the number of mobile-cellular telephone subscribers per 100 inhabitants which has also dropped from 91 to 90 subscribers for every 100 inhabitants (CRA, 2016). In other words, there was an average of 0.9 mobile-cellular telephone subscriptions per person. Nonetheless, the numbers are suggestively lower compared to the years of 2009 and 2010, where the mobile-cellular telephone subscribers dropped from 3.25 million in 2009 to 3.17 million in 2010 (ITU, 2017). In addition, the number of mobile-cellular telephone subscribers for every 100 inhabitants went down from 84.53 in 2009 to 80.87 in 2010 (ITU, 2017).

According to the Eurostat (2017), the statistical office of the European Union, the number of mobile-cellular telephone users has more than doubled from 2005 to 2015 in Bosnia and Herzegovina. However, examining the data from the two neighboring countries, Serbia, for example, which has a population of about 7.098 million people, may have not doubled its numbers in obtaining more mobile-cellular telephone

subscribers, when comparing the years of 2005 and 2015, but their overall numbers of subscribers when compared to Bosnia and Herzegovina is significantly larger. While Bosnia and Herzegovina has recorded around 900 subscribers per 1000 inhabitants in 2015, which is an average of 0.9 mobile subscriptions per person, in Serbia, the number is close to 1300 subscribers per 1000 inhabitants, which is an average of 1.3 mobile subscriptions per person (Eurostat, 2017). Croatia, on the other hand, with a population of 4.224 million people, recorded a jump from 1004 subscribers per 1000 inhabitants in 2005 to 1037 mobile-cellular telephone subscribers in 2015 (Eurostat, 2017). Nevertheless, Croatia has experienced a slow but steady decline in the mobile-cellular subscribers ever since the year 2011, where with each consecutive year a drop in the number of subscribers has been documented (ITU, 2017).

Looking at the number of mobile-cellular telephone subscribers per 100 inhabitants in the world of 96 per every 100 inhabitants signifies that there is a large interest and growth in the mobile-cellular telephone sector in Bosnia and Herzegovina, despite being a country that is still in the developing stage. It is important to note that the numbers collected and presented in the report made by ITU, the United Nations specialized agency for information and communication technologies (ICT), are mobile-cellular telephone numbers given via SIM cards and not the actual mobile-cellular telephone devices. The number of users using mobile-cellular telephones primarily in developing countries, which Bosnia and Herzegovina is factually part of too, are preferring to use dual-SIM mobile-cellular telephones which practically enable two SIM cards to be installed, instead of the customary singular SIM card. Which is to say, the number of mobile-cellular telephone subscribers could be significantly lower had there been no possibility for a dual-SIM card installation. This could also explain why Croatia, one of the two neighboring countries, has seen a slow but steady decline in the mobile-cellular telephone subscriptions. Though the country by itself is seen as a slightly more developed country when compared to Bosnia and Herzegovina, as well as Serbia, the mentality of the people living there along with their culture, which is seen as a mirror reflection of the other two countries' cultures, seem to stay unchanged even after the relatively close separation of the three now independent countries. Another example of this case is the country of India, where according to TRAI (Telecom Regulatory

Authority in India) in their press release back in February of 2017, the number of mobile-cellular telephone users at the end of the year 2016, went up to 1,127 million with a population of 1,281 million. However, it is estimated that the percentage of actual mobile-cellular telephone devices compared to the SIM card owners is only around 60% of the stated number (Trai, 2017).

As with the increase of mobile-cellular telephone subscribers, there was an expected decrease in fixed telephone lines seen across all three countries. Fixed telephone lines are landline telephones which use a cable or a metal wire to for transmission, while the mobile-cellular telephones use radio waves for transmission of data. The decrease in number of fixed telephone lines is not only observed in Bosnia and Herzegovina, Croatia, and Serbia, but it has been witnessed all around the world, where in some parts the decrease in numbers is much larger, while in others it is much smaller and perhaps even slower when comparing the years. This decrease should not be seen a surprise, as the development of digital technology and the preferential use of mobile-cellular telephones makes the fixed telephones and wired devices go out of need.

Apart from these, the number of subscribers to the mobile Internet via the standard mobile-cellular telephone broadband access has been gradually increasing year by year in Bosnia and Herzegovina, as well as in Serbia and Croatia. In 2015, alone, the increase was 22.3 per cent compared to the previous year, just in Bosnia and Herzegovina (CRA, 2016).

According to the BHAS, agency for statistics in Bosnia and Herzegovina, the number of SMS (Short Message Service) messages sent out in the year of 2015 has recorded a considerable decrease of 26.0 per cent, while the MMS (Multimedia Messaging Service) messages, though unexpected, has also recorded a decrease, but by a larger margin of 37.1 per cent compared to the year of 2014 (CRA, 2016). In 2015, there were approximately 1.083 billion SMS messages sent out in the entire year, which makes about 3 million SMS messages sent out every day, or about 0.88 messages per day per mobile-cellular telephone user (CRA, 2016). On the other hand, there were approximately 1.352 million MMS messages sent out in the whole year of 2015, which adds to about 3.7 thousand MMS messages sent every day, or roughly 0.001 messages

per day per mobile-cellular telephone user (CRA, 2016). This reveals the fact that the population of Bosnia and Herzegovina has a high tendency of looking for innovative ways of communicating with their family, friends, and peers, in addition to moving away from traditional technology to a more advanced and up-to-date technology. The fact that the percentage of population coverage of 3G mobile-cellular network, according to BHAS, is 95 per cent in 2015, supports the previous statement. This is seen as a move from traditional mediums of communication amongst people and between businesses and their customers, to wireless and internet based communication mediums. However, it can be also said, that the decline of SMS and MMS message usage in the last two years is due to the fact that the businesses in the three aforementioned countries have not yet fully explored the potential of it and have therefore limited its own access to current and potential customers.

Nevertheless, the growth of mobile communication market has been proven to be attractive to marketers all around the world, as it gives them many opportunities to reach their customers either via SMS, MMS, or another form of mobile communication channel which all tend to be fast, reliable, and personalized as compared to a more traditional channel, for instance, television ads. According to Dynmark's (2016) report, the content that is sent via an SMS message, as compared to the email, has a vastly higher open and follow through rate. It reports that SMS has a 98 per cent open rate, while the email gets an open rate of around 20 to 30 per cent (Dynmark, 2016). Not only that, but the message that is sent via an SMS gets opened and looked at within three seconds starting from the moment when the customers essentially receives the SMS message on their mobile-cellular telephones (Dynmark, 2016). While these rates represent the majority of the world population, the same rates can be observed in Bosnia and Herzegovina, Croatia, and Serbia if the marketers in these countries recognize the endless possibilities that come with the usage of these channels for marketing purposes.

In Bosnia and Herzegovina, SMS, as well as MMS in certain areas, channels are considered as the only ways of mobile marketing and advertising. Though Serbia and Croatia closely follow in this view, the rest of the world has seen and used many other channels of mobile marketing such as various barcode technologies, Bluetooth, CRM,

mobile games, mobile content, location-based services, tests and quizzes, votes and polls, “write and send” campaigns, WAP-mobile Internet and many others.

With each year, the expenditure on mobile marketing and advertising has been increasing exponentially, as can be seen in the report by eMarketer (2017) that calculated a 430 per cent increase in mobile-cellular telephones and tablets ad spending in 2017, as compared to year 2013. It also estimates that in the upcoming two years, the ad spending will double, and will reach $195.55 billion spent on ads to account for around 70.1 per cent of digital ad spending (eMarketer, 2017). The year 2016 has been the first year that recorded a breach in $100 billion of mobile advertising spending, as well as accounting for more than 50 per cent on digital ad outflow alone (eMarketer, 2017). As the numbers are estimated to increase even more in the upcoming years, the total spending on other media will see a drastic decrease.

A Pure360 (2012) report on SMS marketing recounts that 32 per cent of the people who received an offer via an SMS responded to the said offer. On top of that, the digital coupons saw a redemption rate 10 times higher than traditional coupons (Pure360, 2012). Dynmark’s report also supports this statement, as it too records that 29 per cent of SMS recipients respond and click on the offer that is sent to their mobile-cellular telephones, and an additional 47 per cent makes a purchase through these SMS offers (Dynmark, 2016).

All of these services offered through mobile-cellular telephones and tablets with the use of mobile technology are primarily discussed under the concept of mobile commerce. Commerce, by itself refers to any type of transaction between the consumer and the company, while mobile marketing signifies the area of mobile commerce that deals with the transactions between the consumer and the company via mobile-cellular telephones and other mobile devices, all with a purpose of marketing, advertising, and communication between the two parties Mobile marketing takes the advantage of the personalization that comes with these devices that cannot be easily, nor maybe even fully, achieved with other traditional marketing mediums. As personalization becomes more important in a world where people can, with confidence, claim they have seen it all and become less pleased with the standard and old-fashioned way of marketing,

companies have to embrace this new approach of marketing their products and services. Seeing as mobile-cellular telephones are perceived by their owners as objects of personal nature, their effectiveness of being pervasive goes up tremendously when in use when compared to other traditional marketing mediums (Schierholz et al., 2005).

2.1.2 Electronic commerce and mobile commerce

Electronic commerce is seen as a superset where any type of transaction between a company and the consumer via an Internet-enabled electronic device is fundamentally electronic commerce, or e-commerce for short. It was developed back in the 1970s, and it is only made possible to perform the transaction if there is an Internet connection and if there is electricity given to the device in use. It includes all and any exchange of goods and services across the Internet while using an electronic device, and some of its models include business to business (B2B), business to consumer (B2C), consumer to consumer (C2C), and many others. Electronic commerce has been proven to be incredibly popular in the last decade, as its merits far outweigh the merits of traditional commerce. One such merit is the exclusion of a middleman, which helps the consumers make their own decisions on whether they will purchase a product or service or will they not purchase it, without the interference of a third person. Another merit of electronic commerce is the possibility of leaving feedback by the existing consumers, which is then made accessible to all future consumers for review. Electronic commerce also proves be more convenient, fast, safe, and simpler than other traditional forms of commerce. Mobile commerce, on the other hand, is seen as an upgraded version of electronic commerce, which uses the wireless mobile devices and the Internet to perform transactions. Mobile business, m-business, embodies the business done on mobile-cellular telephone devices and other wireless mobile devices where communication and delivery of needed information is done through the convergence of telecommunications and the Internet (Mort and Drennan, 2002). With the intervention of mobile commerce, electronic commerce has reached new heights because of its increase in accessibility, connectivity, and portability, which all exemplify the main substance of what makes cellular devices so different. According to comScore's report on mobile commerce data gathered at the end of the year 2016, mobile commerce spending on mobile-cellular telephones and tablets went up by an astonishing 45 per

cent in the fourth quarter of 2016, as compared to the same quarter in the previous year (Adam, 2017). As represented in the data collected within the comScore report, the share that mobile commerce has on total digital commerce has been going steadily up with each year, and in the last recorded quarter in 2016 it reached a share of 20.8 per cent (Adam, 2017). Mobile-cellular telephones and tablets have become increasingly important for consumers to make their purchases, as can be seen from the report in each succeeding year.

2.1.2.1 Technology behind mobile commerce

In order to make mobile commerce come to life while making sure it works properly on the designated devices as initially planned, there needs to be a combination of technologies that can make the transactions and the spread of information on mobile-cellular telephones and tablets work at high speed, while still making sure that the information that is sent through these devices is kept safe for both parties. In addition to all of this, the databases that hold all of this information need to be vast, and the networking and the embedding systems need to work at an exceptional rate. These networks, along with mobile hardware and software are what makes mobile commerce systems function. Likewise, they also help the companies and users alike transmit their data more rapidly, pinpointing their locations, and help conduct business that is seen as both safe and reliable. Keeping these devices up to date with the newest technology is of essential nature to make sure mobile commerce blossoms and grows stronger (Lim and Siau, 2003). Making broadband (high speed) connection available at all locations is the truest benefit of mobile commerce applications. A number of key technologies are discussed in the following subsections.

2.1.2.1.1 Bluetooth

Bluetooth is a low-powered radio technology standard for a short distance wireless exchange of information and data through mobile-cellular telephones, computers, tablets, and various other mobile devices. It is designed specifically to replace cables and untethered devices, and made for services that are connection-oriented.

The technology that makes Bluetooth function is used primarily in order to create a wireless personal area network (WPAN), which is also commonly referred to as ad hoc

or peer-to-peer (P2P) network (Scarfone and Padgette, 2008). Bluetooth needs its users to stay in close physical proximity in order for it to work. However, unlike infrared connectivity, which can only operate, at direct line of sight, Bluetooth does not need to do that. The best part about Bluetooth is that it is made in order to function with almost all devices from any manufacturer or brand, so it does not limit itself to specific groups of devices nor does it limit itself to a specific brand. Bluetooth identifies a software stack that helps it discover other devices around it; see what they can provide and how they can be utilized to the best of their abilities (Bray and Sturman, 2001).

Some of the key features of Bluetooth are the lack of necessity for cables, along with the ease of use, low power, convenience, reliability, cost effectiveness, and resiliency that it brings out from its use. On top of that, as it does not need cables, Bluetooth provides wireless synchronization between all Bluetooth-enabled devices, in addition to providing internet connectivity through different devices that Bluetooth helps by sharing the access between the devices.

2.1.2.1.2 GSM

Global System for Mobile Communication (GSM) is considered to be a second-generation digital network. The technology has been first developed by the European Commission on Postal and Telecommunication Administrations back in 1982 in hopes of creating a second-generation standard for digital wireless telephone technology (ECEE, 2006). After the signing of the memorandum of developing a new cellular system by 13 countries, GSM network was then first launched into the market in 1991, and quickly gained millions of subscribers the following years (Steenbruggen et al., 2013). GSM primarily dominates the Europe and Asia-Pacific regions, though it is still prevalent in Americas and other regions. It operates as a circuit-switched service where users have to dial in, that is to say, they have to use their telephone lines to access a computer system remotely, if they wish to send and transmit some communication data.

The GSM digital network in most parts of the world operates in between 900 and 1800 MHz, where information is sent form the mobile station to the base transceiver station (ECEE, 2006; Lim and Siau, 2003). United States of America, Canada, along with many other countries from the Americas have GSM that operates in between 850 and 1900 MHz (ECEE, 2006; Lim and Siau, 2003). Nevertheless, providers most frequently

operate either in one or both frequency ranges, regardless of their location. However, according to Ovum's report, the number of 2G digital network users was already seeing a declining path, as it recorded in 2015 a drop of 10% in GSM subscribers as compared to other mobile commerce technologies, where they have all experienced a rise in numbers (McCormick, 2016). Though, GSM was still leading way ahead of the other technologies with its 3.7 billion subscribers, the other technologies, especially third and fourth generation digital network were quickly catching up to that number (McCormick, 2016).

The constantly changing and declining numbers suggest that the 2G technology is slowing fading away, and it is being replaced by third and fourth generation digital networks, and the new, fifth, generation is rolling in to, which does little to help GSM network survive in this competitive environment. United States' AT&T telecommunications carrier has successfully shut down its GSM network back in January 1, 2017 (AT&T, 2016), along with Telstra, the Australian telecommunications carrier, who also shut down its 2G digital network around the same time. They both cited the reason behind the shutdown was in order to free up the spectrum for the newer digital networks to be placed into business, as both carriers experienced steep declining numbers in users using 2G digital networks (Wright, 2014).

Another Australian telecommunications carrier, Optus, also managed to successfully switch off their 2G digital network in April of 2017 (Pacey, 2017), along with all three Singaporean telecommunication carriers, M1, Singtel, and StarHub, that also switched off their GSM networks in the same month as Optus (Tanner, 2017). On the other hand, it seems that 2G will continue to strive in Europe, where the operators and carriers in the European countries are planning to keep the second-generation digital networks, but will close down the third-generation networks first, in order to make room for the other networks.

2.1.2.1.3 GPRS

General Packet Radio Service (GPRS), along with Enhanced Data GSM Environment (EDGE), is commonly known as the 2.5G technology, and it is seen as an upgraded version of the second-generation digital network. The benefit of the GPRS and EDGE that made it more appealing to the masses, is that users could switch on and switch off

whenever they wanted to use the data packages, which basically provided them with the ability to send more graphics-rich data, along with traditional services that 2G already offered, as paging, faxes, text messaging, and voicemail. GPRS users could send and receive data at the speed of up to 115 kilobits per second, while EDGE users could send and receive data at the speed of up to 384 kilobits per second (Lim and Siau, 2003). EDGE is also sometimes referred to as 2.75G and it is seen as transitional phase, along with 2.5G network, until the newer technologies and generations kicked in and became more of a norm on mobile-cellular telephones and other mobile devices all across the globe (Kennedy, 2008).

2.1.2.1.4 UMTS

UMTS stands for Universal Mobile Telecommunications Systems, also known as the third-generation digital network, and it is a standard created for GSM. As there are two schemes under UMTS, wideband CDM (W-CDMA), and time CDMA (TCDMA), both schemes' aim is to offer high bandwidth, packet-based transmission of multimedia, text, video, and voice in order to support applications that relied on heavy data (Lim and Siau, 2003). The data standard for W-CDMA is High Speed Packet Access (HSPA), which in 2015 had the highest network users of 2.1 billion, right after GSM digital network (McCormick, 2016). Time Division CDM (TD-CDMA) is also another scheme that makes use of both the time CDMA and wideband CDMA, and it is a digital network with approximately 195 million subscribers (McCormick, 2016).

2.1.2.1.5 WAP

Wireless Application Protocol (WAP) is an open and global standard set made in order to connect various wireless electronic devices to the Internet. It can be said that the Wireless Application Protocol is much like the Transmission Control Protocol/Internet Protocol (TCP/IP), but with the added radio element (Sadowski et al., 2003).

WAP was made in order to solve the problem of the mobile applications that were being developed at the time of WAP's implementation to connect to the Internet and make those devices able to communicate with other mobile devices through a wireless network (Lim and Siau, 2003). However, WAP did not attain the success as it intended to when it first got introduced to the market. While WAP was constructed in order to

replace the traditional form of communication, the voice, and make consumers use the Internet instead to communicate with other individuals as well as with their own set of electronic devices, the market did indeed shift away from voice, but it shifted towards the use of text messages, SMS (Ansari and Phillips, 2011). Short Message Service, SMS, might have offered less functionality than WAP and its Internet communication, but it was SMS that has shaped the mobile telephony industry from then on.

2.1.2.1.6 Fourth generation (4G)

With smart antenna technology and better modulation, the rise and acceptance of a new generation of digital network came to place, which was thenceforth called the fourth generation network or 4G for short. As it has been in the development stage for a long time, many people believed that the new 4G digital network would be just a linear step up from 3G, though this new generation never had plans to stick to only providing services to cellular systems (Frattasi et al., 2006). 4G's initial plan during the development stage was to provide transmission rates of up to 20 megabits per second, and at the same time accommodate various Quality of Service (QoS) features (Payaswini and Manjaiah, 2013).

The developers tried to construct a more standardized set with a heterogeneous network where users would not have to switch from one digital network to another, but rely only on one, and to do so they would solely rely on the IP. In essence, users who used 4G integrated network would be able to access any system they wished regardless of where they are located and at what time they are trying to reach it. The users using different wireless networks at the same time would have varying levels of quality of service, and yet they would seamlessly be able to use all of them through this one digital network (Hui and Yeung, 2003).

Some of the benefits of the 4G network, besides that it is an all-IP based data network, which essentially allows more data to be passed from one network to another since it allows a higher level of bandwidth, is that the speed of the data being transmitted can go up to 1000 megabits per second for high mobility (Payaswini and Manjaiah, 2013). On top of that, seamlessly moving from one coverage area to another without any interruption in any data transfers on the electronic devices, performing a handoff, as well as having a higher response rate and reducing the latency to $1/100^{th}$ of a second,

are just a few other advantages of the 4G digital network (Payaswini and Manjaiah, 2013).

2.1.2.1.7 Fifth generation (5G)

As with time moving and technology improving day by day, a new digital network is in the development and is planned to be set into the market around the year 2020. This new technology is looking at providing data bandwidth higher than 1000 megabits per second, which was the maximum bandwidth for the fourth generation. The term 5G is still not officially regarded as the name for this new digital network, but many researches and developers have adopted the term and use it loosely when referring to the development of the new digital network, as it is indeed a new digital network that will be significantly improved from the previous generations.

Currently, researches are being carried out to create and develop a World Wide Wireless Web (WWWW), as well as the Dynamic Adhoc Wireless Networks (DAWN) and the Real Wireless World in order to support this new generation that will be heavily depended on IPv6 and flat IP (Sapakal and Kadam, 2013). The new generation of digital networks will satisfy the consumers who constantly look for new developments and new features on their mobile-cellular telephones and other electronic devices, as it will be able to offer impressive data capabilities. That is to say, it will be able to transmit immense amount of data while being connected simultaneously to several wireless networks, and it will be able to provide high level and unrestricted call volume. The fifth-generation network model would utilize the all-IP network (AIPN), which is a common platform used in today's radio technologies, and with that network architecture, the AIPN will be able to support the immense amount of mobile-cellular telephone and other mobile device communication needs that is highly present in today's market (Sapakal and Kadam, 2013).

5G will mostly rely on Cloud Computing Resources (CCR) in order to provide its user with convenient on-demand network access, as it helps the users use the network without the need for installing and signing in anywhere in order to access all their information. Some of the services offered through CCR are mobile banking, mobile commerce, mobile health care, mobile government, and many others (Sapakal and Kadam, 2013).

Table 2.1: Comparison of all mobile-cellular telephone technologies through generations.

Characteristics	Generations						
	1G	**2G**	**2.5G**	**2.75G**	**3G**	**4G**	**5G**
Launch	1981	1991	1995	2003	2001	2009	2020>
Bandwidth	2 kbps	64 kbps	56-114 kbps	1 Mbps	2 Mbps	1 Gbps	>1 Gbps
Core Network	PSTN	PSTN	PSTN, Packet N/W	Packet N/W	Packet N/W	Internet	Internet
Encoding	Analog	Digital	Digital (GPRS, UMTS, CDMA 2000)	Digital (EDGE, EGPRS, IMT-SC)	Digital (CDMA 2000, 1xRTT EVDO)	WiMax LTE, Wi-Fi	WWWW
Handoff	Hard	Hard	Soft	Soft	Soft	Hard	Soft
Multiplexing	FDMA	TDMA, CDMA	CDMA	CDMA	CDMA	CDMA	CDMA
Service	Mobile telephony (voice only)	Digital voice, Higher capacity of packetized data, SMS	SMS, MMS, Push-to-talk over cellular (PoC), WAP, P2P	Caller ID, call forwarding, SMS	Digital voice, integrated high quality audio, video, and data	Dynamic information access, wearable devices	Dynamic information access, wearable devices with AI capabilities
Switching	Circuit	Circuit	Circuit, Packet	Packet	Packet	All Packet	All Packet

2.1.2.2 Information exchange technology

Other than the main digital networks that make mobile commerce systems function on the mobile-cellular telephones and other electronic devices, there are also several technologies that make the exchange of information and data possible through Internet that need to be explained in order to fully understand how mobile applications and

exchange of information through various mediums function. Considering the fact that the cellular devices are moving away from switching between circuit and packet networks onto relying solely on the Internet as their core network to satisfy their consumer's immediate needs, the technologies created for the Internet in order to exchange information and send heavy-centric data, are being developed to meet those needs.

2.1.2.2.1 HTML

Hyper-Text Markup Language (HTML) is a type of markup language that is widely used and accepted by Internet users all around the globe as a standard for website viewing and browsing the Internet. The HTML documents are transmitted and sent from one web browser to another through the Internet by using the Hypertext Transfer Protocol (HTTP). HTML uses HTML elements, which are created semantically so as to represent the direct meaning and purpose of each element. Then these HTML elements are used to create its own HTML document that is then sent to webservers who will extract all that information from the document and create a visual multimedia webpage to its users. HTML in essence is not a traditional programming language, but rather a set of tools and instructions that are sent to the web browser to instruct it on how to show and display certain content, but also it must do so in the same way on every browser available (Brooks, 2007). Henceforth, HTML is officially supported by the World Wide Web Consortium (W3C) and is utilized by all three major web browsers, Mozilla Firefox, Google Chrome, and Microsoft's Internet Explorer since its first launch into the market (Brooks, 2007).

HTML documents use ASCII text formats to create a set of tags that are linked to HTML elements that can then create an indication what kind of relation everything has in the document. However, using these ASCII text formats HTML documents lose one bit, since ASCII text uses only seven bits of each byte (Ibrahim and Razali, 2011). Nevertheless, there are ways to compress the data sent via HTML documents that help lower the amount of data that needs to be transmitted from the web server to other places. This compression is especially needed in the cases of large websites which are rely heavily on big and multitudinous components to showcase their content on the website (Ibrahim and Razali, 2011).

HTML was not always compatible to be used with mobile-cellular telephones for information exchange on various wireless domains, so a subset of HTML was created in order to fulfill the needs of users who held first generation devices (Lim and Siau, 2003). Compact Hyper Text Markup Language (C-HTML) added several new features that the standard HTML did not have, like emoji characters, phone number shortcuts for links, and access keys, in order to cater to small devices that were in use at that time.

2.1.2.2.2 XML

Extensible Markup Language (XML) is another markup language, that can be read by any application program on any platform, provided that the platforms agree on a common meaning of the data they exchange. What makes XML different is the variety of applications it has to offer to users. One of the main applications, the data exchange between the various platforms, is made possible because of the use of a standardized data format which XML provides. Other than that application, XML also provides a common data standard for mobile-cellular telephones to send messages between the device and the web service (Wusheng et al., 2010). Therefore, web service, content management, and data integration are a few other applications that are made possible through XML, and in the content management application, an XML document does not provide any definition to the data or its display of the said data, but instead provides a description so the user can mark and select the language content (Wusheng et al., 2010). Which is to say, XML tags the data and enables content providers to put meaning into their documents so it can be exchanged and understood on different operation systems and data models.

2.1.2.2.3 WML

Wireless Markup Language (WML) is an extended markup language derived from XML and it was made specifically for WAP, so as to get around the issue of presenting web content on mobile-cellular telephones and other small electronic devices. Wireless Markup Language, just like XML and HTML that came before it, is developed in a way so it can be read by all browsers throughout the Internet. However, since they are made specifically for web browsers, they face some limitations when being read by browsers, which are also commonly called micro browsers, found on small electronic devices, like

the mobile-cellular telephones which support WAP. When a request in WML language format is made, then that request is sent to the WAP gateway, which then contacts the web browser that needs to then read and present the content in the WML format, as it was requested, or in a standard HTML format (Zhou and Zhou, 2008). Sometimes, the request to see the content on the web browser is made in WML language, but the actual content is in another language, i.e. HTML, in which case the WAP gateway takes the actual content's format and translates it to the WML language format in order to be understandable for the user as they initially requested.

As WML is technically more aimed towards small electronic devices with low bandwidth, it uses up quite a smaller amount of bandwidth as compared to HTML. When designing WML, the concept of a deck of card was utilized, with the deck representing the actual WML document, while one single card represented one interaction between the user and the browser (Zhou and Zhou, 2008). Another thing that is unique about WML is that when the deck gets opened, there is no need to use more data and the user can navigate between the cards that are in the deck without needing to open anything new.

2.1.2.2.4 SMS

Short message service (SMS) has evolved tremendously over time and it has been the preferred medium for companies to contact and communicate with their current and potential customers for many years. Originally, the service was created in order to send radio memos on pagers, and through time the SMS was integrated into every mobile-cellular telephone and as time progressed, SMS instituted an approach to also send and receive messages not just from one mobile-cellular telephone to another, but also through and to various digital networks.

What makes SMS so special and more preferred than other mediums is that it is very convenient and mostly efficient. It is incredibly simple to use and it does not contain a lot of clutter in one single message. In order to use the short message service, the user needs to get creative and think carefully about how to best present and explain what they want to explain in one message. That is due to the fact that the short messaging service only allows the user to use up to 160 alpha-numeric characters for one single message, which uses the 7-bit encoding. What is even more special about short message

service is that the service already comes pre-installed on the users' mobile-cellular telephone free of charge. The charge gets inferred when the consumer wishes to use the service and sends a message through the short message service center (SMSC) which every mobile-cellular telephone provider has and the charge for each message then differs according to the provider. The SMSC would either receive the message, store it in its database, then forward it along to the designated location, or it would receive the message, and just simply forward it along without saving it. The first type is a store-and-forward type of service, where the user would send a message using SMS through SMSC, which the service will then save it for a certain period of time and will send the message to the user and it will continue to so until the end user receives the message successfully (Brown, 2007). On the other hand, the forward-and-forget type of service is the type where the SMSC would receive the message from the user who sent it and without saving the message it will send it along and will not wait to see if the message is successfully received or not (Brown et al., 2007).

Companies who wish to utilize SMS as a marketing tool can adopt common short codes to help them with their marketing campaigns. If a company wishes to have a voting contest, or create a game where it would like to invite their viewers to actively participate in the game, then they can utilize the short codes to conduct such an event. The short codes would be a short set of numbers, which work as a substitution of the actual long mobile-cellular and landline phone numbers that contain the country code and area code plus the unique phone number of the individual. These short codes have a set of five to six digit numbers, which are therefore easy for customers and consumers to remember and to use. Some other types of campaigns that the companies can do and that are very popular among consumers, are short codes used for alerts, where they can automatically alert the customers about an event happening in town, i.e. a charity concert downtown on a Saturday night, or about changes in policies in the company, or any other similar event that can be sent automatically to all customers at once so they can be informed. Another type of short codes are polls and surveys, where the companies can ask for a public opinion on various things and show results right away or give details about it after the event is finished. Donating money to a great cause or sending money to another mobile-cellular telephone as credit is another great use of the

short codes. Bosnia & Herzegovina, in particular, favorites the short code messaging for sending money from one mobile-cellular telephone to another, especially among young adults and teens who prefer to buy credit for their mobile-cellular telephones then get a monthly data plan from their telecom carrier. The customer simply needs to write the amount of money they wish to send and then the phone number of the other person's mobile-cellular telephone they wish the credit to go to, and then send it to the short code number that the telecom carrier designated for such transactions.

Getting product information, subscribing to games, sports updates, concert events, joining a community chat, or a club, and even matchmaking for dating campaigns are all popular campaigns that use primarily short codes as a means to reach out to their customers. Coupons and access to discounts are some other benefits and incentives that attract customers to utilize short codes, as they are all easy to access and do not require a lot of effort in obtaining them.

SMS has been proven over and over again that it can attract great revenue for people who wish to use it as a marketing tool to reach out to their customers. Looking at USA, in 2000 alone, 14.4 million text messages were sent in a year, and that number already jumped to 28.8 billion in less than seven years (Brown et al., 2007). However, SMS has experienced a decline in their usage over the last couple of years, as more digital networks are building their customer base, and with that more possibilities are opening up where one does not need to go through the telecom carrier to send a message and incur a fee, but can use the internet and the digital network to send it free of charge. Nevertheless, SMS still holds its ground as it boosts a 98 per cent open rate within three seconds of the text message being read (Dynmark, 2016).

2.1.2.2.5 MMS

Multimedia messaging service, or MMS for short, is considered by many as an upgraded version of short messaging service. As short messaging service is able to send only alphanumeric characters and were limited in length of up to 160 characters per single message, multimedia messaging service is able to up the bar and on top of sending basic text messages it is also able to send multimedia objects and digital content, such as audio, images, rich text, short clips and videos. It is capable of sending group of images and thus creating a slideshow, and also short clips and videos of up to 40

seconds in length. Companies and businesses have used multimedia messaging service to send coupon codes and barcodes that customers can scan at the shop, as well as other product images, videos and additional information.

Sending a message over the multimedia messaging service follows a very similar pattern as when a person sends a message using the short message service. When a user wishes to send a message over the multimedia messaging service, the message being sent is first encoded, similarly to an email, and then sent to their mobile-cellular telephone or smartphone network provider, which is specially made for this type of service, and called the Multimedia Messaging Service Center, or MMSC for short. In case that the receiving user does not use the same provider as the sender of the MMS message, then that message will be forwarded to the receiving user's carrier using the Internet.

Another major difference between SMS and MMS is the convenience of sending bulk messages and different kind of lists. As multimedia message service is not yet capable of sending messages to multiple users at the same time without facing any capability issues, short message service has that advantage over it. Nonetheless, when looking at the length of the messages and the ability of sending extra content, such as audio, images, and video, then multimedia message service has the upper advantage over short message service. It is not only able to send extra content over the Internet, but it is also able to send lengthier messages, so in essence, depending on what the customer's goal is for sending the messages, either of the two messaging services can be a good option if the customer knows what it wants to send and how it wants it to be delivered to the end user.

Multimedia messaging service has first been introduced to the world in 2001 by Japan's J-Phone and its messaging service, Sha-Mail (MMS World London, 2017). Unfortunately, the service was plagued by many technical difficulties as there was a major lack of mobile-cellular telephones at that time that were capable of supporting such services. The messages that were sent either were not received by the other person, despite the sender being charged a certain fee for sending an MMS, or the content that does, in the end, get delivered does not contain the full content of the sent message (MMS World London, 2017).

Multimedia messaging service found its commercial success in 2002 with the employment of GSM network, and Sony Ericsson's T68i was the first mobile-cellular telephone that successfully adapted the new service (MMS World London, 2017). From that point on, other companies picked up the service, with Europe and Asia, in particular, being the forerunners in the market.

MMS has not seen its real fame until the introduction of smartphones, which pushed customers to demand for more rich content and visually appealing messages. In 2013 alone, the number of people using multimedia messaging service had increased up to 70 per cent as compared to the year 2010 (CTIA, 2014). From CTIA's annual wireless industry survey that has been conducted since 1985, the MMS traffic has seen a jump from 57 billion in 2010 to 96 billion in 2013, and that number in 2016 has already increased to 277.9 billion in U.S. alone (CTIA, 2017). Along with the MMS traffic, as multimedia message service requires heavier data transfers over the network, the data traffic has also skyrocketed in numbers and looking at 2015 and 2016, it went up from 9.65 trillion in 2015 to 13.72 trillion in 2016, which is a jump of 42.2 per cent in data traffic (CTIA, 2017).

Other countries and its providers around the world are yet to adopt multimedia message service as a primary messaging service, as many still see it as a non-profitable endeavor, but the introduction of smartphones and the customers' demands for more rich digital content seem to be changing the companies' view on things. Nevertheless, MMS is still facing harsh competition from newer mobile applications that are also gaining in popularity in recent years, which also enable sending of messages, along with other rich digital content, though the Internet, often without any extra charge.

2.2.1.3 Location identification technology

As mobile commerce has evolved throughout the years so did the need to know the location of the users at any given point in time. Many, if not all, mobile commerce applications depend on where the consumer is located, in order to present them with real, up-to-date data that is both relevant and effective to them. The Global Positioning System (GPS) is one such technology that provides real-time location identification, which uses satellites that orbit the earth to locate the consumers that access their application through their mobile-cellular telephones, tablets and other mobile devices.

Since the satellites continuously broadcast the information of their own location and provide directions where they are moving from that point on, the receivers down on earth can therefore calculate the exact location of the consumer's device with exceptional accuracy. GPS is now a common device found in nearly all cars all across the globe, but not only that, GPS has also become a commonality on people's electronic devices. Though GPS has been installed in electronic devices since a very long time ago, it has only in the last decade or so started to be used more frequently where people have come to depend on it to cater to nearly all of their needs and requests for directions and locations of various things and places.

GPS has been developed by the United States of America for military use back in the 1960s when the Unites States Navy was conducting experiments in order to try and locate the submarines that were carrying nuclear missiles by using six satellites at that time that were orbiting around the globe (Mai, 2012). Soon enough, the Department of Defense (DoD) wanted to create a more stable location identification and navigation system, so with the help of the previous experiments conducted by the United States Navy, the Department of Defense created its first own navigation system that got fully launched in 1993 (Mai, 2015). The name they took on at that time was the Navigation System with Timing and Ranging, or NAVSTAR for short (Mai, 2015).

Today, the name changed to Global Positioning System (GPS) that is used for multiple purposes and takes advantage of numerous satellites, rather than just six as it was back in the 1960s. GPS now provides a different set of services to both the US military, and its Federal agencies, along with a few other selected armed forces and governments, as well as to civilians around the world, without any extra fee. While the first one uses the Precise Positions Service (PPS), the later one uses the Standard Positioning Service (SPS), and it is commonly called the civilian GPS (Mai, 2015). The civilian GPS has been time and time proven effective and has been beneficial to users all around the world in various ways. As with other technology, which has faced its birth, maturity, peak, and later faced its decline with passing of time, the Global Positioning System seems to be far away from yet reaching its maturity stage, as well as its peak. It can be said at this time, that the GPS service will remain part of the technology in the near future and for many years to come. As it is seen as an essential necessity in every

mobile device, GPS can only grow bigger and prove itself to be beneficial in mobile commerce from this point on.

2.1.3 Small Electronic Devices

Mobile-cellular telephones have globally become a sort of a necessity for people to have around with them wherever they go. They are regarded as a very personal device, as they are present with the consumer at all times, so companies see communicating with their potential customers through mobile-cellular telephone devices as a more direct communication method than through other mediums of communication. Other than just carrying around a mobile-cellular telephone device that was bought from the store or the telecom carrier, that can primarily be used only by the person who owns it, the consumers and companies go further to personalize their device by offering a wide variety of accessories that customers can buy or download to make that device even more personal and unique to its owner than other devices. Some examples of personalization are mobile-cellular telephone covers that come in a variety of designs; customized ringtones that a consumer can either create themselves or download from an app, and then set a different ringtone for each person in their phonebook; wallpapers and themes are the type that tend to be changed most frequently, as they are inexpensive and more often than not free to place on the consumer's mobile-cellular telephone. There are other accessories that can be placed outside of the mobile-cellular telephone, like various attachments in the empty socket where the earphones are meant to be placed.

That is why mobile marketing is primarily connected to mobile-cellular telephones, as it provides a direct channel of communication between the company and the consumer. However, in the sea of technology that is being developed more and more every day, there are other electronic devices that people like to carry around with them, or find a need to have them in order to help their daily life. These devices help consumers get access to news, television, music and radio players, calculators, games, health measurements, maps, calendars, entertainment information, and many more. These devices are universally known as mobile devices as they come in different sizes, but principally stay in the smaller range so they can be easily placed in one's hand and are portable without much difficulty. They tend to have small keyboards that can be

manually attached to the device, or they would have a virtual keyboard already existent on the device. Most of these mobile devices also are able to connect to wireless networks and Internet, as well as other devices in the vicinity. A brief explanation of some of the most common mobile devices is given below.

Mobile internet devices: Mobile internet devices (MID) are seen as an in-between device of a smartphone and a tablet. It does not have a universally accepted definition of what it stands for, but many have agreed upon that the MID is a handheld portable device that offers limited computing abilities and flexible access to Internet (La and Kim, 2009). The main goal of MID is to provide its consumers with the opportunity to access Internet and find entertainment on it while on the move, as well as tracking the consumer's location, presenting maps and giving directions, all while not fully giving the resourceful capabilities that a personal desktop computer or laptop have. As MID's goal was to provide access to simple entertainment and quick information on the Internet, it was never meant to be used by big organizations and enterprises, but merely by individuals for their own pleasure. However, as smartphones and tablets become more developed with each year and started acquiring more capabilities, MID slowly started to be seen as less special with each year. What still makes it alive is the lower price the companies offer for its MID products as compared to other tablets, i.e. iPad, and smartphones.

Tablet computers: Tablet computers have gained popularity in the last 10 years or so, mostly due to the fact that they are more affordable than desktop computers and laptops, offer almost the same functionality as the aforementioned devices, and come in a small flat shaped size, that is easy to carry around. The tablets would come equipped with touch screen functionality, but would also have an access point where the users can attach their own small keyboard to act as a replacement for their bigger and bulkier laptops. Some initial tablets were made solely for book purchasing and reading, with a simple color scheme of white, black, and vanilla. Other tablets came with an installed Microsoft's operating system made specifically for tablet PCs called the Windows XP Tablet PC Edition. While producing the operating system, Microsoft also pointed out what specifications does the hardware for the tablet need to have so the manufacturers of the hardware can know what they need to look out for in order to make the operating

system function as originally intended. Some of those requirements contain (Sharples and Beale, 2003):

- the ability to rotate screens both vertically and horizontally and the display to follow along, without the need to reboot the system
- allow for the dock to be unexpectedly removed and to still make everything work normally
- to have an active digitizer, rather than a touch one, so users can use their tablet pens previously equipped with electronic components so they can write directly onto the tablets
- to have the tablet go into suspend mode but also be able to be up and running within two seconds when prompted to resume
- to have the tablet stay in suspend mode for no less than 72 hours and when prompted to resume to have full battery
- allow the tablet to go into hibernation while in suspend mode, if the battery gets fully exhausted

Wearable computers: Wearable computers are small electronic devices that can be worn on the consumer's body with, underneath, or on top of the clothes. Most wearable computers have a specific wearable technology for separate purpose. One such device that is most commonly regarded as a wearable device, and which is gaining popularity in the last few years, is the smartwatch. Smartwatches have the same capabilities as a regular watch, but are also equipped to tell the weather, make phone calls, receive messages, listen to radio, connect to Bluetooth, and many other functions. What is seen as a crucial benefit of the wearable computers, compared to other smaller electronic devices is their consistency; consistency in a way that is constantly attached to the consumer at all times and it does not need to be turned off or on at any point in time (Nosrati et al., 2012). One other great thing about the wearable computers is that they allow the consumer to carry on with their business without the need to pay attention at all times to their devices, which basically allows them to perform several tasks at once which considerably helps people that are always on the rush and need to multi-task a lot of things without wasting too much time on one single operation (Nosrati et al., 2012).

Some can have touch screen functionality and some do not, but nevertheless, most smartwatches are slowly securing the same functionalities as a regular smartphone. Some of the examples of smartwatches that have already found its way into the market and gained popularity are Asus ZenWatch, Apple Watch, LG G Watch, Nike+ SportWatch, Samsung Gear, Sony SmartWatch, and many others.

Another wearable computer that uses a specialized technology is the health activity tracker, which, among other things, tracks the number of steps a user takes, the number of heart beats per minute, the amount of water intake per day, the quality of the user's sleep, and many other activities that have to do with the user's health and fitness habits. Fitbit is one example of a company that specializes in crafting this type of wearable technology and produces its own wearable device that goes by the same name as the company.

Though the wearable computers are gaining in popularity in the recent years, as they are small, have a great deal of functionality as other electronic devices, and do not get lost easily as they tend to stick to your body, they also face some issue that need to be taken care of before they can fully replace smartphones and other handheld electronic devices. Some of these issues are the architecture of the operating system on the devices, and the management of data that goes through the device, as well as the heat dissipation. The fact that needs to be considered is that the device is attached to the user's body at all times while in use, and therefore, on top of its own heat that it produces from working, it also receives the heat from the user's body in an interrupted sequence.

Personal Digital Assistants: Personal Digital Assistants (PDA) were designed to function as a personal assistant to the consumer so the user can get access to their own schedules, address books, phone books, appointments, to do lists, and many other little things that help organize the user's day. Most PDAs were designed to connect to a wireless network and Internet through a web browser, and most would have touch screen functionality, as well as the ability to listen to audio. The PDAs would provide notifications and reminders for the user's tasks that they set up on the calendar, and they provided synchronizations with the user's computer. On top of all that, some PDAs also had memory card slots where the user could insert their memory card to expand their memory base on the device. As mobile-cellular telephone devices started gaining

momentum, and smartphones came into play, the PDAs fell into obscurity around 2010 (Nosrati et al., 2012). Some devices were already created to work both as a mobile-cellular telephone and as a personal digital assistant, so with time consumers started not to see the reason of why they should carry around two separate devices when they can just have one that has everything on it. This need for simplicity and less clutter in their bags is what brought upon the creation of smartphones and the demise of personal digital assistants.

Portable media players: Portable media players (PMP) are small electronic devices that are designed specifically for carrying and storing media, such as pictures, audio, and video. There are many portable media players in the market, and they all differ in size and functionality, but their main purpose of storing media is the same. In the beginning, portable media players were equipped with hard disks to store the media, but due to the high power it consumed while in use and its overall fragility, the medium for storage was moved then to flash memory (Jo et al., 2006). Flash memory is more adopted among many vendors primarily because it is lightweight, small, consumes less power, and has a shock resistance along with the more reliable solid state drive (Jo et al., 2016). These portable media players can therefore carry within them from a few megabytes of memory to several hundred gigabytes. As they come in different shapes and sizes, they also come in different colors, all in the name of pleasing the customer who wants a more personalized portable media player.

The devices come with installation packs on CD/DVDs that can be installed on the consumer's personal desktop computer or laptop. With the software installed, the consumer can proceed to transfer the media that they wish to have on their portable media players. That media can include, but not limited to, images, photos, songs, movies, podcasts, and many other media. Bluetooth is also another way how a consumer can get access to the files on their computer or vice versa, without the need to install any software. Each portable media player comes with a socket where the consumer can plug in their headphones or earphones to listening to their audio clips and video media that they placed on the device. While most bigger-size portable media players are equipped with a screen and touch functionality, some smaller-size portable media players do not have a screen, so their sole purpose is for listening to audio

recordings, and music. Such example is the Apple's iPod Shuffle, where the device is made in a bite size and only has five buttons placed in a circular shape that covers the entire size of the actual device. It was made so as to attach it to clothes, with its clip on function in the backside of the device.

As smartphones are being endowed with bigger storage sizes with each new phone model, just like PDAs, portable media players are also slowly seeing its decline and will continue to do so in the foreseeable future. This occurrence should not come as a surprise to anyone, as customers are demanding more practicality and efficiency, and less bulkiness and stacking of countless devices that all perform limited number of functions. Basically, the customers want to have a greater range of functions with greater memory storage all found on one small device rather than several separate ones.

Handheld game consoles: Handheld game consoles are small portable electronic devices that are made and primarily used for playing games on the go. Compared to the personal desktop computers, laptops, and home game consoles, the handheld game consoles had the console built in them, as well as the speakers, controls, and screen which allowed the consumer to carry the device with them wherever they went and play games at the same time. Handheld game consoles first came into the market back in 1972 with a game console called Tic Tac Toe that had only one hard-coded game built in it and the actual interchangeable cartridges that are popular and used today have not come into existence until 1979 with Microvision's new handheld game console (Li, 2008). However, it was not until Nintendo released its own handheld game console, Game Boy, in 1989 that these devices became popular. It overcame the issues Microvision and others before Nintendo had, which were limitations to battery life, and small screens (Li, 2008). Game Boy's subsequent models came with more improvements, one major one being the color display so as to appeal more to the masses. As this was seen as a successful improvement and it did its job and attracted a great market share, the following years came with even more major enhancements to the handheld gaming consoles, some of those being external and internal devices, like connection to the Internet and wireless networks, external memory storage and a bigger variety of games offered, as well as other useful accessories (Li, 2008). Throughout the subsequent years, many other handheld gaming consoles were created and placed into

the market, but so far it seems Nintendo still holds its ground with their handheld gaming consoles, most notably the New Nintendo 3DS XL, and they have plans to bring out a new gaming console within year 2017 across the globe, named New Nintendo 2DS XL (George and Garcia, 2017).

Though, customers constantly demand for the decrease in the number of devices they need to carry with them around, that is to say, they want their calendars, address books, Internet connection, music, videos, photos, and games to be found all on one device, the handheld gaming consoles do not need to worry too much yet about going out of business. Reasons for that being is that handheld gaming consoles need a great amount of memory and a good processor with a good graphics card in order to make the consumer fully enjoy to the maximum the game they are playing. As smartphones and other mobile devices are still prioritizing other functions for their devices, handheld gaming consoles can continue to evolve and perhaps gain once again the momentum it had in the early stages of its release.

Pagers: Pagers are another type of small electronic devices that are simple to use and are portable. These small devices can be carried around with the consumer and work in a one-way path, where one can just receive a message but not respond, or they can work in a two-way path where one can receive a short alpha-numeric text message or an audio recording and can subsequently respond to it in the same manner. Upon receiving a message, the pager lets out a beeping sound to signify that a message has been received. Though, the pagers were conceived ages ago, and have lost a great number of its customers throughout the years as other small electronic devices started developing more an, they still remain quite popular in the health care industry. To the hospital workers, paramedics, lifeboat crews, and even birdwatchers, pagers remain an essential part of their working life, as they perceive pagers as simpler than their counterparts which occupy a great deal of their memory and can be distracting, but also because they tend to be more reliable (Benedictus, 2017). It is estimated back in 2012 that around 90 per cent of medical staff in hospital still used pagers, despite the hospital's administration's efforts to bring in new smartphones, tablets, and applications to substitute for those devices (Samuelson, 2012). The medical staff prioritizes reliability above all else, as it fears that they would not have signal or connection in certain parts

of the hospital and they do not want to risk that, and also because pagers tend to be more durable than other electronic devices, which also points to the fact that the device needs to be online at all times and working in top shape, as lives can depend on that single message that was sent to the electronic device (Benedictus, 2017; Samuelson, 2012). Another major obstacle with adopting smartphones and tablets is the privacy issue, as the patients' data needs to be kept confidential at all times, and cannot afford the risk of leaking that data anywhere.

Pagers might be seen by many people around the world as something obsolete and ridiculous to have, they still remain a great necessity to the people who prioritize lifesaving above anything else. Using smartphones might give the consumer more functionality, but with every new function added, the focus tends to skew away from the important things. The sounds from the beeping the pager makes when it receives a message alerts the user that it is most likely something important and brings its attention to it immediately. The unique sound also helps the observers standing around the pager's user to understand that an important message was received and the user's attention needs to be shifted from them to the pager. Which is in direct contrast to having the user look at their mobile-cellular telephones or smartphones while talking to the other person, because the phones' sound alert is more often than not, turned to silent or vibration mode, and therefore not signaling the other person that a message was received nor that it needs the phone's user full attention.

Mobile phones: Mobile phones have different classifications, but their principal goal is to conduct and receive calls over radio frequencies, all while being in the designated service area of the network. The mobile phone sends a radio frequency to their carrier, which is the provider who sold to the user the SIM card that they placed in their mobile phone to gain access to their network, and then the carrier turns on the public switch telephone network so they can establish a connection and proceed with the call. These days the mobile phones use cellular network to establish connections, which is why most mobile phones at this time go by name, mobile-cellular telephone or cell phone. As with time passing and technology developing, mobile phones added more functions and services onto their devices, some of those being but not limited to short message

service, digital cameras, limited Internet access, short-range communication via Bluetooth and Infrared, games, and media message service.

The first commercially available mobile phone came into the market in 1984, when Motorola introduced their DynaTAC 8000x model, but it weighed quite a bit, so it did not gain an immediate commercial success right away (Agar, 2013). Up till that point, USA in particular relied on telephones in cars that police officers mostly used, and it also did not help that Americans were reluctant to communicate or own those handheld phones because the fee of the call would be incurred by the receipt of the call, rather than the one making a call to the other person, which was a complete opposite of how Europe and Japan at that time incurred fees for making phone calls through their networks (Agar, 2013). Eventually, GSM came into the market, along with other technological trends during the 1990s, and new lighter weight components were placed into the telephones, making them less heavy and easier to carry around, so the general public finally found their liking in these new handheld mobile telephones that were not restricted to only in-car use. Mobile phones from then on would climb up to become one of the most important handheld electronic devices that customers desired to have with them at all times. Motorola then also gained big competitors, like Nokia from Finland, and Ericsson from Sweden, with which they competed on who will make a more powerful, smaller, and cheaper mobile telephone.

Eventually, all three of the giants who started and competed against each other for the market share in the mobile telephone industry, have slowly faded away from the map and have been bought out by other companies, who saw potential in smartphones and pursued that path. Though Nokia is credited to produce one of the first touch screen smartphones, it believed that there was no future in it and that their customers would not like this device in the long term, so it scrapped that idea and continued producing their own standard handheld mobile telephones.

Feature phones: Feature phones are mobile telephones that are very similar to traditional mobile telephones, but are still a few steps under the smartphone. Feature telephones contain slightly more functionality than traditional mobile telephones, which the aforementioned concentrates on providing just basic phone calling and text messaging services, while the feature phone also provides limited access to Internet and

some basic multimedia services, all designated by the telephone's service provider. What makes it also different than smartphones is that the feature phones tend to be distinct by themselves and the user can also sometimes create their own operating system and how they want their phone to work, while smartphones on the other hand tend to have similar traits and capabilities across all devices, regardless of the brand, device, or the model.

Both the mobile and feature telephones are seeing a steady decline with each year, but that decline is still somewhat slower in the underdeveloped and developing countries, where consumers are still holding onto their traditional telephones.

Smartphones: Smartphones are steadily overtaking the mobile industry and are becoming prevalent in most developed countries. Smartphones are small electronic devices that have the same capabilities as a traditional mobile and feature phone, but also come equipped with higher computing capabilities. They were first designed to have a functional combination of personal digital assistants and the traditional telephone, and later more functions like the connection to Wi-Fi, web browser, location finder via GPS, higher display resolution, and a greater number of screen inches, were added onto these devices, thus becoming a more sophisticated and more desirable device for the customer to have (Nosrati et al., 2012). Some of the operating systems that were created in order to work on various smartphones, regardless of which company produced them, are Apple's iOS, Google's Android, Microsoft's Windows Phone, Nokia's Symbian, Samsung's Bada, and RIM'S Blackberry OS (Nosrati et al, 2012).

Smartphones generally tend to be larger in size than traditional mobile-cellular telephones, but also smaller than tablets so they could fit in the customer's pocket. They provide both mobile data internet that a user can use through their network provider and incur a charge, as well as the capability to connect to Wi-Fi, a wireless network which is in their vicinity, free of charge, in most cases. As almost all smartphones come with a big touch screen, which covers up nearly the entire front surface of the device, and has a graphical user interface with a color display, it is also able to provide the ability to perform video calls on top of the regular voice calls. The consumers can also use their smartphones to play video games, take digital pictures and videos, play music with a surround-sound system, use it as their personal digital assistants, get navigation

instructions through GPS, and use and install third party applications that can be accessed through stores like Google Play Store and Apple App Store. These applications are either made specifically for one operating system or for more and can perform various functions and each day more and more applications are being created and placed into these stores so consumers can access them at will and either pay for them, or get them for free. Also, other than the internal makeup of the smartphones, there are many external accessories made each day that help the smartphone industry gain an even bigger share in the market. Accessories, all the way from screen protectors and smartphone outer cases to Bluetooth-enabled speakers and selfie sticks, there is an array of things that the consumers can choose from that will enable them to enjoy their small electronic devices personalized just for them.

Smartphones have for the first time outgrown the number of sales of traditional mobile and feature phones in the fourth quarter of 2012, and have not seen a major decline in sales ever since (Hyers, 2012). As calculated in the latest report in May of 2017, the shipments of smartphones went up by 6 per cent and have amounted for 353 million units shipped in only the first quarter of 2017, with Samsung once again taking the lead in front of Apple, OPPO and others (Mawson, 2017).

2.1.4 Limitations of Small Electronic Devices

While switching from a large bulky personal desktop computer or laptop to a handheld mobile-cellular telephone might seem like a good idea, as it makes the users life simpler and more efficient, there also needs to be an understanding that there are limitations that still exist with these small electronic devices that need to be fixed if people truly wish to only rely on them for all of their computing purposes.

One such limitation is the size of the screen, which tends to be ten times smaller than classic desktop computers and laptops. Since they are smaller, the eyes get strained when looking at such a small screen, and even more so when there is a need to type something out, because the keyboard is less than half a size of the actual screen. Connecting to the size of the screen, there is also a recurrent issue that previous researches have established with keeping the mobile-cellular telephones and smartphones close to ones' ears, showing that by doing so it can damage their hearing. Not only does it cause a problem for the ears, it can also cause problems for the body as

well, especially if the person has a medical device placed inside of them, like a pacemaker. If the individual carries any sort of electronic device at all times, the device can release radiation and pose to be a great health risk to that individual. Matters over potential health hazards and radiation from the said devices have been brought to attention and studied by many scientists throughout the years.

Another major concern over these small electronic devices is the security issue. The users of these devices are more often than not on the go and so they have to connect to a digital network, or internet, through a third-party medium, leaving them vulnerable, as they do not have full control over that network and cannot be sure what happens to their personal data. As the connection is also established through the nearest signal point, then if there some natural hazard like a storm, blizzard, or even rain, happening in the vicinity it can cause transmission interference. Not only natural hazards, but going underneath the ground, or somewhere far in the outskirts of the town, can also cause transmission interference, giving the consumer a bad or nonexistent signal.

Power consumption is another issue that needs to be addressed, as personal desktop computers and laptops have cables and batteries that can get recharged right away, as consumers tend to keep those devices around places where there is a power socket. On the other hand, mobile-cellular telephones and other smaller electronic devices tend to be always carried around on the go, which often leads the consumer to be outside in the public, where there is no power socket to recharge the battery. Unfortunately, as smartphones are getting more developed with each new function being added to them every day, the problem with the battery being drained very fast is only getting bigger. The more powerful the small electronic device becomes, the more power it consumes, and the battery dies off quicker. Companies and the market is aware of the problem, and though they do offer alternatives to their customers, such as buying an extra battery, the prices of these extra batteries are marked up high. Reason for this is that companies know that their consumers will need their devices at all times as more and more people are becoming addicted to them and depend on them a lot, so they will see the need to buy these extra batteries even if it costs more than it should.

The bandwidth might have been a major limitation in the earlier stages of mobile-cellular telephones, as the internet access tended to be slower on the small electronic

devices as compared to cabled and home network, that limitation is slowly fading away with new digital networks coming into the market. They are made to be faster and use less bandwidth than previous generation's digital networks.

Lastly, as small electronic devices are made to fit in the consumer's pocket, their sizes are less than comparable to regular desktop computers, laptops and other major electronic devices, so because of their size they are more prone to being lost and forgotten at different locations, as the eye does not always notice it right away where it was left the last time. Bigger electronic devices, even without really noticing it, leave a temporary image in the consumer's head of where they are, so it is easier to recall their last location. Moreover, as these small electronic devices are made to be handheld, they can more easily slip out of one's hand and onto the floor, consequently crashing the device, sometimes even beyond repair. Bigger electronic devices can be caught more easily, because of its size, even if it slips out of one's hand.

While, there may be many limitations to small electronic devices, they are still seen as the future by the masses and each of the said limitations is being worked on to be solved quickly, albeit how slow it may seem from a standalone point.

2.2 Mobile Marketing and Mobile Advertising

Ever since the emergence of mobile telephones and cellular phones, businesses have dwelt into the possibilities of communicating with potential customers through these small electronic devices. The businesses have seen the opportunity in the fact that the customers always carry their small electronic devices with them at all times, especially the mobile-cellular telephones and smartphones. Since they carry these devices around, the businesses can reach the customers faster and get their attention within minutes. Reaching their potential customer within minutes is in direct contrast to traditional medium of marketing where reaching the potential customer takes longer and it depends on various variables. Looking at the example, marketing through TV commercials, where the customer has to sit at home or at a café to watch the commercial, it already at that point excludes the possibility of reaching the customer when they are at work or at school during most of the day, so it only gives a short time window of when the potential customers can be reached. Furthermore, since the customer is usually watching television from a comfortable place, when the TV commercial comes on, they

can switch the channel to avoid the commercial and watch something else that is of more interest to them. Other than switching the TV channel to another channel, the customers can leave the commercial running and simply pick up something else at home to do while the commercials are on. The customers will continue to do their work until the commercial passes and then when it is over, they can get back to their show they were watching prior to the start of the commercial.

On the other hand, when a customer receives a text message or a multimedia message on their mobile-cellular telephones or smartphones, they immediately notice it and try to read it, as those devices are with them even at work, at school, and at home. The content of the message cannot be seen until it is opened, so it prompts the customer to open the message and at least skim through it to understand what the message is trying to convey. The period of potentially reaching the customer becomes much larger, consequently boosting up the possibility of customer reacting to the content of the advertisement and making a purchase or a decision to act as requested in the advertisement.

There are many other ways of marketing via mobile technologies, and doing so through short message service is just one of them, which as a fact has been the most long-lasting and effective method of mobile marketing so far. Though, the first official mobile marketing service offered through a mobile-cellular telephone was with the invention of Palm VII in 1999 when the location-based service was presented, the true growth of mobile marketing service has not happened until the invention of smartphones, and particularly the invention of iPhone by Apple Inc. (Kaplan, 2012). Palm VII at that time was able to offer a service through their mobile device by providing information about weather and traffic reports based on the requested zip code by the user. Japan's NTT DoCoMo was also able to launch a similar service couple of years later by providing users with the option of finding and locating restaurants, friends, and similar things through their GPS.

Mobile marketing is defined by many and there is no single universal definition of what categorically mobile marketing is, as it is seen not as an intermittent theme but more of a subject that is dwelt upon with each new development of any sort in the marketing and the technology area. Kaplan (2012) defines mobile marketing as any marketing activity

organized through a selection of various interlinked networks to which consumers can connect to via some sort of a mobile device that is their own and that they carry with them at all times. In order to make it happen, the switch between networks should be smooth and uninterrupted by anything, which is to say that a user should not need to concern itself with turning off their mobile device and plugging any cables or adjusting the settings, when they switch between these networks. Not only should the switch be smooth between networks, but also having a constant uninterrupted connection to these networks should also be possible at all times. This particular factor can come true mostly with mobile-cellular telephones and smartphone, because consumers consciously keep these devices on during the entire time they own them. This is in contrast to, i.e. tablet computers, which consumers keep on only in instances when they need them, and turn them off when they are done using them. Consumers turn these devices off either for saving energy and being environmentally friendly or just simply for saving the device's battery so the consumers can use it again later on. As compared to mobile-cellular telephones and smartphones, these devices require higher computing abilities and by keeping them running the entire time, it puts more burden on the hard drives and other components inside the device, consequently making their life expectancy go down and putting it at risk of a burnout.

Scharl et al. (2005) defines mobile marketing as connecting through any kind of wireless medium and by doing so it offers the user location and time sensitive information about goods, ideas, and services that are all personalized and all made to benefit the participants in the said transaction.

When looking at how personalized and interactive the marketing through mobile devices is compared to other traditional forms of marketing, mobile marketing tends to stand out amongst them all. This is due mostly because of the location dependence which tends to be higher and thus providing a more accurate and more relevant search and communication between the company and the customer. Sultan and Rohm (2005) go more in depth in showcasing the difference and the reasons why marketing through small electronic devices beats all the other forms of marketing. They characterize approaches to marketing communication along two dimensions, which are based on the

location specificity of the small electronic device and interactivity that the said device provides between the company and the customer.

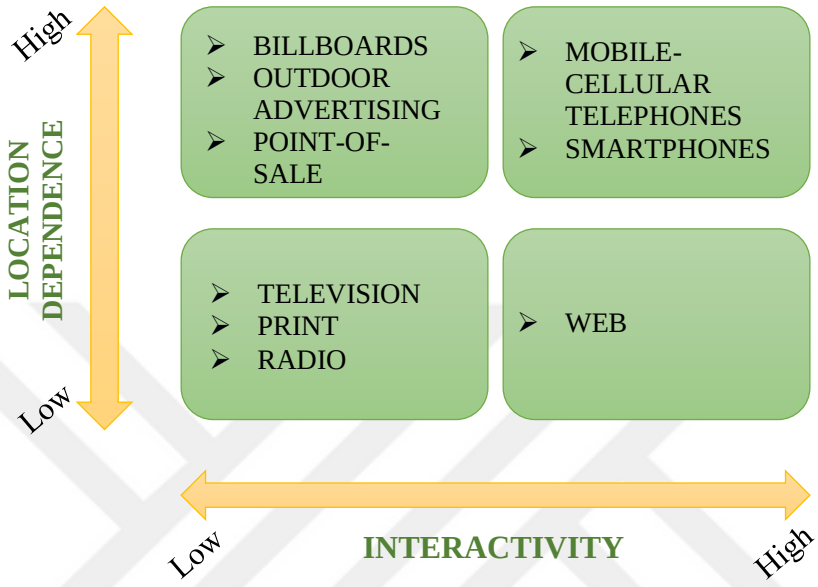

Figure 2.1: Comparison of Marketing Communication Approaches (Sultan and Rohm, 2005)

Sultan and Rohm (2005) see interactivity as something that can be classified as 'lean back' and 'lean forward'. 'Lean back', as the name itself implies, requires to user to not involve itself too much in reaching for the advertisement and can simply lean back in their chair and wait for the advertisement to come to them and the company will do the rest. 'Lean back' does not require as much effort on the side of the consumer as much as 'lean forward'. Traditional media like television, magazines, newspapers, billboards, and others alike, are the type of marketing companies do that are not personalized for one single consumer, and the consumer itself did not voluntarily opt in to see and hear those specific advertisements. On the other hand, 'lean forward' requires the customer to willing go in, reach and seek out information and advertisements that are of their interest. Going on a specific web page is one such instance, where the user seeks out for specific things and the advertisement that is shown on those websites are tailored according to the information on that website. The customer is basically making a conscious decision on which website to visit and what to see and sometimes even

seeking out specific websites with advertisements that can help them get a better deal in the store.

The other dimension Sultan and Rohm (2005) explored is the location dependence, where the advertisement has to depend on the specific location of the customer. Some are more dependent while others are less. Television, radio, newspapers, and magazines are less dependent of the location of the customer as the customer can watch the same channel on TV regardless if they are in a downtown café, sitting at home, or at a friend's place. Likewise, with print advertisement, which can be picked up at any location and carried with oneself, the information will still remain the same. On the other, billboards are more dependent on location as they cater to specific places and cannot be seen everywhere or carried around. Point-of-sale is another location dependent type of marketing where the customer would need to go to a specific store to see the advertisement, as it can only be found at the location where the actual sale, the final transaction, is being made. While the pop-up advertisement that shows up on website is not dependent on the location of the personal desktop computer or laptop, the digital coupons received on the mobile-cellular telephones and smartphones that say there is a store nearby where the customer can use the coupon for is more location dependent.

Small electronic devices, and particularly mobile-cellular telephones and smartphones, are personalized and carry loads of information about the consumer. Getting access to that information without intruding into the customer's privacy or creating any potential security risk for the party is of great importance to the company as it continuously pursues to establish a more meaningful connection with the customer and therefore strengthening its brand value. This is why mobile marketing is primarily connected to mobile-cellular telephones and smartphones, as they tend to be more personalized than other small electronic devices and they also tend to stay turned on the majority of time as they are being carried around with the consumer. Maintaining that constant connection to the digital network as well as the Internet in certain cases, can help companies collect meaningful information based on the customer's location along with the other gathered information they procure from the customer's personal small electronic device that they are carry around with them. The companies can track not

only their location through these networks, but can also narrow down the possibilities of why the customer is at that point there and that way they can tailor their advertisements accordingly, furthermore, maximizing the positive receptiveness of the consumer upon receiving an advertisement on their personal mobile device.

Traditional media, though generally low on the interactivity scale with the customer, is looking at integrating also its own form of mobile marketing where it incites customers to use their phones to connect with their televisions. Point in fact; sending a text message with the customer's voting option decision in order to participate in a game that is being shown on television is one way of how television broadcasting companies are using mobile devices to connect to their customers and lure them to pay attention to the television. Nevertheless, marketing through mobile devices is exponentially growing in numbers as it offers a more individualized and dialogue-oriented interaction as opposed to traditional media. The growing popularity of mobile marketing can be attributed to the extensive global penetration of mobile-cellular telephones and smartphones in particular, where it is becoming odder not to own a mobile-cellular telephone as supposed to owning one. Another reason is due to the fact that smartphones are becoming more popular and companies are gaining wind in providing higher and stronger computing abilities with larger screens making it easier to stare at the screen for longer periods of time and perform similar or same tasks that are made available on larger electronic devices. In addition to the expansion of mobile-cellular telephones and smartphones, as well as their higher computing abilities, the fact that the devices are able to stay connected to a high-speed network at all times and that these networks are getting more advanced with each year, is also helping mobile marketing take precedence over other marketing options.

2.2.1 Characteristics of mobile marketing

2.2.1.1 Content

When companies and businesses wish to use small electronic devices to market their products, they need to pay close attention not only on how to utilize the technology that is climbing up to be the top technology among users, as well as pay careful attention to the content of the advertisement that they send over these devices.

The companies need to look at who their target market is and build their advertisements around that information. Sending the same advertisement to an elderly person and a young teenager will not yield the same effect or response. Getting creative in placing all the necessary information in the a single 160-character limited message is another subject that the businesses need to look out for. These messages do not only need to contain information about the matter that is being advertised but also information on how to opt out not to receive that information anymore. In a world that is today where small electronic devices are becoming a norm to have and the ease of communicating with other people is a standard rather than an obstacle, sending unsolicited messages and consequently spamming the receiver is a problem that consumers are faced with on a daily base.

If a business wishes to send a message to a particular target consumer group, the content of the message should be first understood and then afterwards it should attract the attention for being different and for trying to make a difference, rather than just being entertaining. When a company's target consumer group is elderly people above the age of 50, their messages should be more informative and easy to understand, and should not try to be overly complicated. The reason being is that at that age most elderly people are fairly new to such technology and its marketing ways, so they will not fully understand the message or will not simply even bother to understand it unless its simple and clear. On the other hand, when sending a message to teenagers and young adults, such advertisements and messages should contain something that will entertain them and should follow a similar style that that age group usually uses when sending text or multimedia messages over their mobile-cellular telephones and smartphones, so they would feel a closer link to the said advertisement.

Credibility: Credibility has been linked to advertising value in many studies conducted throughout the years, not only in traditional advertising, but also in web advertising, and now also in mobile advertising. Credibility is defined, as consumer's perception of how truthful, honest, and believable is not just the message that is delivered through the advertisement, but also the sender, the company or the person, of that message (MacKenzie and Lutz, 1989). It has been found that entertainment and credibility are the strongest of the variables that go into what customers look for in advertisement

messages (Izquierdo-Yusta et al., 2015). According to the study of Kim and Han (2014), personalization of the advertisements has a positive effect on the credibility, among others, of the advertisement's value.

In order to be credible, one has to be first truthful, as many have stated before. Being truthful is not just referring to the truthfulness of the advertisement's message itself, but also refers to the company and its representatives. Since credibility is linked to a positive effect on customers' attitude towards advertising on mobile devices, it is important to minimize uncertainty and vulnerability while customer is making a decision while reading the mobile advertisement (Yang et al., 2013). If the company has a bad reputation and scandals linked to the company, the advertisement and its message would be looked upon with a sense of suspicion, regardless of how truthful and real the message is. In order to avoid such occurrences, the company would need to focus first on building its brand value and recovering its image, if it was previously tarnished, and then look into sending out advertisements that ask from their current and potential customers to put faith in the messages being delivered. Building this trust is not an easy task and demands a strenuous process, which requires businesses to focus not just on the technology they are using, but also on the business practices they are using in the industry (Haghirian and Madlberger, 2005). Nevertheless, studies have shown that credibility not only depends on the message delivered through the advertisement, or the sender of the said message, but it also depends on the actual advertisement medium. It has been discovered that the advertisement shown on the Internet through a website is perceived as less credible by customers as compared to an advertisement shown in newspapers and other traditional mediums (Bauer et al., 2005). Though, it is crucial to note that the credibility does go up when that same message on the Internet websites is shown by strong and reputable brand that customers know about and trust it (Bauer et al., 2005).

What customers expect when looking at the credibility of the company is that the company or the person has the expertise and capabilities to conduct the process they are claiming they can do and to do so effectively and reliably.

Customization: Customized and personalized advertising messages have long been established as a preferred method of advertisement among customers. Many studies

have shown that what makes the personalized advertisement messages so special is not just the fact that they attract customers to willingly buy the company's product, but it is also the fact that being able to personalize the messages according to each customer is what makes them stand out from other traditional mediums (Zhang and Shijagurumayum, 2003). While the advertisement showcased on a billboard stand somewhere outside on the street is not directed towards any specific customer, the message received through a text message on the mobile-cellular telephone or smartphone can be created in such a way that it is only directed towards that specific customer that the message has been sent to. However, the advertisement on the said billboard can be made to refer to a specific group, i.e. females in their thirties, or young adults in their early twenties, the same advertisement on that medium cannot be made to directly communicate with one single customer. The billboard is not only located in a public place for everyone to see, but it is also not portable and cannot move along with the customer who will not stop what they are doing and interact with it in any form or fashion.

Compared to traditional broadcasting mediums, customized and personalized mobile marketing advertisements have a greater and more lasting impact on the customers. The customized messages can add value and benefit to customer's daily lives by seemingly integrating themselves into an everyday occasion that does not directly disrupt the customer's habitual daily processes (Chen and Hsieh, 2012).

In order for the messages to be thoroughly customized, the companies need to collect information from the customers and store it in a database from which information can be pulled out easily when requested. To collect this information, companies use various ways to achieve it, from asking directly the customers while they are doing their shopping in a store, or by sending mass emails and text messages prompting for a response with customer's personal information, or sometimes even finding this information through other companies' databases. This collection of information and building of a network database is the crucial first step that needs to be performed if the company wishes to have a successful mobile marketing campaign (Shankar and Balasubramanian, 2009).

Though many studies had shown that customized messages are generally more efficient than universal messages directed towards more people, none of the studies have successfully pointed out how exactly should the message be personalized (Li, 2016). It brings about the question on whether some messages are seen as personalized, even though they are not, and other personalized messages seen as non-personalized (Li, 2016). Nevertheless, customized messages are seen as more favorable than oversimplified messages for the masses, primarily because the customers feel a sort of a connection to the advertisement as it shows up on their mobile-cellular telephone or smartphone, which is already perceived as a device of a very personal nature.

Entertainment: Entertainment has been linked, along with credibility, as one of the two most important factors of the mobile marketing advertisement's effectiveness (Izquierdo-Yusta et al., 2015). Another study has also found that entertainment and informativeness are the two factors that set up the base for a successful mobile advertisement message (Blanco et al., 2010). Entertainment is seen as something that can be achieved intuitively, spontaneously, and imaginatively, without putting too much thought into it. Entertainment on the small electronic device should follow the same steps when creating a message whose goal is to attract the customer through the entertainment factor.

When customers think about entertainment they think about games, prizes, awards, event participation, and similar things. It does not involve just watching short clips and reading a text message, but also reacting positively to the said messages. Messages sent, as a form of advertisement, should be aesthetic and humorous, and thus immediately capturing the customer's attention (Yang et al., 2013). People, in general, have a natural playfulness already instilled in them, so often subconsciously when people look at advertisements they want to be entertained (Luxton et al., 2009; Chowdhurry et al., 2006). This subconscious willingness to play and interact with the advertisement, has led companies to discover that this single fact yielded high participation from the customers and also led to attract, not only old, but also, new customers (Haghirian and Madlberger, 2005).

Then again, each entertainment factor that is placed on the advertisement should be carefully examined, as not all entertainment is perceived the same way by all age

groups and each gender. Few researches point out that men are less likely to sit and wait for the advertisement to finish or even participate in it if it requires too much work, while women are more likely to do all of that if they find the advertisement appealing (Karjaluoto et al., 2008; Nysveen et al., 2005).

Tsang's et al. (2004) study found that entertainment strongly affects the customer's attitude towards advertising, and it does so more in a sense of where the customer prefers the entertainment's form content on the mobile devices, over the actual entertainment's content features.

Informativeness: Informativeness is another important factor that has proved to be a direct factor that influences the customer's perception of the product, brand, and the company (Blanco et al., 2010). Informativeness refers to the how much qualitative information does the advertisement contain (Oh and Xu, 2003). Which is to say, does the advertisement contain the intended message it is trying to deliver or not. The advertisement's message could be whether or not it states what the product looks like, where it can be found, how much does it cost, what is so special and different about that product, how beneficial it is to the customer, and similar things about the product or service it is trying to offer. Understanding what the product or service is about it not the only thing that should be looked at. The advertisement also needs to contain information about the company and how trustworthy it is, as well as how to receive or stop receiving further advertisements from the said company. All that along with how can customers get in touch with the company for further inquiries.

Accuracy, timeliness, and usefulness of the information in the advertisement to the customer are all qualitative features that should be delivered to the customer while delivering the advertisement and maintain a sense of relevancy (Siau and Shen, 2003). The study of Blanco et al. (2010) showed that though there is a positive effect with informativeness on the customer's reaction to the advertisement, the study also showed that people in general perceive this factor, along with entertainment, to seldom link to mobile advertisements.

Interactivity: The personal nature of the mobile-cellular telephones and smartphones that customers interact with on a daily basis, makes mobile marketing fair far better than other traditional advertising mediums. Marketing through these small electronic

devise creates a formidable opportunity for the customers to communicate with the advertisement (Luxton, 2009). Interactivity itself is defined as any sort of interaction between the customer, and a group of customers, with the businesses all through a form of digital platform or some kind of media output (Ström et al., 2014). The messages that customers receive on their mobile device tend to request of the customers to act on it immediately, prompting them for some kind of a feedback (Haghirian and Madlberger, 2005). Considering that traditional mediums only have one way of reaching and interacting with the potential customer (Yaniv, 2008), marketing through mobile devices have a more efficient way of incorporating interactivity and thereby facilitating a more personal one-on-one communication between the customer and the company (Dickinger et al., 2004). Having in mind that time is of the essence to many people in this time and age, looking at advertisements that do not appeal to them directly, or do not ask them to do anything that will benefit them in some way, providing personalized interactivity is something that can attract many customers if done properly.

The level in interactivity is defined by the communication from both sides of the mobile device, as well as their synchronization, and the level of control that the customer has during this interaction (Ström et al., 2014). Other variables have also been brought up in previous studies, such as connectedness, which provides the customer a way to access other resources (Gao et al., 2009). Playfulness, as it has been discussed earlier, and interpersonal communication, where the customer feels that the communication they do with the company's advertisement is more personal, are two other factors that Gao et al. (2009) points out as important factors. The same study pointed out that the higher the perceived interactivity is, the more successful the communication through the mobile device is (Gao et el., 2009). However, this might prove to be more beneficial to game and content providers and their customers, as other companies need to look at increasing informativeness and minimizing interactivity in order to increase customer retention (Ström et al., 2014). Nevertheless, the open dialogue that the company can have with the customer offers great opportunities, as today the fight for the attention of each customer is very fierce (Bauer et al., 2005) and companies need to find a way to use this method to the best of their abilities.

Irritation: While the previously mentioned factors can be seen as a positive psychological feeling, irritation falls on the other side of the spectrum. Due to the personal nature of the mobile-cellphone telephones and smartphones, any kind of unwanted or unexpected message sent to these devices is perceived by many as annoying and intrusive.

Marketing through phone calling also dates back even before the discovery of mobile-cellphone telephone and smartphones, when cold calling was used with regular telephone lines. In the early ages, cold calling was hard to track through the telephone line, as the telephones at that time were not able to display the phone number on the telephone, so customers had to pick up the phone to find out who is calling them. Tracking and avoiding the phone number got easier later on, but cold calling has also made its way through on mobile devices. Thus, all the unwanted and unexpected phone calls that customers receive through their own mobile-cellular telephone and smartphones, is seen as exceptionally irritating, and creates a vastly negative feeling towards advertising on these mobile devices. Text messages that customers receive through their mobile devices can be read at the customer's own will at any time, without forcing them to stop working on whatever they were doing at that point, so messages are seen as less intrusive. Calling, on the other hand, interrupts the customer at whatever they were doing at that moment and forces them to look at their mobile device and also pick up the call if they get the feeling it is important to do so.

Receiving these unwanted messages and phone calls can not only lead to irritation, but can also have a negative feedback in further tries to reach the customer. If the customer feels flooded with unwanted advertisements and it hinders or even prevents the customer to reach the information they sought out for at the beginning, then it can lead to a negative response, where the customer can feel irritated by it and then avoid any advertisements in the future (Elliot and Speck, 1998). This is also made visible through the lessening number of the click-through advertisements found on the Internet, as customers feel they are flooded with spamming advertisements (Yang et al., 2013).

This problem is becoming more of an issue with the widespread use of small electronic devices, and the customers can feel this is invading their privacy, which hikes up their irritation level even more (Chowdury et al., 2006). If the messages end up being

annoying and unappealing, consumers are more likely to feel irritated with them and create a negative feeling that will last more long-term, than the positive effect.

Remembrance: Remembrance is connected to the length of time that the customer remembers a specific advertisement. Allocation of the cognitive resource, which is the intelligence and experience of the user up till that point, during the customer's exposure to the advertisement, is seen as an important factor in remembering the advertisement later on (Peterson et al., 2017). It is not only important to see if or not will that advertisement be remembered later on, but also how exactly is it remembered, and how that mental remembrance affects future purchase decisions and the company's brand evaluation (Peterson et al., 2017).

Many studies have pointed out that what makes one message more memorable than the other is the recognition and the production of the said message later on (Harris et al., 2008). Recognition referring to recognize the message when presented to the consumer in a different setting, and production referring to the consumer's ability to use it by willingly invoking it in their head in a relevant situation (Harris et al., 2008). Others also pointed out that what makes images and messages more memorable is their intricate ability to invoke a certain emotion in the consumer (Heath et al., 2001). Messages, in particular, are seen as more memorable, as opposed to those that are non-memorable, when they are built with an unusual set of words, but on top of commonly used part-of-speech patterns, maintaining a sense of generality (Danescu-Niculescu-Mizil et al., 2012).

Advertising, in general, is not premeditated to deliver and convey complicated messages, especially when advertisement is done through a traditional medium, and not aimed towards a specific customer (Lowrey, 2006). Their goal is more focused on brand awareness, and even at points when the informativeness is more relied on, the companies try to present it in the simplest form (Lowrey, 2006). Complexity in print advertisement has been showcased to affect memory recall (Bradley and Meeds, 2002; Lowrey, 1998), however, this syntactic complexity does require a certain degree of involvement from the customer's side (Lowrey, 2006).

Remembering a certain advertisement does seem to be affected by various factors, from the wording of the message, to the ability to invoke emotions and the cultural aspects of

it, as well as the generality of the word patterns and the color scheme, the time and the location where the message is received, and many other things. Taking all these factors into consideration and finding new ones along the way does help the businesses build their brand stronger and attract potential customers to purchase their products even after the certain advertisement that they remember has long passed and was switched with a new one. This remembrance helps prompt the customer to still buy the company's products or use their services even long after their advertisement that they remember has reached their lifespan.

Usefulness: As advertisement has gained more popularity throughout the years, customers are flooded with intrusive advertisements left and right, which consequently prompted the customers to focus more on whether the advertisement has some kind of benefit to them, otherwise they will choose to ignore the advertisement, as there are plenty more fish in the sea to focus on. This also goes along the way that mobile marketing will be more acceptable by the customers if the customers see a certain benefit in the advertisements they receive on their mobile devices (Kavassalis et al., 2003). Marketing through small electronic devices will see an exponential growth spur when the industry starts paying more attention on how to bring out more useful and fun content through their advertisements on mobile devices (Kavassalis et al., 2003).

Looking at the extent of the advertisement's usefulness to the customer does directly influence the customer's attitude and its subsequent actions towards that product and the company (Rohm et al., 2012). Recognizing this factor, among others, will help the business lead a more successful marketing campaign, and to influence the usefulness, the businesses need to look out for and raise the customer's attachment, innovativeness, as well as successfully find a way how to avoid risk (Rohm et al., 2012). When looking at Europe, the greater the risk of customer's privacy being affected, the lower the perceived usefulness was recorded (Rohm et al., 2012).

Companies also have to keep in mind that content usefulness differs from one person to another, and therefore will also perceive mobile marketing as useful differently from each other. Therefore, when creating an advertisement and choosing the form of marketing that is going to be done through mobile devices, business have to carefully look at the usefulness of their applications, content, and further activities when reaching

their target audience (Amin et al., 2011). When comparing U.S. with China and Europe, U.S. indicated a greater level of need for usefulness of the content they receive through the advertisements, as compared to others (Rohm et al., 2012). They also faired higher in the number when it comes to personal attachment to their small electronic devices, as well as having a greater acceptance of mobile marketing in general (Rohm et al., 2012). Nevertheless, companies must not forget the extent of their marketing activities which can lead to irritation and making it simply burdensome on the customer, even if the content does prove to be useful to them.

Mobile marketing will be more accepted by customers not just in U.S., but in Europe, China, and other places, when the customers feel that their fulfillment for useful information is satisfactory, important knowledge can be obtained through it, and that marketing activities are more socially accepted (Pousttchi, 2009).

2.2.2.1 Convenience

Convenience has closely become a synonym with mobile devices throughout the years, as customers find it easier to carry their small electronic devices around with them, can use it at any given point in time or location, and can access other information through them while on the move. This helps customers perform a broad range of functions regardless of the time or the place they are at, and consequently reduce their cost and their time spent on one activity (Smutkupt et al., 2011).

Convenience was seen as an important value factor when customers were looking at the utilitarian use of mobile devices, especially within financial services, such are payments made through the smartphones and other small electronic devices (Ström et al., 2014). This value, as discovered by Ström et al. (2014) could be increased through customization and personalization of the small electronic devices, consequently also increasing the competitiveness of retailers who are looking into using mobile devices to conduct their business transactions. This convenience, as well as the safety concern of the customer's data, prompts the businesses to simplify their input and output methods while doing transactions (Ström et al., 2014).

Ease of Use: In order for something to be convenient, that something also needs to be easy to use. As humans subconsciously prefer things that are simple and that do not require a great deal of brain processing, they will almost always tend to lean away from

complicated things, whether that be in technology, innovation, relationships, school, or work. Which leads to defining perceived ease of use as anything that does not require a great deal of effort from the customer to do something (Pousttchi, 2009). When referring to the marketing practices, the ease of use refers to how easy is for customers to receive marketing advertisement messages, how manageable are those messages, and can they work within the scope of the limitations of the small electronic device on which the advertisement was received (Carroll et al., 2007).

Both the perceived ease of use as well as the perceived usefulness of the technology, both from the customer's point of view, are two direct external variables that influence whether the customer will use such technology, and thus consequently influence them in being more accepting towards mobile advertising (Pousttchi, 2009). The more the customers find these devices easier to use, the greater the acceptance of newer technologies (Yang et al., 2013). Likewise, if the customers already have some prior experience with the said or similar technology, which they associated with being easy to use and being useful, then their acceptance of newer technology will also go up (Taylor and Todd, 1995).

Shopping across multiple channels, whilst being at a point-of-sale, and getting all the information, such as coupons, discounts, reviews, price comparisons, on the customer's small electronic device makes the shopping experience easier and less time consuming (Persaud and Azhar, 2012). Creating this opportunity, also places a greater value on marketing, but it needs to be more closely observed with newer technology, as this opportunity gets stronger when it is placed within smartphones, rather than traditional mobile-cellular telephones, which offer only text messages and calling as a form of marketing practice. Smartphones go beyond those two capabilities and offer a wider array of marketing practices that can help customers find an easier way to communicate with the businesses and track down the needed information.

One thing needs to be observed when looking at the ease of use factor, and that is the age group of the customers who are determining how easy it is to use a certain technology and thus be more open towards mobile marketing. As older generations will see technology as an intricately more complicated being, their ease of use variable will be lower than the younger generations who have a better understanding of how most

technology works, especially mobile devices with which they spend most of their awake time with.

Localization: Localization looks at the geographical location of the customer's mobile device, and thus determining the location of the customer who uses that mobile device. The first mobile-cellular telephone that offered location-based services, and thus opened up doors to mobile marketing, was the Palm VII that was introduced to the market in 1999 (Kaplan, 2012). While the first mobile devices offered only simple services based on location such as weather forecasts and traffic reports, the newer services combined the initial services and added also the capabilities to find restaurants, other mobile devices, get directions, order food, get location-specific games and many other similar services.

Studies have shown that advertisement based on location are more likely to be 5 to 10 times higher in click-through rates, as compared to advertisements found in traditional media and those found on the Internet (Oh and Xu, 2003). Since customers are entering the retailing industry, identifying their location becomes one of the key factors in mobile marketing (Shankar et al., 2010). When talking specifically about retailing industry, identifying the location of the customer's mobile device, and thus the customer itself, creates more of a two-way communication channel, rather than a one-way channel. A customer can either communicate with the company and get information about the wanted product and the nearest store to the mobile device, or the company can see which customer, or group of customers, is in the vicinity of a store, and then send useful information, to those mobile devices, and present them with a listing of products, their prices, qualities, as well as discount offers and coupons (Shankar et al., 2010).

As location-sensitivity is not a new term, but has been used as one of the primary factors in marketing, as with retailing (Inman et al., 2009; Ozimec et al., 2010), so with demand forecasting (Yang and Allenby, 2003), it is thus today able to use technology such as Bluetooth, GPS, GSM, and RFID (Radio Frequency Identification) to enable companies to locate a mobile device at a specific place (Kaplan, 2012). Kaplan's (2012) study also makes a distinction between applications that are location sensitive but not

space sensitive, referred to as space-locators, and applications that are time sensitive but not location sensitive, referred to as quick-timers.

Information that is based on the location, whether that be weather forecast, friend tracker, food order, nearest retail store, or anything else, has been proven to influence consumer behavior. Customers who receive information about the discount offer on their favorite brand in the nearest store have seen to create a positive effect as that information is seen as very valuable for them (Barnes and Scornavacca, 2004). On top of that, localized information can also help in situations when a customer with visual impairment finds itself in an unfamiliar situation, speech data can guide the customer to the desired location. Location-based mobile marketing is seen as highly interactive, as compared to traditional marketing methods, and it is also regarded as vastly context-specific, ubiquitous, and very personal (Persaud and Azhar, 2012). Therefore, location-based mobile marketing can easily be the frontrunner in mobile marketing, because of its ease to share information about products and service with other people, and thus creating a stronger brand value and relationship between the customer and the company (Persaud and Azhar, 2012).

Ubiquity: Mobile devices, and mobile-cellular telephones and smartphones, in particular, along with other technology are some of the things that have become ubiquitous, and as such, it is generally more accepted that they are everywhere, as opposed to them not being everywhere. Ubiquity is seen as one of the main advantages of small electronic devices, as they enable customers to receive information and perform transaction at any point in time, at any location, and do so when it is most beneficial for them. Perceived ubiquity, or flexibility of the mobile device in terms of time and place, plays an important role in mobile communication and can directly affect customer's trust of the company and its advertisement, as well as its perceived risk (Okazaki et al., 2009). When looking at coupons, which traditionally have been paper-based, consumers can track them through their mobile applications, specially designed for coupons, which automatically sorts the coupons by certain categories and needs, and can be easily brought out to surface when it is time to redeem them at the store. This feature enables the customer to search through their collected coupons ubiquitously at

any time or location and redeem them without the hassle of collecting and sorting out paper coupons at home (Liu et al., 2015).

The convenience of mobile ubiquity helps customers overcome three major constraints as listed in Hägerstrand's study (1975), and reiterated in Okazaki's et al. study (2009). One constraint being coupling, which requires from the customer to be at a specific place and time; another constraint being capability, which refers to the customer's ability to overcome the spatial differentiation between them and the product; and last constraint being time-space zones, which refers to the specific times of when the company is opened where the customer's desired product is located (Hägerstrand, 1975; Okazaki et al., 2009).

The convenience of the ubiquitous nature of mobile devices and its technology relates to the convenience of time, place, and execution, which helps customers do what they need to do at a convenient time and place, and do their transaction in a convenient way (Yoon and Kim, 2007; Liu et al., 2015). Nevertheless, the perceived ubiquity does raise concerns over the customers' feelings of increased anxiety that this ubiquity in one way leads to the collection of the customer's personal information without their awareness (Okazaki et al., 2009).

Due to the personal nature of the mobile devices and their ubiquitous nature, the interactivity of the customer with the company can be established anywhere and at any time, but it has been shown that even with this benefit, companies need to keep the customer in mind first before anything else (Barnes and Scornavacca, 2004).

2.2.2 Mobile marketing services

As mobile marketing is gaining popularity with technology more evolving and the acceptance rate of marketing through small electronic devices going up, the services offered on these devices as a form of marketing keep expanding day by day. Some of these mobile commerce tools are more widespread in one country and less in another, and as technology evolves so does mobile marketing. Which is to say that mobile marketing has yet to discover its full potential, and the services it is able to offer through the small electronic devices have yet to be all realized and exploited.

2.2.2.1 Voice

Voice as a marketing service is the simplest form of marketing that has been present since the invention of telephones. As the name pertains, voice marketing service refers to the company calling the customer, or vice versa, and making their business transaction or inquiry through the telephone line. Voice marketing can be tracked through several ways, and as it has been recorded before, the acceptance of mobile marketing has seen that voice service quality presents itself as a dependent variable which was observed with Chinese customers (Qi et al., 2009).

Other than the company directly calling the potential customer and offering them products or services that might benefit them, there are other types that do not always involve a human being sitting on each side of the line. Companies calling potential customers to their personal mobile-cellular telephones or smartphones, tends to be intrusive and irritating if the customer did not know beforehand that the phone call is going to happen. Cold calling has been present for a very long time, and is one of the primary reasons why the acceptance of mobile marketing is slow and somewhat lagging behind other marketing mediums (Chowdhury et al., 2006).

To minimize costs, companies also found another way to perform voice marketing, and they do so by having an automated speaker on the other side of the telephone line when the customer willingly calls the company to conduct their transaction. Many companies, ranging from banking sectors, insurance companies, universities, food deliveries, are utilizing this self-service technology (Hsieh, 2015). This type of self-service technology, called, interactive voice response (IVR) system, is used by companies to do customer surveys, perform customer billing inquiries, and customer orders, among others (Hsieh, 2015). One such example, are the telephone lines that are used in the banking industry, where the customer can call a specific number given prior by the bank, and would get an automated bank teller that will lead the customer through each step of the process to help them solve their issue (Ahmed et al., 2014). If the issue cannot be resolved through the automated speaker, the phone call gets directed to a real human being waiting on line to help the customer. Things like changing the PIN code on the card, getting information about the nearest branch, opening a new bank account, and several other features are offered through these automated bank tellers. Even if the customer wishes

to speak directly with a human bank teller, the system is set up so that the customer first gives its personal information, before speaking to them. Information such as the customer's name, four digits of their card number, their place of birth, and an answer to a security question, are some of the questions that get asked at the beginning of the phone call. This then helps minimize the work that the human bank teller needs to perform during their phone call with the customer, as they can have all that information ready beforehand and focus more on solving the current issue on why the customer called the bank in the first place. As it not only saves time for both the customer and the bank teller, but it also helps open up ampler time for other customers throughout the day that the bank teller can help.

There are a few other types of how voice can be used as a marketing practice. One such way is using voice recorded greeting cards that can be bought either in brick-and-mortar or online stores and then gifted for various occasions, such as birthdays, anniversaries, weddings, and many other. The greeting card comes with a prerecorded voice message and plays when the card is opened. Similar type of marketing with a voice recording is the mobile voice greeting cards that are accessible through the customer's mobile device and use the interactive voice response system to deliver the message (Pousttchi, 2009). These interactive voice messages are often combined with a text message that inform the customer of the greeting card (Pousttchi, 2009).

Another type of voice marketing practice are toys and stuffed animals that the customer can purchase at selected stores and can either get a prerecorded voice message or record the message themselves and at the press of a button on the toy, the voice message gets played. The first talking doll can be linked back to 1959, by the name Chatty Cathy Doll, which had a string on its back that the user could pull and it would utter selected 11 phrases (Fowler, 2015). Newer versions of talking toys do not solely rely on the toy's small number of prerecorded messages, but now they are able to use the external technology for its own advancement. Hello Barbie, is a type of a doll, that the user can talk to, and that speech gets recorded, sent to a cloud database, using the customer's Wi-Fi network, and then trigger a prerecorded response that is then sent back to the doll and played for the user to hear (Fowler, 2015). Another type of doll, called My Friend Cayla, that came out before Hello Barbie, instead of the customer's Wi-Fi network, it uses the

customer's mobile device to access the messages (Fowler, 2015). The Dino toy, made by Cognitoys, is perceived as perhaps a more advance type of a talking toy, as it uses the customer's Wi-Fi network to connect to IBM's Watson supercomputer and pulls out information from the said cognitive system and therefore, is capable of having a more open-ended conversation with the user (Fowler, 2015).

2.2.2.2 SMS

With the invention of mobile-cellular telephone, so did the short message service (SMS) came to existence. It did not take too long for marketers to realize how this service can be utilized also for marketing purposes for their business transactions. Companies would put up phone numbers on their advertisements, which then enabled willing customers to contact the company to get more information about a product, service, or any other question they may have (Okazaki, 2005). This form of advertising created a valuable communication channel between the company and the customer, that lead to the strengthening of their relationship and the company's brand value (Frolick and Chen, 2004; Okazaki, 2005). This all became possible because of all the technological advances and greater acceptance of mobile technology around the world. As mobile device manufacturers are lowering the prices of their devices, and the network providers are working on improving their voice and data transmission, it helps the expansion and growing of the number of mobile-cellular telephone and smartphone users (Sanakulov and Karjaluoto, 2015).

It is also important to point that that the acceptance of wireless technology, and therefore, SMS technology and its marketing, does have a close dependent relationship with the cultural aspects of one's country (Tse et al., 2004; Mao et al., 2005; Muk, 2007).

Short message service is most commonly found in the mobile banking sector, where there are two types of short messaging services that the banks offer – the push and the pull SMS (Ahmed et al., 2014). The push SMS refers to a time when the bank sends a text message to the customer, without the customer making any prior requests to the bank (Ahmed et al., 2014). These messages that the bank sends to the customer are customarily related to any unusual activity going on the customer's bank account. Sending a temporary short code to the customer when the customer is using an online

service, either by making an online payment while shopping, or simply by accessing their online bank account profile, the bank sends a temporary short code to the customer to verify whether they are the genuine bank account holder. These short codes are called one-time passwords (OTP), made only to be valid for one single entry, and they are constructed to protect the customer's money and minimize the chances of hacking into the customer's account (Naren et al., 2017). The pull SMS, on the other hand, refers to a service where the bank designates a particular short phone number on which the customer can send a short code via a text message inquiring about their account information, or other unrelated information, and then the bank replies to that message in the same form containing the customer's requested information (Ahmed et al., 2014).

Short message service (SMS) though it has it perks, it also has its downfalls, as only text messages containing up to 160 alphanumeric characters can be delivered once at a time. In addition to that, most marketing campaigns charge an extra fee for the SMS service that they use in their marketing practices, which tends to be higher than the network provider charges for regular text messaging using SMS.

2.2.2.3 MMS

With the introduction of 2.5G and 3G networks to mobile devices, the adoption of multimedia message service, and consequently MMS-based marketing campaigns, has gained a significant following (Okazaki, 2005). As per customer's demand that wanted more interactive and versatile service from SMS, MMS was constructed and was able to offer, on top of the regular text messaging service, also graphical data and multimedia objects, such as images, short clips, and audios, to be sent through a mobile device. This way, with the help of MMS technology, customers were able to build more attractive messages, and overcome the limitation that pertained with SMS's limit of 160 alphanumeric characters within one message (Scharl et al., 2005). Alas, SMS still maintains it preferred position within customer's selection, as MMS faced several problems with its development and expansion. As SMS does not face mobile device compatibility, it is able to send and receive text messages regardless of the small electronic device's model or its configuration. On the other hand, MMS requires more advanced configuration and could not initially send and deliver multimedia messages through various small electronic devices without facing the problem of mismatched

messages, failed-to-send messages, picture formats looking awkward, as well as missing fonts on the receiver's mobile device, and several other compatibility issues (Yunos et al., 2003). With the introduction of smartphones, MMS has gained a stronger following and has gradually started being accepted by a bigger number of people, as problems with device's model compatibility started to slowly fade away. Other than sending a message directly from a mobile device to another mobile device, MMS is also capable of being sent to the receiver's email, which the receiver gets notified by its network provider that there is a message waiting on them.

Some of the reasons why customer might choose to use MMS over SMS are listed below:

- When a customer wishes to send a greeting message, like a birthday message or a congratulatory message, instead of writing a full long message which takes time, a customer can record a short audio in far less time and send that instead (Lee et al., 2007).
- When customers who wish to get in touch with their friends, they can send graphical icons and smileys to get their attention, instead of writing long and unamusing text-only message (Lee et al., 2007).
- When customers who are traveling wish to inform their family and friends of how they are spending their time, they can record a short clip, or take a picture and showcase those on the spot (Lee et al., 2007).

Lee's et al. (2007) study also concludes that in order for a customer to use multimedia message service, there has to be a perceived enjoyment variable behind it, along with perceived usefulness and perceived ease of use. Since MMS messages can consist of various graphics, audios, and other multimedia objects, it brings out the creativeness in people and the delivery of the message's intent tends to be more effective as it can describe better of what the sender of the message wants to say. Nevertheless, the key to success to both SMS and MMS utilization is that companies, who wish to perform marketing activities through these two services, need to first obtain customer's permission before starting any marketing campaign through these two services (Li and Stoller, 2007; Barwise and Strong, 2002). Taking into account the massive spread of

mobile devices in today's world, sending unsolicited messages has also gained a momentum and has started to become intrusive and irritating by the majority of customers, so many countries have enacted several laws that prohibit contacting customers without obtaining their permission first (Li and Stoller, 2007; Barwise and Strong, 2002).

2.2.2.4 Location Based Commerce

One of the advantages of mobile marketing as compared to other traditional media marketing is that mobile marketing can be independent of the location where the customer is and still function to its full potential. However, though the customer does not need to be at a specific place or time to receive a company's advertisements, the customer's mobile device location, and thus the customer's location as well, can be used to offer a different kind of mobile advertisement. While the traditional media pulls the customer towards itself to be at a specific place and time in order to receive the advertisement, with mobile marketing, the customer is the one pulling the company towards its own place and time and asking for the advertisement to be brought to them. Location Based Services (LBS) can thus be offered to customers who wish to get localized information about the new products and services through their mobile devices at their own convenience (Sharma et al., 2015). Typical features of location based services are emergency evacuation, mobile check-in services, and advertisements based on the customer's locations (Zhou, 2013). Global Positioning System (GPS) integrated in the mobile devices is one such technology that is used for location based services, that can track the customer's mobile device and thus the customer itself. One fine example of the use of GPS technology inside the mobile devices is a marketing service offered already in 1996 by a taxi company in Singapore (Scharl et al., 2005). The taxi company prompted their customers to send a text message via SMS to inform any taxi drivers in their vicinity that they need a taxi, and then the company would use the GPS system in the customer's mobile device and track their location and send the closest taxi driver to them (Scharl et al., 2005).

Location based services within retail industry is another popular example of their usage and benefit. The customers who wish to use the location-based services on their mobile device can go directly into a mortar-and-brick store, upon which the retailers get a

notification of the customer's presence, and then proceed to send the customer discount offers and coupons that can be used in that specific store where the customer entered (Kang et al., 2015). Customers can also use their own mobile devices with built-in cameras and take snapshots of the barcodes of QR codes in the store to get price information, color availability, similar products on stand, and many other things. Location-based services in the retailing industry remains important, as 87% of customers who own any sort of mobile device, whether that be a tablet, smartphone, or a mobile-cellular telephone, use it for shopping and similar activities (Nielsen, 2014). A report by Leggatt (2014) states that 66% percent of U.S. shoppers are more inclined to shop at brick-and-mortar stores that offer location based service mobile applications if proven that they are useful for them. It is believed that these mobile applications deter customers from looking and being influenced by other stores, consequently raising the in-store conversion number and future customer retention (Siwicki, 2014, Kang et al., 2015).

Considering the late adoption of location based service, several researches have worked out possibilities of what affects adoption of the said service on mobile devices. Most of these studies were based off of technology acceptance theories, such as unified theory of acceptance and use of technology (UTAUT), as well as technology acceptance model (TAM), and the task technology fit (TTF) theory (Zhou, 2013). Building off of TAM theory, Junglas and Watson (2008) discovered that mobile technology's perceived ease of use and its usefulness does affect the adoption of mobile device's location based services. Junglas et al. (2008) also looked at the TTF theory and discovered that its task characteristics and technological characteristics that affect customer's mobile technology adoption, also are connected to customer's adoption of location based services. Looking at the location sensitivity and the mobile device's mobility and its detection, the TTF theory correlates with customer's LBS acceptance (Junglas et al., 2008). Lastly, UTAUT theory was examined by Xu and Gupta (2009) and they too have found out that UTAUT's theory of effort and performance expectancy, along with personal innovativeness, does affect customer's approval of location based services.

In addition to all these variables that influence the customer's approval of location based services, that are based off of information technology acceptance models, some

researchers have found out other alternatives unrelated to these models. Those variables being the conditional, convenience, and monetary values, as well as location based advertisements used with multimedia (Pura, 2005; Xu et al, 2009).

The customer's adoption of location based services, as compared to other popular mobile marketing practices, is conversely lower, which does raise questions on what affects customer's behavior to accept these services (Junglas and Watson, 2008). As location based services may improve customers' experience and can present them with the finest information and services, it does at the same time raise concerns over the customers' privacy and the perceived risk security with these mobile applications (Zhou, 2013). Kofod-Petersen et al. (2009) reports that customers are less likely to use location based social media and network services, because of concerns over their privacy. Several other researches point out various other variables that affect customer's perceived risk and security and thus further determine whether customers are willing to use any location based services. Some of those variables include proper government regulations, as well as the industry's own self-regulation, and appropriate compensation for the usage of these location based services (Xu et al., 2009).

As with most mobile marketing services, location based service faces customer's uneasiness with its usage on their mobile devices which they perceive as very personal. Nevertheless, with proper control and companies facing directly the issues at hand, while keeping in mind the fretfulness that customers have while using their applications, location based service is steadily raising in acceptance numbers.

2.2.2.5 Near Field Communication and Radio Frequency Identification

Radio frequency identification (RFID) is one of the many technologies related to the Automatic Identification and Data Capture (AIDC) system (Fosso and Boeck, 2008). It uses radio waves to identify hardware tags, called RFID tags, that are placed on specifically chosen items and contain electronically stored information about the selected product or service (Tsao et al., 2014). Such technology can be used to get product or service information, such as their price, availability, purchase options, categorization, and additional information. When a customer who has an RFID reader reads an RFID tag, that is attached to the desired object and which does not have to be in customer's direct line-of-sight, it does so in a contactless manner and the information

is sent directly back to the reader, or interrogator that can be then examined at the customer's convenience (Bahr and Price, 2016). RFID tags come with an integrated circuit or chip inside of them, that is commonly called the brain of the RFID tag (Banks, 2007), and they are used for the communication between the tag and the RFID reader, as well as the data storage (Bahr and Price, 2016).

RFID tags come in all shapes and sizes, but its technology has not yet fully been utilized equally by all countries. Japan and South Korea, in particular, distribute mobile devices that already come equipped with radio frequency identification technology, and have been doing that since as early as 2007 (Ondrus and Pigneur, 2007). Nevertheless, countries around the world are seeing the potential in this technology and electronic information retrieval and are thus investing a great deal of money for its implementation and further development (Tsao et al., 2014).

Near field communication (NFC) is a similar technology to RFID, and what makes it different from the aforementioned technology is that it is primarily being used with mobile devices. That is to say, mobile devices that have short-range wireless connectivity standard installed in them, can undertake the role of an RFID reader or RFID tag. Thus, near mobile communication enabled mobile devices can be used as a contactless card by using the magnetic field around them to communicate (Sharma et al., 2015). Unlike other wireless technologies found within mobile devices, like Bluetooth and Wi-Fi, the NFC enabled mobile device, does, however, need to be brought within a few centimeters of its other NFC enabled device in order for it to work (Ondrus and Pigneur, 2007).

NFC is made to work in three different styles (Ok et al., 2010):

- *Card emulation*: Mobile devices can be used as RFID cards, and other NFC readers can acquire data from it.
- *Peer-to-peer*: Two NFC-compatible devices can exchange data from one to another.
- *Reader/Writer*: Data is transferred from or to one NFC tag or smartcard and a mobile device.

The NFC technology is made to be intuitive and easy to use, so people of all ages, regardless of their previous technology knowledge, should find using near field communication technology fairly easy to navigate with (Lahtela et al., 2008). Some other advantages of NFC technology is that it works at a high speed to exchange information and it is good for convergence of online and offline information, thus helping customers get fast access and more information about their desired products (Palumbo and Dominici, 2015).

One clear benefit that radio frequency identification technology has over near field communication technology, other than not needing to be in a very close proximity of the reader, is that the aforementioned technology can be used when the quantities are high and the object is moving fast (Lahtela et al., 2008). Nonetheless, both RFID and NFC technologies can be successfully implemented and utilized for various other functions in industries such as logistics, retail, transportation, tourism, banking, and alike. Considering NFC heavily relies on international standards, it has the ability to be used by most, if not all, contactless cards in every country (Lahtela et al., 2008). Since near field communication technology aims to facilitate communication between various devices, not just smartphone with a smartphone, it helps reinforce the idea of using mobile devices as multi-tasking devices, and helps with further development of mobile computing (Ondrus and Pigneur, 2007).

2.2.2.6 Mobile Wallets

Mobile wallets are a new method for users to stop carrying more things with them and have everything at their fingertip available within one single device. Without worrying about losing other things, the users can just focus on keeping one object in their possession safe. Mobile wallet application can either be found on the customer's mobile device right after they purchase their device, or they can simply download the mobile application from selected online application stores. When the application is set up, the customer needs to enter their card information, and upon making purchases in stores, the customer just needs to choose which card to use and then hold it against the scanner to complete the check-out. Mobile wallets can thus be used for various purpose, some of which are digital identity, customized and geo-localized offers, couponing, vouchers, loyalty cards, ticketing, and mobile payment in general (Palumbo and Dominici, 2015).

Some of the more well-known mobile wallets are Android Pay, Apple Pay, Samsung Pay, plus the majority of banks in developed countries have their own personalized mobile wallet application.

Making a payment with the customer's mobile device is one type of mobile marketing service where there is an uneven employment of it throughout the world. Asian countries tend to fair better than other countries, as they have been seen implementing mobile payment practice for at least ten years. Mobile-cellular telephones and smartphones have been made to use as payment method for various things, transportation, vending machine and convenience store purchases, are just among many others that were made available during this time period (Ondrus and Pigneru, 2007).

What makes this mobile marketing practice thrive in Asian countries, and less in Europe and U.S., is the technology that is being implemented in the mobile devices before the customers even purchase the devices (Ondrus and Pigneur, 2007). Nevertheless, mobile payment is growing in numbers, and according to a Forrester's report on US mobile payments, it is expected for the payments to reach $142 billion by 2019, which is a jump from $52 billion in 2014 (Carrington et al., 2014). This breakthrough has been made possible because of the ever-growing smartphone acceptance and their usage in everyday activities. With the adoption of this method of payment for products and services in developed countries, researchers expect that it would reflect itself also on developing countries (Aydin and Burnaz, 2016). Another study by Commonwealth Bank in Australia predicted that within the next five years, smartphones will replace most of the physical payment methods, and it is believed that in order for this transition to fully work, both players from both sides of the market would need to learn how to cooperate and coexist (Bott and Milkau, 2014).

Mobile wallets' primary two tasks of information gathering through the customers' mobile devices, and the proximity mobile payments, where a customer needs to be close by an NFC reader in order to make a payment, have seen to be strongly influenced by customers' perceived risk and its benefits (De Kerviler et al., 2016). Though both tasks are influenced by mobile wallets' perceived benefit and risk, the information gathering through these applications is seen as less fearful by the customers as they seem to be familiar with these types of functions (De Kerviler et al., 2016). On the other hand,

making purchases and paying with their mobile device is not yet common among customers and thus, the mobile wallets need to provide a clear value and benefit of their usage in order for customers to be more accepting of them (De Kerviler et al., 2016).

2.2.2.7 Mobile Web Pages

Pages found on the global WWW network were not always made to be accessible and, therefore, readable through mobile-cellphone telephones and smartphones, much less for other mobile devices. The screen sizes were exponentially smaller than desktop computers and laptops, and the complexity of each web page kept growing with each year, much of the objects presented on these web pages would not be supported by the mobile device's hardware. Since it was difficult for customers to fully view web pages on their mobile devices, a new technology, Wireless Application Protocol (WAP), was developed to help overcome that problem (Roto and Kaikkonen, 2003). At the beginning, these web pages through WAP were only made possible to be seen through the customers' mobile devices, and not through their desktop computers and laptops (Roto and Kaikkonen, 2003). However, today, it is possible to view both the mobile version and the desktop version on the desktop computers, though, customers might prefer to keep them separate in order to have a better view of the information given on the web pages. It has been reported that customers in the U.S. spend more time on mobile web browsing and less on desktop web browsing, with 3.1 hours per day per user spent on mobile web browsing, and only 2.2 hours per day per user spend on desktop web browsing (Meeker, 2017). Though the customers are spending more time on mobile web browsing, and the number of people using mobile devices is growing, the complexity of web sites that businesses make still far surpass the capabilities a mobile web pages (Zhu and Reddi, 2013). The loading time of the web pages on customers' mobile devices is one issue that causes companies to lose money, and that number can go as high as $2.5 million in lost sales in a year even for a one second delay in the loading time of the web page (Kissmetrics, 2011). With just one second delay in loading web pages on the customer's mobile device, it can cause the company a loss of 7 per cent in conversion (Kissmetrics, 2011), and with slower loading times, customers tend to quickly abandon those web pages and move to something else (Zhu and Reddi, 2013).

When creating a web page for a mobile device, companies have to not only look at the layout of their page, but also take into account a different method of payment, different advertisements, different search engines, and other things alike. It is important that the companies create a website that customers can use in order to search for information, use it for comparison of products and its prices, and fundamentally use the web page as a primary channel for their transactions (Shankar et al., 2011). Globally, customers have already surpassed the number of desktop usage compared to mobile usage, and that number is slowly, but surely being reached by the Bosnia and Herzegovina, Croatia, Montenegro, and Serbia, with Bosnia and Herzegovina reaching it the fastest out of the four (StatCounter, 2017).

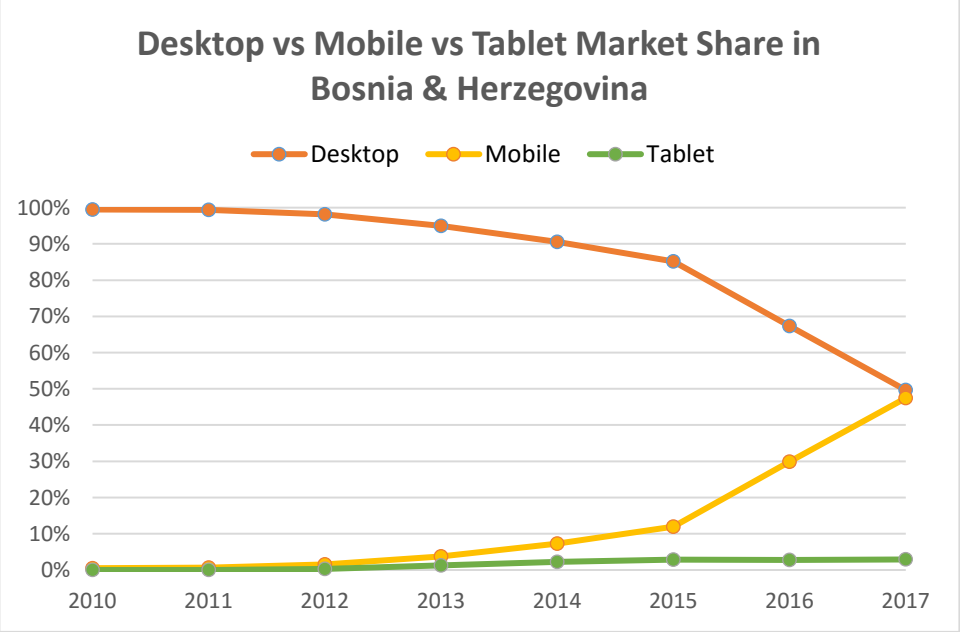

Figure 2.2: Desktop vs Mobile vs Tablet Market Share in Bosnia and Herzegovina

Bosnia and Herzegovina, as seen in figure 2.2, and comparing to figure 2.3 and figure 2.4, seems to be the fastest to switch between desktop web page viewing and mobile web page viewing, with 49.97 per cent of consumers in May 2017 choosing mobile over 47.19 per cent choosing desktop (StatCounter, 2017).

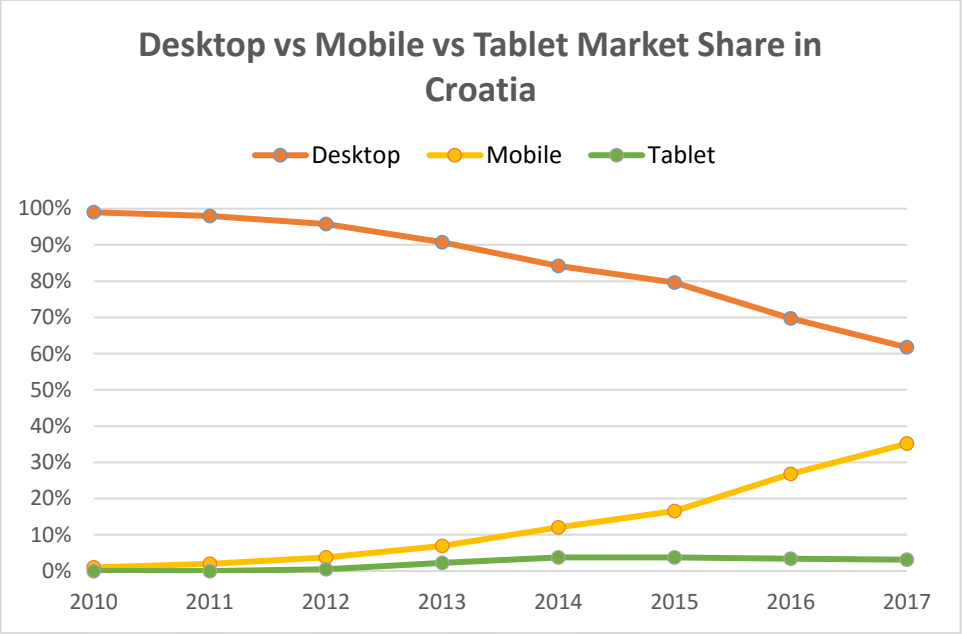

Figure 2.3: Desktop vs Mobile vs Tablet Market Share in Croatia

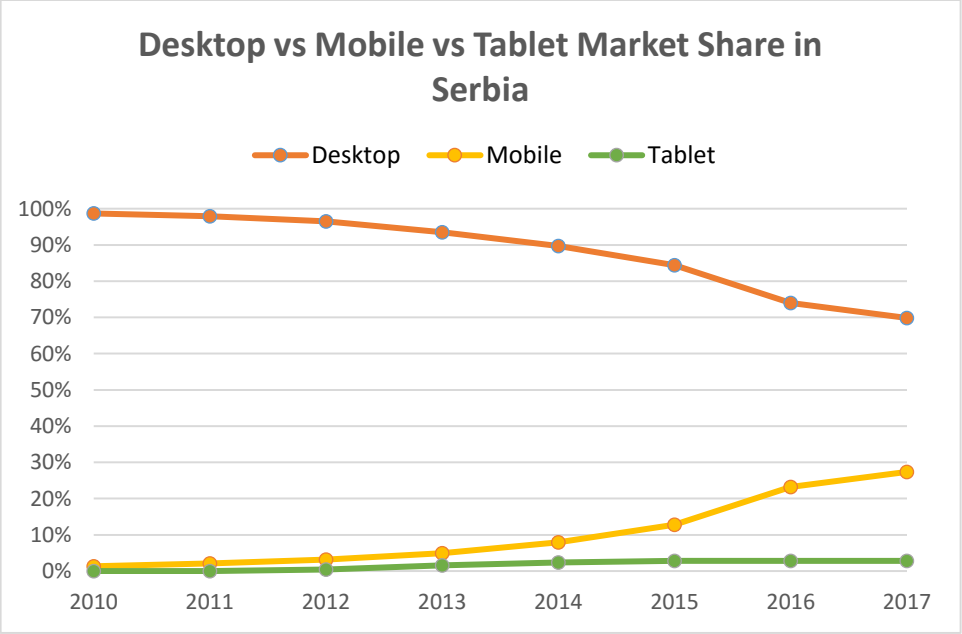

Figure 2.4: Desktop vs Mobile vs Tablet Market Share in Serbia

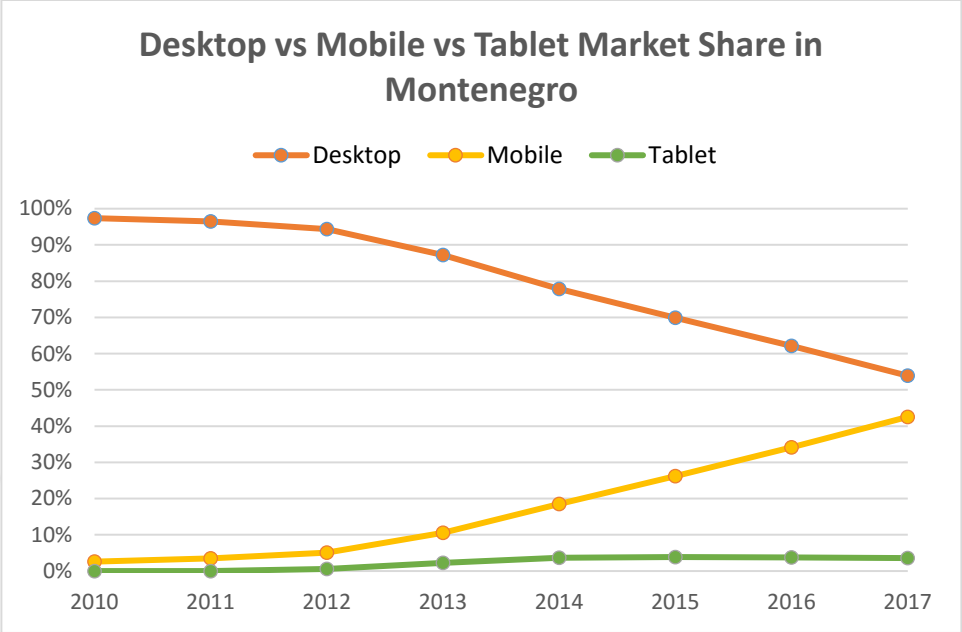

Figure 2.5: Desktop vs Mobile vs Tablet Market Share in Montenegro

According to figure 2.5 Montenegro's mobile market share seems to be steadily raising with each year, and it looks like the second country out of the four who will switch desktops with mobile. The statistics show that already in May 2017, desktop market share went down to 50.95 per cent, while mobile market share went up to 45.48 per cent, and it is expected within the next two years, it will surpass it (StatCounter, 2017).

Looking at the latest statistics, companies need to see the urgency of creating web pages that are more compatible for viewing on mobile devices, as customers are spending a good amount of their awake time with their mobile devices. Cisco's Internet Business Solutions believes that retailers could increase their sales by as much as 19 per cent in three years, if they utilized their mobile device to its advantage (Shankar et al., 2011).

As with standard business web pages, to reach those pages, customers first need to select a search engine that will help them find the websites they need, if they do not know the full name of a website. Google has already made a report back in 2015 that its search engine is being used more on mobile devices than it is used on desktop computers and laptops (Sterling, 2015). With this report came about many improvements and optimizations for better viewing of their own pages, but also others as well. Some of those improvements being new ad formats, new and offline

measurements, new automation tools for both the searched and the displayed ads, and better view of store visits (Sterling, 2015).

2.2.2.8 Mobile applications

Mobile-cellular telephones and smartphones have become a ubiquitous gadget that are being carried with the customers nearly at all times. Thus companies and its marketers had to find a way to adapt their marketing practices and focus on what is best for representing their company through mobile devices. Applications industry has been revolutionized in the last decade and software download system has changed tremendously throughout these years, all with a goal to simplify the process of downloading and obtaining these third-party applications (Leontiadis et al., 2012). The industry already in 2013 was worth over $50 billion (Ghose and Han, 2014), and in 2016 it recorded a revenue of $88.3 billion worldwide (Statista, 2017). The revenue number is expected to grow up to $188.9 billion by 2020 with the help of app stores and in-app advertisements (Statista, 2017).

App stores are specialized third-party digital distribution platforms that collect all available applications on the Internet and offer them to their users for download either for a certain fee or for free. The two most popular stores are Apple's App Store and Google Play Store, with Google Play store leading in number of applications available, with 2.8 million of available mobile applications recorded in March 2017 (Statista, 2017). Some other popular app stores are Amazon's App Store, BlackBerry's App World and Windows Phone Store, which is steadily growing in number of available applications in their store.

These mobile applications are made not just in order to simplify the customers' use of mobile device, but also the customers' lives. For them to be accepted by the major public, the mobile applications should be innovative, user-friendly despite which mobile device is using the mobile application, and they should provide proper solutions for what they are originally meant for (Varnali and Toker, 2010).

Some of the highly downloaded mobile applications separated into their purposeful categories (Krum, 2010):

- Business Productivity: cloud hosting, checklists, alerts, schedule organizers, file sharing, voice recording
- Educational: foreign languages, maps, tutorials, dictionaries, calculators, flash cards, books
- Financial: personal and business reports, bill payment reminders, tracking of account balance, consolidation of cards and bank accounts, mortgage calculators
- Lifestyle: running maps, drink mixing, calorie counters, nutrition facts, restaurant search, barcode scanners
- Mobile Device Utilities: flash, battery savers, extra security, currency and unit converters, mobile device usage statistics, syncing
- Multimedia: image editing, music, radio, musical instruments, audiobook players, TV watching, magazine and e-book readers
- Navigation and Travel: road maps, trip schedulers, bus, train, and airplane time trackers, delays in transportation, currency exchange locators, traffic locators
- News and Entertainment: game highlights, sport scores, celebrity gossip, games
- Shopping: price comparisons, grocery lists, virtual trying on clothes before purchase, gift shopping and delivery, couponing, holiday spending trackers
- Social Networking: Facebook, Twitter, Tinder, Yik Yak, Pinterest, Periscope, WhatsApp, Viber, LINE, WeChat, Snapchat, Vine, Tumblr, LinkedIn
- Weather: weather forecasts, alerts, allergy zones, past and future weather maps, moon phases, star visibility time

With applications showing up right and left, it comes as no surprise that mobile applications are dominating over mobile browsing.

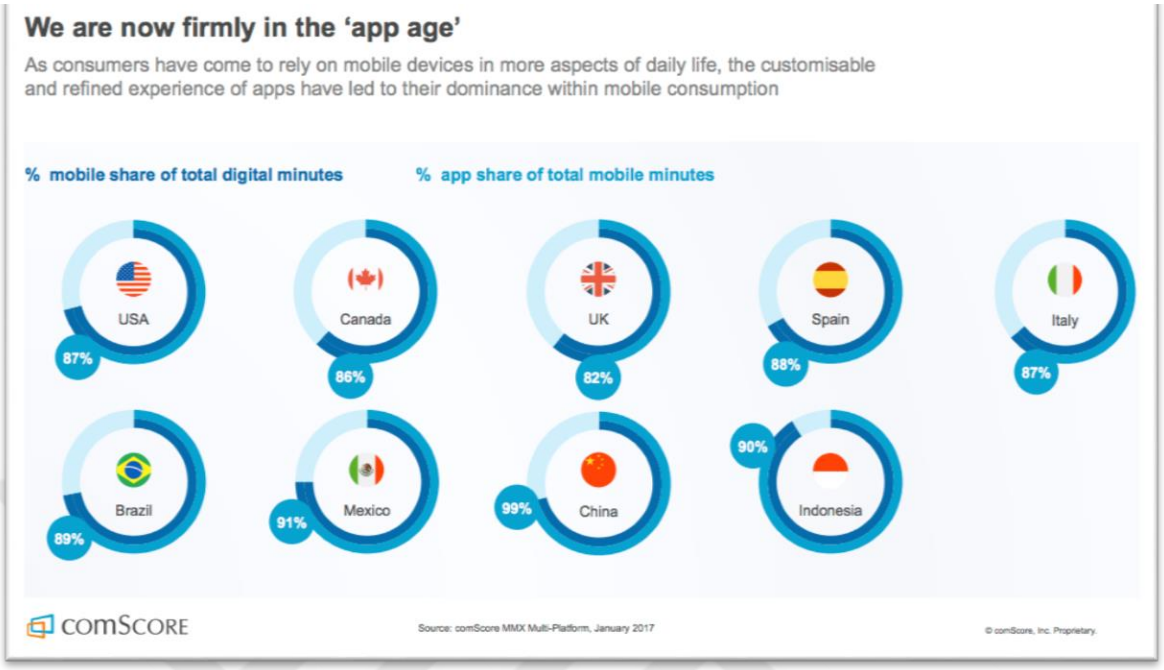

Figure 2.6: Percentage of App Usage Share vs Mobile Minutes' Share (Adam, 2017)

Looking at comScore's report from January 2017, shown in figure 2.6, customers all around the world are spending a very large number, if not all, of their mobile minutes on mobile applications.

According to another report, made by Flurry (2015), customers are spending 90 per cent of their time on mobile device on mobile applications, with Facebook leading in percentage with 19 per cent, and entertainment mobile applications being second with 17 per cent.

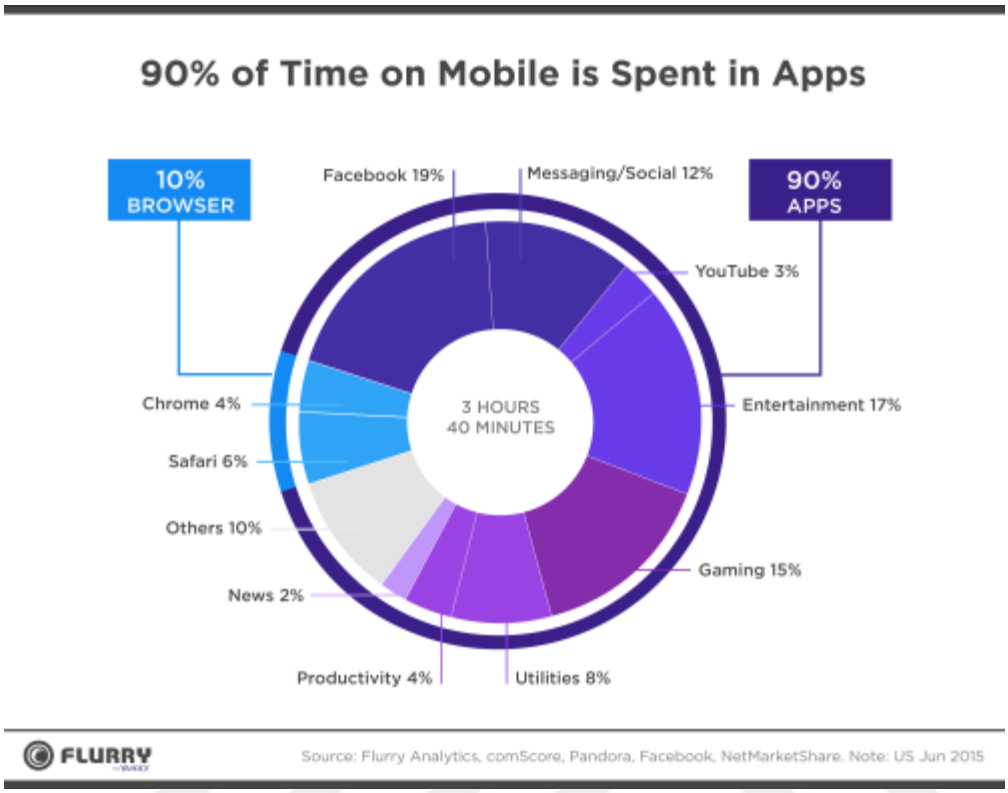

Figure 2.7: Mobile App Minute Spending on Each Category (Flurry, 2015)

These number point out that companies needs to think carefully before deciding on whether to create an application that is specific for a mobile device, or should they create optimized mobile web sites (Chaffey, 2017).

2.2.2.9 Mobile advertisements

Mobile advertisements come in all shapes and sizes, but their main focus is to be readable and understandable on the customers' mobile devices. However, businesses seem to be still somewhat lagging behind in accepting and creating these mobile advertisements despite the raising number of minutes spent on mobile devices. The year 2017 is expected to reach $223.74 billion in spending on mobile advertisement, and this number is predicted to double by the year of 2020 (eMarketer, 2017). Though all regions around the world are seeing positive increases in mobile ad spending, some regions, like Europe, and Western Europe in particular, are slower than the others, with Latin America and Asia-Pacific being the fastest in growing the amount of mobile ad spending (eMarketer, 2017). Google and Facebook are two of the strongest companies in the world that are leading the way each year with overall digital ad revenue gains,

with Google holding the top position with its earnings of $63.11 billion and Facebook being second by earning $25.94 billion in 2016 (eMarketer, 2017).

Although, mobile advertisements can be created to be shown on all mobile websites, they are most commonly found on social network websites, gaming sites, and information and news portals (Krum, 2010). That is to say, mobile advertisements are not explicitly limited to be shown only on company's own website, but can be used on any other site on the Internet. What makes mobile advertisements stand out from other digital advertisements, is that the mobile devices are relatively small in size, so they can only show one or two advertisements per page, whereas the website that the customer sees on a desktop computer can have multitude of advertisements (Krum, 2010). This mass of advertisements on a desktop has been proven to be less effective, as the customer cannot focus on too many things, so only the ad that interests them will catch their attention and the others will be ignored. While, on the other hand, the advertisement shown on a mobile device brings the customer's attention all to itself and can have a higher click-through and conversion rate.

In order to fully understand mobile ads, it is important to get an overview of the lingo, special terms, used behind these mobile ads. List of the most common ones are shown below:

- API – Application Programming Interface (API) is a type of programming language made specifically for applications that will be used on mobile devices. It is made such that it uses protocols and rules of programming that does not conflict with any of the mobile devices that use it.
- Ad Network – Ad networks are a type of company that buy out ads from companies and sell it to other companies who offer space on their website to showcase those ads.
- eCPM – Effective Cost per Mile (eCPM) is a term used to describe how much money does the company earn for every thousand impressions, which are basically clicks on a specific ad.
- CPA – Cost per Action (CPA) is the amount of actions that the consumer does after clicking on a specific ad, which then translates to the amount of money that

the advertiser pays to the publisher. These actions can include, registration, e-mail sign up, in-app purchase, and many more.

- CPC – Cost per Click (CPC) is the amount of money advertisers pay to their ad publishers for every click that the consumer performs on a specific ad.
- CTR – Clicks Through Rate (CTR) is the number of times an ad has been clicked overall, so how many impressions did an ad have since it has been developed and placed for public viewing.
- DNT – Do Not Track (DNT) is a specially designed http header, a signal, which requests ad publishers and their websites from tracking and collecting data from their consumers. This DNT signal has not yet been duly reinforced as consumers would wish to.
- Impression – An ad impression is a term used to see an overall view of how much exposure did a specific ad have, basically telling the advertisers how many people did their ad reach.

While there are many other terms and acronyms out there that are used for mobile advertising, it is important to realize that in order for the advertiser to reach their target market and achieve their return on investment, along with the ad publishers, it is in their best interest to familiarize themselves with at least the basic lingo of mobile advertising. Afterwards, depending on their need and long-term goal, the advertisers and publishers can dwell more into educating themselves with more complicated and advanced terms that will help them reach their full potential.

2.2.2.10 Social Media

Social media has become one of the most popular mobile marketing practices in the last few years, which stems from the fact that more and more people are hanging out on social media, and have thus come to accept social media as a form of an entity that is constantly present in their daily life.

With each era coming and going, social media has become the norm of communication today and companies have come to realize that without implementing any social media marketing plan they do not stand a chance in competing against others in this ever-evolving environment. Some social media websites, like Facebook, LinkedIn, and

Twitter have seen a rapid increase in registered users, and Facebook alone, if observed as a country, would be the third largest country in the entire world, standing only behind China and India (Saravanakumar and SuganthaLakshmi, 2012).

Social media has opened doors to reach out to a greater specter of consumers, and it has helped companies in having a more direct and open communication between themselves and the customers. However, as social media has become more available and transparent, companies also have to put up extra caution when marketing over social media, as any mistake made by the company can go viral in a matter of seconds. The amount of time it took the company to reach their potential customers via social media, if caution is not observed, then that number of customers or more can likewise be lost, if not even faster than gaining them. In order to avoid such blunders, companies are advised to know their target market well and to communicate with them appropriately so as not to damage the brand's image, but improve it and gain the customers' much-needed trust (Saravanakumar & SuganthaLakshmi, 2012).

Social media is described as a gathering place online using a conversational media to exchange ideas, opinions, and information among a group of people, all while observing as the same time their behaviors, attitudes, and practices using that conversational media (Safko, 2010). Weinberg (2009) also reiterates that statement that social media is a form of exchanging experiences, information, and perspectives on various topics via community oriented online websites. Using social media as a form of marketing for products, events, services, and others, has many benefits for the company, one of which is mentioned before and that is the number of people being reached is extraordinarily high. By using social media, marketers can also save a lot of money, as majority of social media platforms do not charge anything for opening an account, and thus the company can post information and make a profit without purchasing anything (Kaur, 2016). Another advantage of social media is that it offers marketers an opportunity to reach a selected market, which they predetermined in advance, rather than blindly trying to reach all customers out there (Kaur, 2016). On top of the aforementioned advantages, there is one more advantage that defines social media perhaps more than the others, and that is the ability to control the content on social media, therefore, having a higher

interactivity and thus giving greater access to the user to the vast information that is offered online (Kaur, 2016).

As there are advantages, there is bound be some disadvantages to social media, just like any other entity out there, though they are currently outweighed by the advantages. Nevertheless, the disadvantages are something that should not be ignored and should be carefully studied. Privacy and trust issues are on a rise in the last few years, and as social media is becoming more spread-out, and users share their and others' information a lot quicker and easier, they also are starting to realize the consequences of such actions. Trademarks and copyright issues are potential problems that companies need to look out for, as they can be misused when they reach social media and the online world in general, so the companies need to carefully monitor their trademarks and copyrights online (Kaur, 2016).

Bosnia and Herzegovina has an approximately 1.70 million social media users as of April 2017, and out of those 1.70 million, 1.40 million are active social media users via mobile devices (StatCounter, 2017). Facebook dominates the social media platforms, reeling in 98.96 per cent of users accessing its website, while the second position holds Twitter with less than 1 per cent, standing at 0.36 per cent of users accessing it (StatCounter, 2017). YouTube closely follows Twitter with 0.25 per cent, and Pinterest and Instagram hold the fourth and fifth position, with each standing at 0.17 and 0.15 per cent respectively (StatCounter, 2017). Tumblr comes in last out of the present social media platforms in Bosnia and Herzegovina, holding 0.05 per cent of totally social media users (StatCounter, 2017). Bosnia and Herzegovina has proven to be a fan of social media throughout every year since it was made available, and Facebook seems to take the cake as the leading social media platform. Marketing through social media in a country like this, does have the numbers to back up marketers' plans that they will have their returns on investment in the future.

2.2.2.11 QR codes

Quick Response Code, or QR codes in short, are another form of marketing that companies have implemented, but customers are not yet fully aware of it. QR codes are generally viewed and accepted as a form of a larger group of codes called barcodes, as are many other codes, regardless of their sizes and shapes used in their digital image.

They are a two-dimensional (2-D) matrix codes, digital images, and can store a large amount of data, unlike one-dimensional codes and even other two-dimensional codes (Denso, 2011).

QR codes, with the help of a mobile device, Wi-Fi, or Internet connection, and a QR reading application installed on the device, can be scanned with the mobile device's camera and then can deliver the information contained and stored in these digital images to the mobile device (Crompton et al., 2012). What is also special about QR codes is that they are generally smaller in size and square-shaped, so they take up less space, and can be scanned from either side, unlike traditional barcodes, which can be scanned only from the bottom up. Other than being square-shaped, QR codes need to have a good enough contrast between the darker colored shapes, modules on the image, and the whiter colored background, so as to work properly (Omerasevic et al., 2014). QR codes contain three small box-shaped position detection patterns placed in the corners of the image that help the information stored on the image be read at high-speed (Wave, 2010). What also helps QR codes being read so fast is that it is capable of restoring data from the image even if there is dirt on it or the image is somewhat damaged (Wave, 2010). QR codes can store all standardized encoding types, such as alphanumeric, binary, numeric, and kanji, and one symbol can contain up to 7,089 characters (Wave, 2010), which is to say that these codes can store 350 times more information than traditional barcodes (Cata et al., 2013).

As with the development of mobile technology, as are QR codes being more frequently used. While they may still perhaps lag behind Asia in terms of the frequency of their use (Liao and Lee, 2010), they are gaining a significant momentum in other parts of the world as their ability to link brick-and-mortar stores to the digital world is seen as a very significant achievement in the marketing world (Cata et al., 2013).

QR codes can be placed on any location and can store any kind of information, from pure text and information about the product being sold to links to purchase concert or theater tickets. As it does not require a middle-man, customers can depend only on themselves to get their desired information, provided that they have an installed QR reader on their mobile device, or an internet or Wi-Fi connection, where they can access websites which can successfully read the QR codes and present them with the

information stored in those digital images. QR codes also do not need to be attached to a single product, but a store can print the papers with the QR codes and place them in their store in multitude of locations and all can contain the same information. QR codes are also not restricted for commercial use, as users can create their own QR codes online and, for example, place them in their house, for guests to scan them and access their Wi-Fi password.

The quick response (QR) codes have a wide range of use, whether that be for marketing purposes by companies or for personal use by the users, and their ease of use and storage of a big capacity of data in them are all but positive sides to implementing QR codes in the customer's daily life. QR codes may lag behind in terms of their use compared to other marketing strategies in certain areas of the world, Bosnia and Herzegovina being one of them, they are still a method that is highly linked with the development of mobile technology, and can only be improved and new benefits found with each year passing.

2.2.4 Mobile advertising

Mobile advertising is often times confused to be the same thing as mobile marketing. Though, the two words, advertising and marketing, are not mutually exclusive, they still have their own characteristics that differ from each other. In simple terms, marketing a product includes the entire plan on how to market a certain product and that can include, but not limited to, using social media, releasing it in the newspapers, holding a special event, and other strategies to promote a product. Advertising a product is the actual advertisement, the words said on the radio, the text placed in the newspaper, or the image on a billboard that is promoting the product, service, or an event.

Advertising has been more of a one-way interaction back in the days when companies had to rely just on TV, newspapers, and radio to place their advertisements, but with the mobile technology development, customers have the opportunity to create an interactive two-way communication channel that has proven many times to be beneficial to both sides (Chen and Hsieh, 2012). With this advancement of technology, companies are able to create a more personalized advertisement that is more valuable to the customers and thus successfully have a good turnover. Companies can either get information from their potential customers in person before they showcase their advertisement to them,

and can also get information on their location and their purchasing habits' history, all in order to create a more targeted and personalized advertisement that the customers will like (Varshney and Vetter, 2002). With more bandwidth becoming available, the higher are the possibilities to send richer content, such as videos, images, audio, graphics, and more, which then maximize the effectiveness of the marketing campaign (Varshney and Vetter, 2002). The success of the marketing campaigns then does not only depend on the technology's advancement, but it depends also on the company's better understanding of its customer and other environmental variables. Looking at all of that, and also having a clear focus on the company's own advertising goals whilst taking into account the marketing wishes of the company's stakeholders, as well (Grewal et al., 2016).

2.2.4.1 Types of advertising

Depending on what kind of customer companies want to attract, as well as the customers' personalities and their use of mobile devices, there are two types of advertising that can be observed and implemented in a marketing scheme.

Push Advertising: Push advertising refers to a method of advertising where the company sends out a message to the customer without the customer's prior notice. Companies sending messages through SMS is the most common type of push advertising. One of the most popular SMS-push type of advertisement is the coupons that companies send to their potential customers, whilst getting their prior permission to do so (Andrews et al., 2015; Fong et al., 2015). As these mobile push advertisements can be intrusive, they are often subject to legal restrictions, and European countries are ones such that require companies by law to get the customer's permission before doing any push type of advertisement (Grewal et al., 2016).

Pull Advertising: Pull advertising refers to a method of advertising where the customer is the one that initiates the contact with the company's advertisement. Opening a website or a mobile application and seeing an ad is one example of pull advertising. Pull type of advertising is different from push type of advertising in that customers are fully aware of the fact that they are willingly looking at an ad and that it is using up their time. When opening a mobile website or a mobile application, they are mindful that they will see an ad on there, either in a form of a banner, or pop-up, or a message in the corner.

The pull type of advertising allows customers to look up an ad by themselves, and they do so by searching for a specific keyword, using a display, playing a mobile game, or looking up videos and other rich content media (Kim and Han, 2014; Yang et al., 2013; Sinkovics et al., 2012). Advertising with rich media allows the customers to control when to click on the advertisement and play the audio and video, or have the image change from one to another, and thus bringing to the customers' curiosity, interest, and focus on it (Kim and Han, 2014).

Both push and pull type of advertising needs to take into account various variables, such as the size of their ad and what kind of mobile device will that ad be shown on, does it have big enough of a screen, whether it has a strong enough graphic and memory card, and can it interrupt the customer's work at that moment and show the ad across the entire screen. The company also needs to mind the fact that most mobile devices are small in size and screen, so having one ad and two at tops would be their best option to maximize their effectiveness.

2.2.5 Permission advertising

As technology advanced so did the number of advertising companies grow bigger. With that came an abundance of messages and advertisements sent to customers' mobile devices. With time and overflow of these advertisements, the irritation and annoyance of the massive amount of messages the customers receive, new laws and regulations had to be implemented. In the earlier days of advertisements, while cellular-telephone devices were still in use, the devices were not seen as personal as many people like to think of their smartphones and other mobile devices today. It was proven various times that the customer's irritation came from mobile advertising, especially with push type of advertising, where customers had little to no control over when they will receive the advertisement in some form or fashion (Störm et al., 2014; Caroll et al., 2007; Tsang et al., 2004).

Permission marketing revolves around companies obtaining permission from their potential customers in order to promote their event, product, sale, or service and thus building a long-lasting relationship with them. With this approach, companies are more certain that their message will reach their targeted market and it will turn out more effective. Now, it is also important to note that though customers who do give

permission to receive advertisements on their mobile devices and get a sense of control of what they receive and how, it has been found in several researches that this perceived control had very little bearing on the customers' overall willingness to receive advertisements (Izquierdo-Yusta et al., 2015). Nevertheless, organizations need to realize and fully understand that it is the customers who drive their relationship and it is these customers who can make, sustain, or break the relationship at any point in time (Gupta, 2015). To conduct mobile marketing, companies require from customers to not only provide their mobile device phone number, but also other personal data, such as their demographic and location variables (Ispir, 2011; Kautonen et al., 2007).

Due to the fact that mobile devices are becoming more synonymous with personal items in the minds of many customers, especially those who own smartphones, there are many privacy concerns raised over the advertisement received on these devices. Having this in mind, only permission-based marketing is regarded by many as the only acceptable and appropriate approach to mobile marketing and advertising (Ispir, 2011; Beatrix Cleff, 2007). Many other researches confirm this and say that permission-based marketing is not only necessary, but it is also critical for the mobile marketing's success and acceptance (Varnali et al., 2011; Barnes and Scornavacca, 2004).

When the term permission marketing was first used by Godin (1999), saying that delivering anticipated, relevant, and personal messages is more of a privilege, rather than a right, and that the delivery is only made to the people who actually want to receive those messages. Already at this time, it was recognized that people in general do not like receiving unannounced and irrelevant messages from an anonymous sender, which would immediately lead them to reject the advertisement (Bauer et al., 2005).

Godin (1999) also proposed a five step process which would lead a complete stranger to a formal customer, by simply relying on permission-based marketing.

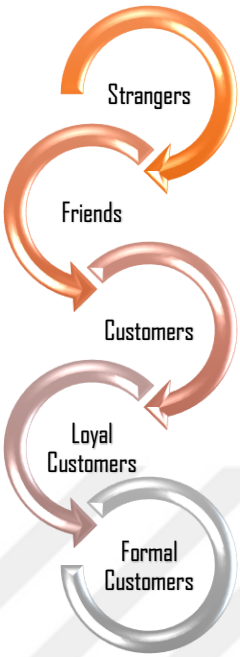

Figure 2.8: Five Steps of Getting New Customers by Permission Marketing (Godin, 1999)

Permission marketing differs from traditional marketing in such that news and information about certain activities, events, specials offers, sales, specific services, and many others, are sent only to a selected market that gave permission beforehand and are willing to therefore receive those messages (Rohm et al., 2012; Chowdhurry et al., 2006). That is why it is also important to establish proper legal grounds over how the customers' personal data is being used and handled (Beatrix Cleff, 2007).

Looking at the concept of privacy, it deals with how is the personal information of a user being disclosed and how to do so in an effective way that it does not raise concerns over their privacy being compromised. As mobile technologies are becoming more personalized, customers are becoming more sensitive over receiving messages on their mobile devices and thus feel quite skeptical about the legitimacy of these companies who send them advertisements and how secure these companies are (Haghirian and Madlberger, 2005). It is thus critical for the company's brand that the consumer accepts the permission-based advertisements, because if it is not done right it can not only make the advertisement ineffective, but it can also reduce the brand's equity (Barwise and Strong, 2002). Likewise, it is important that the customers know of how their data is

collected and the logic behind how it is processed and used, and should finally have the choice of deleting their information upon exiting a marketing campaign if they wish so.

2.2.5.1 Components of permission marketing

There are several approaches that give customers a choice of whether they want to receive any marketing advertisements, and if they do agree, whether later they want to stop receiving them.

Opt in: To opt-in into something means that the customer has willingly given their permission to the company for it to send advertisements and other notifications to their mobile device. This type of approach helps the customer avoid being overwhelmed with receiving countless messages and notifications every day. On top of helping the customer not feel too swamped with numerous advertisements they receive on their mobile devices, this type of approach also helps companies filter out specific customers, helping them personalize the advertisements towards those customers and only market to the ones they are aiming for (Haghirian et al., 2012; Deighton and Kornfeld, 2009; Muk, 2007).

For a customer to willingly opt-in to receive advertisements, it is proposed that the best option for that is to find some incentives that companies can provide to their customers, such as coupons, discounts, and similar things, and make the messages even more relevant in the long-term (Shankar and Balasubramanian, 2009). Another study showed that social influences and customers' attitudes positively influence customers to choose to opt-in to receiving advertisements via SMS (Muk, 2007). Customers also need to be careful to what they are opting in to, as they need to have a clear understanding of what specifically is being collected about them and how it is used, and thus avoiding the possibility of opting in to a blank provision (Beatrix Cleff, 2007). Companies need to give a clear, conspicuous, and concise explanation to their potential customers of what entails by opting in to receive marketing messages, and following that the customer needs to give an explicit agreement to the aforementioned task before the company can send anything to them (Varnali et al., 2011; Beatrix Cleff, 2007).

Finding a successful way for potential customers to willingly and voluntarily opt in to receive advertisements on their mobile devices is only but a first step in the company's creation and built up of a successful long-term relationship. Knowing how to create a

befitting database of all the gathered information, how to segment it, target the desired group, and how to manage these customized relationships through different periods of time, and all that in real time are all critical in creating a long-lasting successful relationship between the company and the customer (Ström et al., 2014).

Opt out: To opt out is to give the freedom to the customer to choose not to receive any more marketing messages or notifications in any form. The customer should have an easy to understand and free of charge option provided by the company to opt out of the marketing service or a particular segment of a campaign (Beatrix Cleff, 2007). With having that in mind, companies need to ensure that due to possible haste made by the customers during the opting in and out steps, which can make them give their permission by accident, the opting in and out options should be simplified for mobile devices and the mobile marketing that comes with it (Beatrix Cleff, 2007).

Having the option to opt out is one of the critical parts of permission marketing and should be taken into consideration by every company which chooses to use mobile marketing to advertise their services, products, special offers, and events. As it is critical to have those options and be knowledgeable about them, those same options should be at immediate reach, explicit, and very clear on how to opt in and how to opt out of a particular campaign or even the whole company's database (Varnali et al., 2011). The customers need to know and be sure about it that after they choose to opt out of a certain campaign or the company's database that their personal information they have provided and given to the company up till that point will be removed completely and not used in the future for any reason. The customers need reassurance, and they would get that if they have trust in the company, that their personal information will not be abused after they discontinue their support with a certain company.

Spam: With permission-based marketing, the amount of unsolicited and unwanted messages and notifications customers received on a daily base has seen a decrease in the recent years, especially after the laws and regulations got implemented and started being enforced. However, even with that, customers still receive messages from companies and places that they have not given prior permission to, and these unsolicited commercial messages are called spam, and still preserve to be a major problem for customers and companies, likewise (Krishnamurthy, 2015). Spam also refers to

messages and notifications that are sent to the customer but do not offer any direct value to the customer and show no clear benefits (Reimers et al., 2016; Grimes et al., 2007; Kumar and Sharma, 2004).

Spam is also characterized by several other negative connotations, aside from being in abundance (Reimers et al., 2016; Gratton, 2004):

- no opt out option available;
- offensive and fraudulent or negative nature; and
- violates privacy laws and regulations.

Though, the customers might be the ones directly affected by these spam messages, in an indirect way it affects the companies too, who are looking to find potential customers through mobile marketing. If the customers are swamped with spam messages on their mobile devices, they will ignore also the messages they receive from companies to which they already gave permission beforehand to send them notifications, as it will be too troublesome for them to go through each of them to find what they need. Not only that, but customers, who already consider their mobile devices as very personal items, will feel that their privacy and security is threatened and will not feel safe to give out their personal information to other companies, as they will feel it is not going to be protected properly. If properly personalized, commercial messages can become valuable and avoid any negative reaction (Bauer et al., 2005). For that reason, in other to sooth the customers' worries, businesses need to be diligent in using their customers' personal information and create messages that are relevant, personalized, and carry valuable information in which the customers will see the benefit and will not reject them right away.

2.3 Consumer Retention

2.3.1 Concept of consumer

Consumer is they key object of every company, because without them the company cannot survive. Consumers are needed to purchase and use the company's product in order for the company to profit. Though, old belief has it that the consumer is just but a stepping stone to the company's success, with later time the more successful companies

realized that without looking more deeply at their customers and consumers, and paying attention to their wishes and desires, their company's future will be affected.

Customers' and consumers' attitudes is where companies need to look into first, before they focus on how their consumers will use and consume their products. Knowing what attracts and influences the customers' behavior and attitudes in the purchasing process, directly effects the customers purchase decision. Discovering the customers' wishes and desires has never been an easy task, and just simply collecting the customers' personal information is just but a first step in the process of finding out what customers truly wish for. Other than looking at the customers' purchasing history, receiving feedback for previous purchases, and suggestion for new products and services, are also some ways how companies can reach out and communicate with their customers and thus get a better understanding what each and every customer wants and desires. Nevertheless, as the population of the world is rising, and more products and services are entering the market, it is becoming awfully hard to please every customer and give them what they want, especially because people often do not know themselves want they want. During those times, companies need to predict what the customer will want from their previous purchasing history, their feedback, their expressed wishes and desires, their environmental and social influences, as well as their personal information they provided to the company. Identifying what external and internal factors impacts customers' patterns of consumption is important for companies of all sizes and should be observed in great detail (Lake, 2009).

Customers make their purchases for various reasons, and sometimes those reasons do not always have to align with their own beliefs and wishes. Consumers have generally seen so far as people who recognize their need or desire, complete a purchase, and when done with it, they dispose of it (Solomon et al., 2012). However, a customer does not always have to be a consumer, and a consumer does not always have to be a customer. Gift giving for birthdays and anniversaries is one example where customers purchase their product for a consumer keeping in mind not their own wishes and desires, but the wants and needs of the person who is going to receive that gift, which is the consumer. Consumer also can need a product, but is not capable of purchasing it itself, such as babies and their need for diapers and other necessities. Consumers like toddlers, kids,

and teenagers tend to be fully dependent on another person who acts as a customer to the company, while they act as the consumer. Moreover, customers and consumers do not have to be just a single party, but businesses can perform purchasing services with other businesses, where one person might make the final purchasing decision, but multiple individuals will end up using those services and products that they have purchased. In those cases, businesses need to be mindful of not pleasing just one person with the product, the consumer, but they also need to pay attention to the customer who is the prime decision maker in whether that product or service will be purchased or not.

2.3.1.1 Consumer purchase process

While the purchasing process may be done by a single or multiple parties, each of them still go through a certain decision process before making a purchase or using a service. This process might be simplified for research purposes and each entity has different external and internal influences that are unique just to them so that way they too effect their decision making process.

The following five stages have been created in order to give a sort of an overview of how a single consumer goes through a single decision-making process, while also taking into account various variables that the consumer might have experienced while coming up with that decision (Solomon et al., 2012).

1. ***Problem recognition***: At this initial stage, the consumer notices that there is something that they need in their life. That need can be in a form of a new product to replace an older one, or a completely new product that they did not own or experience before, but through various external and internal influences, they come to the realization that they need it in their life. The need can also come in a form of a service that will last only for a short period of time and disappear, i.e. a massage or going to a concert.
2. ***Information search***: At the second stage, after the consumer has realized that they need something in their life, they try to find more information about how to satisfy their need. They can either research the information themselves through online search engines via Internet, or they can look up the information on TV, in a magazine, or listen through radio. They can also ask for help from other people,

like their friends, and family, or they can even search through various stores and ask the directly the businesses themselves.

3. ***Evaluation of alternatives***: After gathering all the necessary information that the consumer found so far, they might face a problem of having different products or services that can satisfy their need. At this point then, while comparing all the information gathered previously, the consumer needs to separately evaluate all the alternatives that are presented to them, and they do the evaluation based on their own scale they created for themselves, as each need is unique to every person and same scale cannot be used for all of them.
4. ***Product choice***: After successfully evaluating each alternative, the consumer is ready to make the final choice and discard all other choices that were presented to them up till that point. At this stage, the final purchase of the product or service is made, at which point the consumer believes that the product they chose will completely satisfy their need.
5. ***Outcomes***: Finally, in the last stage of the decision-making process, the consumer experiences firsthand their product or service they previously chose and see if that was the best choice and does it really completely satisfy their need. If the consumer is satisfied with their purchase, they will try to conduct another one of these decision-making processes to satisfy all their other needs. If, however, they are not happy with the outcome, the consumer can shift their decision-making process and businesses can be directly affected by that, too, as they too had some influence in the consumer's purchase decision-making process up till that point.

Consumers are faced with decision-making processes and product and service evaluation in every stage of this five stage process. Having that in mind, while these stages give a good representation of what the consumer goes through while making a purchase of any kind, with some customers and consumers these stages overlap or some do not even happen. For example, some customers just simply do not look at other alternatives when purchasing their favorite chocolate bar at their local supermarket. That is because they have bought that chocolate bar before and since they were happy with it the first time, when another purchase decision-making process should happen,

they ignore the stages and go straight to the purchasing stage, already anticipating also the outcome. According to Lindström (2009), customers tend to enjoy things they paid more for and that the purchasing decisions are more linked with neuro-marketing, the consumers' unconscious thoughts and immediate reactions, rather than stages mentioned previously where in each stage there has be a fully conscious decision being made in other to move on to the next stage.

2.3.1.2 Mobile marketing consumer

Each consumer has different motives in what makes them purchase and use a certain product or service. Mobile consumers are no different in that aspect, and they also have different motivators within their own realm in how each of mobile consumer is using the existing mobile technology. Retail consumers, for example, will use their mobile devices to create shopping lists, look up information about a product, take pictures of the products, rate the products and services, look up other stores in the vicinity, perform inquires, and do a comparison of prices (Dholakia et al., 2010).

It is believed that that consumers have five unique goals they want to achieve while making a purchase (Dholakia et al., 2010; Balasumbramanian et al., 2005):

1. *Economic goals* – finding a good deal
2. *Self-affirmation goals* – choosing the best purchasing channel and way of use
3. *Symbolic meaning goals* – being detailed and considerate
4. *Socialization and experimental goals* – being part of a stimulating community
5. *Routine or script maintenance goals* – have a sense of regularity and familiarity

These goals do not only differ from one consumer to another, but they differ also within each segment of mobile users. There are four most commonly identified types of mobile users, and each type differs from one another by the consumers' amount and way of using mobile devices (Shankar et al., 2010). Countries and continents also have noticeable difference in how mobile devices are used. While in North America, mobile devices are more or less a norm to have by every person, the African continent is more than far from having every single person carry a mobile device in their possession. Cultural background and technology development also effects the protrusion of mobile devices within a certain population. While some countries are more technologically

developed, and their mobile devices are more sophisticated and consumers have more use of, other countries and cultures are less than developed, and struggling with catching up with the rest of the world, skipping many steps in the technology advancement just so they could reach an equal footing with the rest of the world.

- *Millennials*: The millennials are mobile consumers that are aged between 10 and 25 years, and have been brought up surrounded by technology, so they have a good sense of technology and thus quickly adapt to any new changes and innovations (Shankar et al., 2010; Junco and Mastrodicasa, 2007). The millennials also desire to be constantly connected to their fast-paced environment and tend to be skeptical over anyone, especially businesses, who try to intrude into their privacy, including their mobile devices which they consider a very personal space (Shankar et al., 2010; Junco and Mastrodicasa, 2007).
- *Road Warriors*: Road warriors are equally capable of adapting to new technologies and using a variety of mobile devices, but more for the necessity rather than a want (Shankar et al., 2010). They lead a busy and stressful life, and can be seen working either in consulting, engineering, law, sales management, or other similar occupation (Shankar et al., 2010). Since they are seen to be more concerned with the betterment of their professional and business careers, the use of mobile devices helps them achieve those goals (Shankar et al., 2010).
- *Concerned Parents*: This type of mobile users uses mobile devices to stay in touch with their children either through text or voice primarily (Shankar et al., 2010). These mobile users are also the oldest ones out of the four segments, and other than using the mobile devices to communicate with their children, they also use them extensively while doing shopping (Shankar et al., 2010).
- *Light Users***:** Light users are the type of mobile users that see a mobile device neither as a necessity or a want, but use them for simple tasks such as an alarm, a reminder for something, or just because they need to communicate with their family and friends who are otherwise unreachable (Shankar et al., 2010).

All of the four segments are also influenced by the location of the mobile users, as well as their environmental, cultural, and even religious backgrounds, so how each of the segments uses mobile devices can be greatly different from one place to another.

2.3.2 Consumer demographic variables

Demographic variables have been found in extensive amount of researches that it influences consumers' approach towards using mobile devices and its services (Okazaki, 2007). Most researchers use age, gender, household structure, marital status, monthly allowance, and occupation to conduct profiling of their target customers using one or more of these demographic variables (Okazaki, 2007). These variables are used in order to get a general idea of what a company's potential market will look like, as this data is a lot more accessible. In time, businesses have come to terms that these variables cannot be the only ones guiding their marketing and production planning, as it is not narrow enough and encompasses too large of a group, leaving many individual customers unsatisfied.

When looking at the age variable, it was seen that young consumers, in particular, adopt mobile devices quicker than the older generations, and they do so either because they wish to listen to music, socialize, play games, and download other content for their entertainment (Sultan and Rohm, 2005). It was noticed that this particular age group sees mobile devices as a form of a status symbol and therefore feel very attached to it, as they would with a particular piece of clothing (Sultan and Rohm, 2005; Robins, 2003).

Gender and education are two other variables that are easy to track and have been recorded to have a significant influence on the acceptance of mobile devices and mobile marketing. Older studies have already noted that there is a difference in how male and females use and how they perceive their mobile devices (Dedeoglu, 2004; Ling, 2001). It has been shown through several other research papers that though there might not be a difference in the perceived value that each gender shows towards mobile marketing, but there is a difference in what advertising type each gender prefers (Haghirian and Madlberger, 2005).

Along the same lines, education has been shown to be a major influencer in the mobile marketing world, as the higher the education was of a person, the higher the negative

attitude towards mobile marketing was and vice versa (Ström et al., 2014; Haghirian and Madlberger, 2005; Dedeoglu, 2004). The same goes for customers with higher income, who have been observed to showcase a more negative attitude towards mobile marketing, while the customers with lower income, have been more open and had a positive attitude towards mobile marketing (Ström et al., 2014).

2.3.2.1 Factors that affect consumer purchase

Other than variables that affect which customers use mobile devices more and how these customers also perceive their mobile devices, the profiles of these customers can be separated even further by seeing which factors encourage them to make a purchase over their mobile devices. Starting off with the demographic variables, it can be right away seen that depending on the age of the customer, they demand different things, as, for example, young generation would be driven to purchase things based on their external wishes and what their social circle is using, while the older generations would be more prone to purchase things based on their immediate needs and would look less at what people around them buy.

Another clear category is noticed within the gender variable, where businesses separate their products and services depending on the gender, and that is also portrayed in their traditional and mobile advertisements, as well as on their company's websites. As was mentioned in the previous section, gender is a variable that is highly observed by researches, and according to the latest report by Liftoff (2016), it is 40 per cent cheaper to obtain a female mobile customer compared to the male.

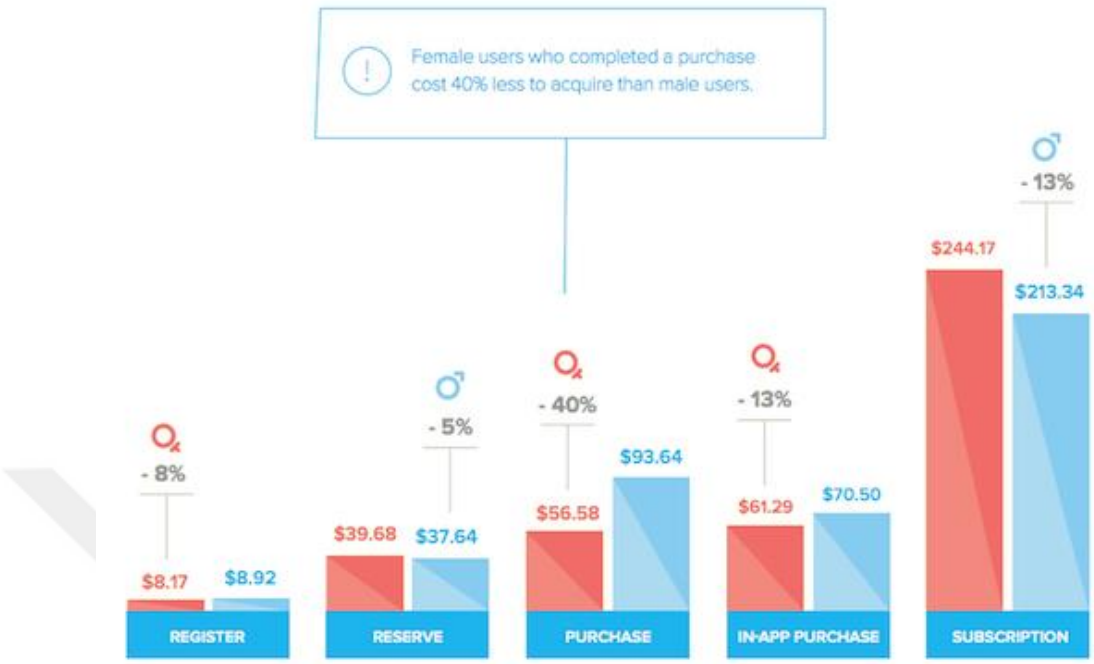

Figure 2.9: Female to Male Acquisition Rates (Liftoff, 2016)

To acquire a female mobile customer, a company would need to spend about $56.58 per person, while to acquire a male mobile customer, the company would need to spend nearly double, and would cost them around $93.64 per every male customer. The in-app purchases also see a clear distinction, where in-app female customers tend to costs $61.29, a 13 per cent difference from the male in-app customer, where the company would need to spend $70.50 per every male, as seen in figure 2.9. The report by Liftoff (2016) also made an interesting discovery where females were seen to spend more money than men on mobile device games. Females are also the ones that are more likely to download mobile applications, in the shopping and utility categories, register, and perform in-app purchases, while males are seen to be more dominating in the financial categories (Liftoff, 2016).

Other demographic variables, such as income level, place of residence, marital status, education, and profession are both indirectly and directly influencing customer's intention to purchase. Income level might have a more direct influence than the other aforementioned variables, as customers with lower income are immediately stopped from purchasing anything above their limit as they cannot afford it, and businesses will not give them the products or services for free. The customer's income level has also

been observed from an example of shopping via online websites and how its connection to the service quality of these websites and businesses effects the customer's willingness for purchase (Kim et al., 2012). One study has observed an increase in purchases made by customers who spent less money when going the traditional route of purchasing and before they got more adapted to the shopping applications on their mobile devices (Wang et al., 2015). These types of customers tend to place larger orders on a more frequent basis than other types of customer, and they are also more prone to spend their money on things that they have familiarized themselves with in a previous purchase (Wang et al., 2015). Alternatively, customers who are not married have more time and more income to spend on things that satisfy just them, and have no one that depends on them to provide. Being married, often entails spending more money on the house, marriage partner, and future kids, among other things. Family shapes the customer's purchase intentions often times more unconsciously, rather than consciously, and with families changing from childhood to adult age, so does the motivation behind customer's purchase intentions and needs change.

Other than family, there are social class, reference groups, and culture as socio-cultural factors that are influencing customer's intention to purchase. Culture, in particular, and different histories, have been an important indication of how customers plan and evaluate a product or a service they plan to purchase and use (Rezvani et al., 2012). Often times, customers prefer to buy products whose origin is the same country they are currently living in, or from a country they feel a sort of personal connection to (Rezvani et al., 2012). It has been shown also, that customers can even create negative reactions towards advertisements and its subsequent products and service that are from another country (Rezvani et al., 2012; Yeong et al., 2007).

Another set of variables that influence customer's intention to purchase products are psychological factors, and these factors come more from the inside of the customer and its built-up personality throughout the years. The customer's motivation to purchase a certain product can differ from product to product, from day to day, from one mood to another mood, and so on. The motivation is built from external factors that the customer experience in its everyday life and can change with each situation. That is why it is very difficult for businesses to pinpoint what exactly is the motivation behind every

customer's purchase as it can be very unpredictable. Some customers have a sort of motivation where they want to buy a product or use a service solely because they want to show those around them that they are capable of doing that, and not so much because they need that certain product or service. With this kind of motivation behind a purchase they get a sense of superiority and feeling of belonging, which has been a subject of study for many years and will continue to be for many more. Often times, customers who achieve to feel a sense of superiority also get pleasure from it, and pleasure has been seen to have one of the strongest influence on customer's purchase decision, as well as its use of mobile device and many other things.

Another psychological factor that influences customer's purchase decisions, is its perception ability, where the customer has to pay attention to all the information that is being sent its way and process all of that in their head, while comparing and evaluating all the new things that they see and hear every day as they are processing the previous information. While trying to process all of this information at a fast speed, the customer also finds things that they can learn and use that knowledge in other situations in their lives. Businesses who provide an entertaining and easy learning environment to their potential customers can see a more positive attitude towards the use of mobile devices and its mobile marketing (Akturan and Tezcan, 2012). Lastly, the customer's personality and attitude towards things is the accumulation of all its life experiences up till the purchase point and are variables that are unique for each customer, making them hard to distinguish and predict.

2.3.3 Consumer attitude

Most, if not all, purchases and decisions to use and how to use a mobile device depends on the customer's attitude at the time of the purchase and service use. As attitudes are formed from experiences gained throughout many years, it is hard to change them. However, several factors can push the attitude towards a change and those are usefulness and entertainment factors found on mobile websites, permission marketing, gained trust, and the customer's sense of being in control of everything that is going on with their mobile device (Watson et al., 2013). Knowing how to influence a customer's attitude is the first and most likely the most important step in gaining a long-term satisfied customer.

2.3.3.1 Behavioral intentions

Customers' behavior when introduced to mobile marketing, as well as their behavior when conducting a purchase has seen rapid developments throughout the years and companies have realized that when customers are buying something, it is not just about giving money and receiving something in return. As attitude is formed when being faced with an object in any form or fashion, customers look back at their previous beliefs and consequently form a behavioral intention towards that object (Okazaki, 2007).

Consumer's behavior while performing a purchase is based on a lot of other things, one being that it observes how this purchase will affect the customer's life and how will the purchase make them feel about themselves (Solomon et al., 2012). What is more, since the customer behavior is so unpredictable and constantly evolving, businesses would see more success if they focused more on short-term goals and experiment less, so they can observe gradually how customers behave around their mobile device and what works with it (Shankar and Balasubramanian, 2009). It is also good to note that customer's behaviors can differ also across different countries, even when the product or service is the same at every location. (Shankar and Balasubramanian, 2009). The key to initiate the customer's behavior is to get their attention long enough with something, even if they forget an advertisement, or choose to ignore it or skip it (Dickinger et al., 2004). Likewise, the more invested the customers are in their social activities, the more their behavior changes and the customers become more innovative in how they search for new information (Okazaki, 2007).

2.3.3.2 Trust

As more companies are opening their businesses, it is becoming more difficult for customers to build a long-lasting trust with them, as they do not have ample time to spend communicating every second with every company they come across. That said, building that trust is important for both sides, and companies need to spend enough time on building their trustworthiness and try to maintain it by providing special deals, and make the customer's transactions and communication convenient, as well as entertaining (Rohm et al., 2012).

As mobile devices are requiring customers to perform more online transactions rather than offline ones, it has been found already that the trust values are giving a higher priority in the virtual world, where purchases are made online rather than in a brick-and-mortar store (Dickinger et al., 2004; Barwise et al., 2002). It was also noticed that customers who had a higher level of trust towards a brand and its website, were seen to be more influenced by the perceived entertainment those websites provided, and had therefore stayed longer on them, which consequently turned into a higher turnover of purchases made by those customers (Kim et al., 2010). Likewise, those customers with lower levels of trust towards a company's brand and its website spent less time on the websites and had a lower turnover rate (Kim et al., 2010).

Younger consumers in particular should be carefully observed when building trust with them, as they are more protective over their mobile devices, and only those brands that they trust, will be allowed to interfere with their daily lives and gain access to their devices. It is important to understand how to reach these customers across different cultures and different parts of the world, as with each culture, the consumers are placing importance on different things, and companies need to look into that if they wish to build an abiding relationship (Rohm et al., 2012). Brand trust was also observed to be one of the indicators on customer's willingness to participate in mobile marketing by a study conducted by Persaud and Azhar (2012). Customers are seen to be more willing to communicate and accept mobile marketing if the brand is one of the ones they have already established a relationship before, or if it is known by others, and themselves, that it is a brand that majority of people trust. Caroll et al. (2007) also argued that customers would prefer even more if the advertisements they receive and the people they communicate with are from local stores that they already have some knowledge about and are familiar with it.

As businesses are asking their potential customers to provide their personal information, failing to protect that information and misuse it would lead to distrust by the customer whose personal information was mishandled badly. Inappropriate use of the customer's information will not only lead that one customer, who was affected by it, to mistrust the company, but it will also influence any new and potential customers that the aforementioned customer knows, as the customer will share that information to others

to warn them about the problems with that company. In addition to sharing the information to others, the customer would also develop an additional mistrust with any other mobile marketing activity done by others companies as well (Barnes and Scornavacca, 2004), which then does little to help mobile marketing to gain more acceptance.

2.3.3.3 Attitude towards privacy

Marketing has always lingered on the problem of customer privacy ever since its conception, but it has gained an even more significance in the recent years with the development of mobile marketing and online Internet transactions. As mobile devices are increasingly becoming more personalized, so have the advertisements that are sent to these devices become more tailored for each customer. These personalized advertisements come from the personal information that the company has previously gathered from the customer either with their explicit permission or not.

Permission marketing has gained approval from the customers as concerns over privacy have been rising each day due to the problem of intrusive advertisements that are sent to the customers' mobile devices, which disturbs their personal space (Beatrix Cleff, 2007). Messages sent to customers to their mobile device via SMS, mobile applications, and other mediums, can be annoying to the consumer, if they have not expected those messages beforehand. In earlier days when the population was smaller, as was the number of companies, customers were somewhat more accepting of these advertisements sent to their devices. At that time, the mobile devices were also more of a mean rather than a need to have, so customers did not feel any emotional attachment to it. However, as the world population grew, so did the number of companies, and eventually the number of marketing messages sent to the consumer's mobile devices grew as well. Mobile devices became more developed and further personalized, making them an entity that consumers started to feel a personal and emotional attachment to it. Given the fact that customers provide a multitude of information in order to personalize their mobile device and gain economic and social benefits, concerns over how their information is being used is directly linked to that, and businesses should find a balance in how to protect their consumer's interests and at the same time satisfy their own goals and market at large (Eastin et al., 2016).

Consumers also look at perceived risk when thinking on how to best protect their privacy and personal information, as they are uncertain of the consequences that their actions bring in (De Kerviler et al., 2016; Bauer, 1967). That uncertainty is observed from the customer's fear of potential psychological, as well as monetary loses, that can come out of their actions when dealing with mobile devices (De Kerviler et al., 2016; Featherman and Pavlou, 2003). Sharing personal information through mobile devices in order to conduct business transactions raises anxiety within customers over possible transaction errors and whether their information will be used for fraudulent actions (De Kerviler, 2016; Lee, 2009). Therefore, mobile marketing is perceived by customers as a high risk action, so concerns regarding their privacy and protection of their personal information should not be ignored by the company, and should continuously work on improving their security policies.

2.3.3.4 Deal proneness

People tend to prefer deals, even when it's a subconscious thing, where they have not fully realized they are leaning towards it. Whether a person has more money in their pocket or barely enough, that person would almost always go for a purchase decision where they would fully maximize utility and get more than they bargained for. That is why deal proneness is defined as a type of proneness where people react more towards promotions solely because they are in a deal form, and not so much because the customer needs to buy something (Lichtenstein et al., 1990). Basically, people pay attention to deals and react to them, because they are in a form of a deal, and not so much because the product or service was of a lower price. Nevertheless, when faced with multiple promotions and deals at the same time, customers will go for the deal that brings them in the most savings and will not necessarily go for all the deals at once (DelVecchio, 2005).

With the improved technology, there are more options for targeting specific groups of customers, making the company's deals more efficient, and it also allows companies to vary the prices of their products and services (DelVecchio, 2005). Deal proneness is of great interest to marketers for many years, and therefore they are constantly trying to identify areas that are deal prone based on the demographic and other variables that they have collected from their consumers. If the companies can successfully identify the deal

prone areas then it will help them narrow down their promotions marketing, making the deals more efficient by creating a bigger buzz and higher turnover. This would also help companies lower the costs they would usual place on producing all the promotional material and marketing the deal. Instead of marketing the deals to all known areas where business is conducted, the companies would save on costs and only market the deals in the areas which they know they are more deal prone, and thus increasing the efficiency.

Webster (1965) has already identified that deal proneness is a mix of both the number of times a certain product is sold as a deal and the customer's buying behavior, and a method to combine these two factors to statistically measure a customer's deal proneness has been developed and called the deal prone index (DPI). This index was developed from a research that was done on 366 families located in a major metropolitan area where they were tested if they bought a certain product at a regular price or from a deal (Webster, 1965). What this research also discovered is that customers who were more deal prone are found to buy products more frequently, but they would also be the ones to switch brands easily if there is a better deal offered somewhere else (Webster, 1964). Likewise, if they are aware of any new deals and promotions, these customers will share it with other people, and that share of information by word of mouth was also tested and confirmed by Wirtz and Chew (2002). It was observed that customers who are more deal prone are likely to generate a higher word of mouth buzz than those customers who are less likely to be affected by ongoing deals (Wirtz and Chew, 2002).

Seeing as how people are more likely to go for a deal regardless of how much it costs them, companies should focus on creating deals that are more centralized in an area where there are more deal prone customers, which can then help them boost up their efficiency rate and get a higher turnover.

2.3.4 Consumer loyalty

Customer loyalty has been researched extensively throughout the years, and majority of them agree on the fact that businesses need customer's long-term loyalty, if they wish for their companies to succeed. Loyal customers are important because they are the ones who stay with the company through both good and bad times, and they are the ones that

the company can count on to be there while they focus on impressing new potential customers. These customers are also the ones that will use the companies' products and services the most, and will look into buying other products in the brand's repertoire, on top of advocating to other people about the brand they are loyal to. Furthermore, customer loyalty is intricately linked with how the businesses treat them from the beginning till the end. If, for example, a repair has to be done on a product that has been purchased from an online or a brick-and-mortar store of one single brand, and that same brand is willing to do the repair of the said product regardless of which store it was bought in, at a reasonable price and with good quality results, the next time the customer has a problem with a certain product it will not look for other stores, but will instead directly go to the first store that they were happy with the transaction. In addition to that, a lot of people tend to go to stores and purchase products that have already been tested before and have good results.

Primarily, people would firstly believe their friends and family members about the quality of a certain product or service rather than the massive advertisements they see around them, or the online reviews and scores or the size of the company. If the stores are able to create a sort of a bond with their customers where they can feel a closer connection to them, as they would with a family member or a friend, the possibility of that customer coming back to that store will go up, and chances are that that customer will remain loyal for a very long time in the future.

It is important to note that attitudes and behavior of the first people that customers get in contact with when approaching a company can, and will continue to do so in the near future, play a big role in how companies attract their most loyal customers. In how these front-line workers behave in front of the customers in helping them find what they want, answering any questions they may have, and helping them in any other way that the customer might need help with, has been proven many times through extensive research that it does greatly effect in how these customers perceive that company and whether or not they will come back the next day to purchase another product or service.

3. RESEARCH DESIGN AND METHODOLOGY

3.1 Method of Research

3.1.1 Research objective

Previous researches have shown that there is a lot of discuss when it comes to marketing and customer's satisfaction with it, as well as their general view of the various marketing strategies that businesses use to promote their product, service, or event. As marketing is a very old field, there have been many researches on how marketing effects customer's behavior, their expectations, satisfaction, demands, wants, and wishes. However, there is only a few of these studies that focus on the interaction between marketing and customers in the developing countries, much less for mobile marketing and the customer's expectations and their satisfaction of it, which is an even more narrow field, and has not yet been fully explored by other, more developed, countries.

Considering how the studies that cover the cause and effect of mobile marketing strategies on customer's satisfaction in Bosnia and Herzegovina have an unflattering number, this study's goal is to try and shed some light on the issue at hand. The study, therefore, brings about the development of the consciousness of the importance of using the newest technology developments, in this case, mobile devices, to develop new marketing strategies that will help connect the businesses better with their current and potential customers, and would help create a more long-lasting and equally beneficial relationship between the two parties. It looks at how these new strategies that are unique to the mobile device effect customers, and explores what specific variables within these strategies makes these customers satisfied and open to accept mobile marketing, thus leading to a greater willingness to continue and interact with the company.

The main objective of the study is to measure the effects of SMS, social media, and mobile applications as mobile marketing strategies on Bosnia and Herzegovina's consumers' mobile marketing acceptance through their satisfaction of the company's use of the aforementioned strategies. In addition to the main objective, the study is also aiming to look at whether permission marketing has any mediating effect, and whether the customers' acceptance of new mobile technology has any effect on mobile marketing acceptance. On the other hand, this study also tries to make a contribution to the mobile marketing field, as the field is going through a huge expansion and development in the last few years, and will thus help its further growth and improvement.

3.1.2 Research type

In this study, at first explorative and descriptive research methods have been used in order to get a better understanding and give more insight on what mobile marketing strategies are available so far and how are they used in different situations, as well as their prominence in each country that has been tested so far. An extensive literature review has been conducted in order to present information on what technology goes into mobile devices, and how does it differ from the technology used in bigger devices, such as desktop computers and laptops. The literature review also covers how mobile marketing came to be, and what services are available to use through these small electronic devices, and how advertising through these devices is connected to permission marketing. The last explorative and descriptive research parts cover how consumers and customers differ and what factors influence the customers' attitude towards mobile marketing and its acceptance of both the mobile devices and the mobile marketing strategies.

For the purpose of this study, a quantitative research method was used in order to create a questionnaire, in an online form, that will help present the information acquired through this questionnaire in a more concrete and numeric way, through graphs, tables, and charts.

3.1.3 Sampling method

Since the study aims to investigate the attitudes and the consumers' satisfaction of the various mobile marketing strategies used in Bosnia and Herzegovina, the main sample used for this study includes educated male and female consumers of Bosnia and Herzegovina who own one or more mobile device and have at one point or another come face to face with mobile advertisements sent or viewed on their mobile device.

The sample number consisted of 422 respondents, out of which 52.6 per cent were females and 47.4 per cent were males, with an average amount of monthly income above 800 BAM (US $480). The majority of the respondents came from an urban area, standing at 82 per cent, while the remaining 18 per cent came from rural and village areas, as it can be seen in figure 3.1.

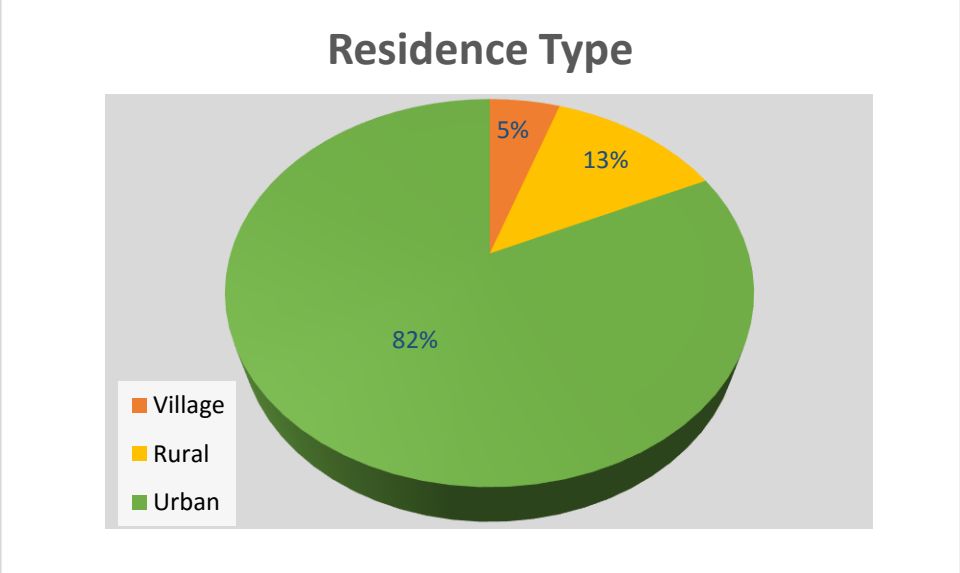

Figure 3.1: Residence Type of Questionnaire Respondents

As it can be seen in figure 3.2 down below, the majority of the respondents were in between two age groups, which were 20 to 30 and 30 to 40 respectively, as they were more familiar and perceptive of what is mobile marketing and have at some point came across it.

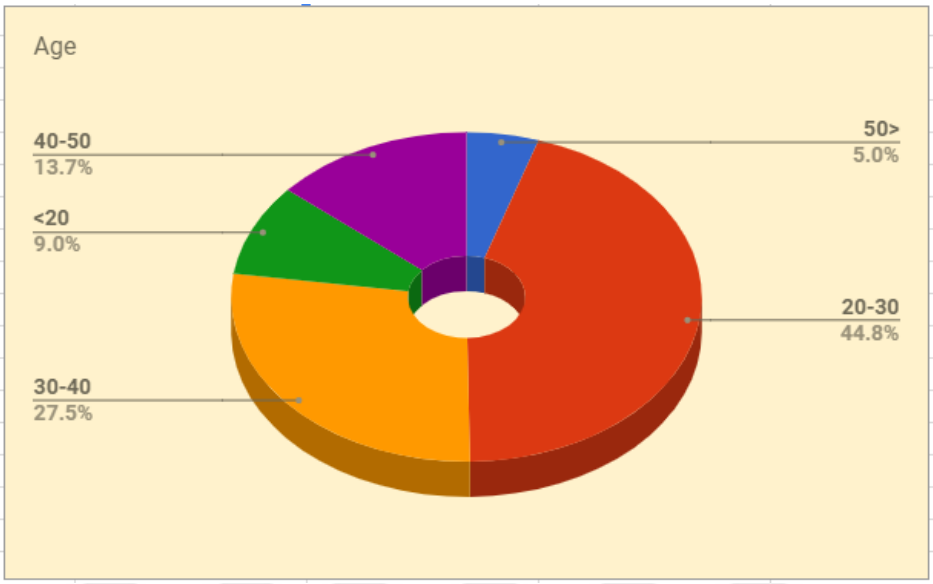

Figure 3.2: Age of Questionnaire Respondents

3.1.4 Data collection

The study was conducted on a web platform through a course of three weeks in July of 2017, during which a number of 422 mobile device users have responded and filled out a survey. The survey was first pre-tested on a selected number of people, after which the comments and suggestions by the respondents were taking into consideration and the final questionnaire was modified accordingly. Afterwards, the questionnaire was published on a web site and the link to it was distributed via social media groups, e-mails, SMS messages, and also asked to be done directly through their smartphones. The survey was principally made in Bosnian language and was created in order to reflect the current situation in Bosnia and Herzegovina, and has thus collected and aggregated answers only from Bosnia and Herzegovina's current residents and mobile device owners.

The survey was designed in order to collect data regarding mobile device user's experience with mobile marketing via SMS, social media, and mobile applications, as well as their general opinion and views on what mobile marketing should look like in order to be more accepted by the public. The survey consisted of three major parts, with an additional two parts which covered questions about the respondents' socio-demographic variables and the general opinion of using a mobile device and mobile marketing. The first part of the questionnaire focused on the mobile device user's

opinions and experience with mobile marketing through SMS, while the second part of the questionnaire followed a similar line and looked at mobile device user's experience and wants with mobile marketing through mobile social media applications. The last part of the questionnaire looked at the mobile device user's experience and opinion about businesses practicing the use of mobile marketing through mobile applications that consumers download on their mobile device.

3.1.5 Data evaluation

The questionnaire consisted of several parts: (1) attitude towards mobile marketing via SMS, (2) attitude towards mobile marketing via social media, (3) attitude towards mobile marketing via mobile applications, (4) attitude towards mobile marketing in general, and (5) demographic characteristics of the consumers. The first three parts were constructed in a form of a positive and negative statement, using the five point Likert scale, to help the respondents express how much they agree or disagree with a particular statement that was provided in the questionnaire. The scale was created in a form of (1) Strongly Disagree, (2) Disagree, (3) Undecided, (4) Agree, and (5) Strongly Agree.

The first part of the questionnaire, as stated previously, contains statements about how consumers feel when being introduced with mobile marketing via SMS. The ten statements cover the consumers' past experience with mobile marketing via SMS, as well as their wants and needs for future interaction with such form of mobile advertising. The first four questions looked at what kind of content the marketing message sent via SMS is acceptable and whether consumers preferred if it was creative, useful, interesting, and suitable for their needs. Another question looked at the consumer's privacy and how strongly they feel about protecting their personal information, and also a statement of how strongly they feel that there needs to be permission given by them in order for the company to send them any marketing messages. As permission marketing has been seen to gain a great importance in the last few years with the boom of smartphones and growing number of companies, it was necessary to see how a developing country, with no laws on permission marketing, sees it from a possible scenario. One more statement examined whether consumers cared if the marketing message they received talked about a product or service that it is in their close proximity. The final two questions in the group referred to the frequency of the

marketing messages and whether they feel that too many messages, especially the ones sent at an inappropriate time, is obstructing their daily life.

The second part of the questionnaire examined the marketing messages sent to consumers via social media applications that they have on their mobile device, such as Instagram, Twitter, Facebook, WhatsApp, Viber, and many others. The questions, as mentioned before, were presented in a form of a positive or negative statement, with a five point Likert scale to help the respondent express how much they agree or disagree with the given statements. As with the first part, to keep it on an equal scale, there were given ten mixed positive and negative statements, so as to avoid the error of the respondent blindly marking their answers with one number.

Few questions were trying to discover through which platform the consumers prefer to receive marketing messages and how quickly would they respond to such a message. Statements about the benefits of social media and real time communication with the companies were also presented, so as to see how important is for the consumers to have the ability to solve their problems and inquiry about the company's products and service in a quick and easy manner. The statements also looked at the convenience side of the social media applications and how it allows the consumers to choose a time when they would like to read a marketing message, and whether they found these messages more interesting and creative than the ones they receive through other mediums. Finally, as with the previous group of questions, a statement was given in this part to see how protected the consumers feel when they share willingly and unwillingly information over social media applications.

The third set of questions, which also consisted of ten positive and negative statements, observed consumer's point of view of using a company's mobile application to conduct their transactions and at the same time, receive marketing message and incentives through these applications. The majority of statements looked at what benefits would the consumers want to have within the company's mobile application, if they choose to use at some point in time. It contained statements on whether mobile applications should not consume too much storage on the consumer's mobile device; whether it should not slow down the device from being too large and rich in content; whether it has an up-to-date database with all the products and services listed; and whether by

using the company's mobile application should it bring in some benefits to the consumer. The statements also inspected the privacy issue of how protected the consumers felt when providing their personal information, and also if it is important for them that the payment is quick and easy. Lastly, few statements tried to find out how important mobile applications are for them and do they appeal to them if they are less complicated to use and have more options available on it. To make a distinction between a mobile website and a mobile application, one more statement was given for the respondents to express if they found mobile applications more useful to use than for them to go manually on a mobile website and then search and navigate through it all by themselves in order to find what they need.

In the fourth part, three statements were presented to get a general view of what consumers thought about mobile devices and mobile marketing. They were asked to express how they would react if they were satisfied with the mobile marketing messages and would they be willing to share with others what they know.

The final part of the questionnaire focused on the consumer's demographic characteristics. It included five questions, and asked of the respondent their age, gender, residence type, education status, and monthly income. Age and gender were asked as they provide a key role in influencing how consumers react to mobile marketing messages and how it can influence their behavior. Income is equally important to ascertain if having high enough income would influence the consumer's acceptance of mobile marketing and its subsequent reaction to the advertised products and services in these mobile marketing messages. Education status was asked in order to determine whether the consumers have enough knowledge to use a mobile device for all what it is and how they would interpret and respond to marketing messages sent to these mobile devices. Lastly, residence type was asked in order to see how localization and relevance of the products and service being advertised through these mobile marketing message has any connection to their overall acceptance of mobile marketing.

3.2 Research Findings and Analysis

3.2.1 Reliability analysis

In order to test the reliability of the collected data from the questionnaire, the Cronbach's alpha reliability test was first conducted. The standard range for the Cronbach's alpha coefficient is between 0 and 1, and for the data to be considered valid within social sciences, the coefficient should be above 0.7. The higher the Cronbach's alpha coefficient is, the more reliable is the data.

Table 3.1: Cronbach's Alpha Reliability Test.

	Number of variables	Cronbach Alpha
Coefficient related to mobile marketing via SMS variables	10	0.898
Coefficient related to mobile marketing via social media variables	10	0.770
Coefficient related to mobile marketing via mobile applications variables	10	0.877
Total	30	0.918

From the table 3.1 it can be seen that all coefficients for each set of statements related to the given variables are above 0.7, which was the needed range according to the Cronbach's alpha reliability test, thus it can be said that the data in the questionnaire is reliable.

3.2.2 Demographic characteristics of the responses

Table 3.1: Gender.

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	200	47.4	47.4	47.4
Female	222	52.6	52.6	100.0
Total	422	100.0	100.0	

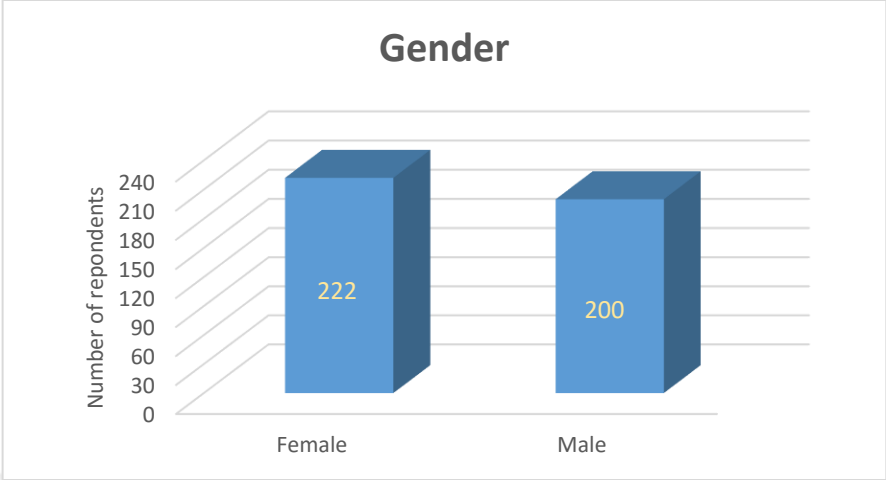

Figure 3.3: Gender

The research questionnaire surveyed in total 422 people, and the first demographic question in the survey focused on the gender of the respondent. From figure 3.3 it can be seen that there was not a vast difference in between the two genders, standing at a difference of only 22 out of 422 respondents. Females were the majority of the respondents, with 222 of them responding to the questionnaire, which occupied 52.6 per cent of the total amount of respondents. Males carried a 47.4 per cent of the total respondent rate, which makes the other 200 questionnaire respondents males.

Table 3.3: Age.

Age	Frequency	Percent	Valid Percent	Cumulative Percent
<20	38	9.0	9.0	9.0
20-30	189	44.8	44.8	53.8
30-40	116	27.5	27.5	81.3
40-50	58	13.7	13.7	95.0
50>	21	5.0	5.0	100.0
Total	422	100.0	100.0	

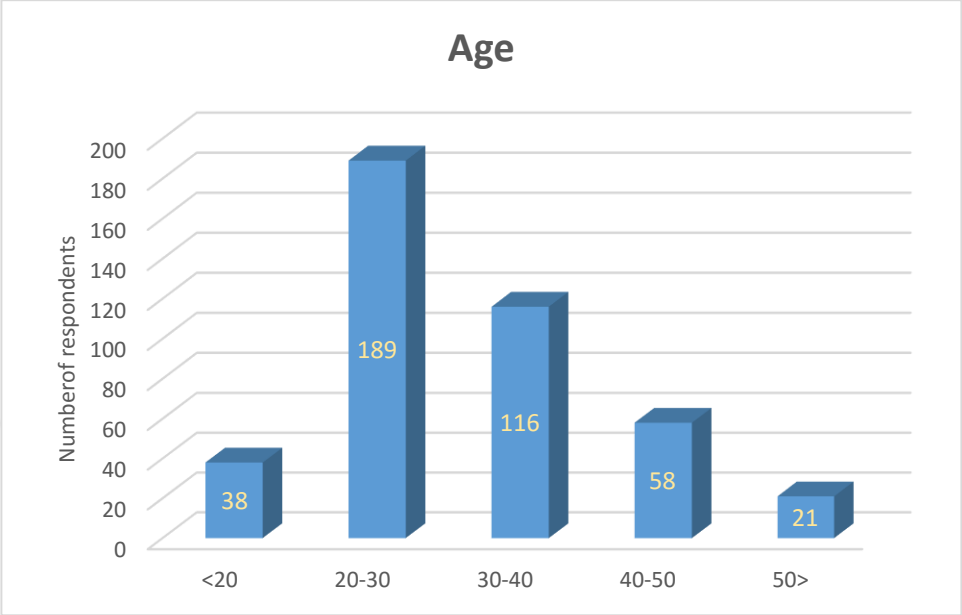

Figure 3.4: Age

As the questionnaire focused on young and working adults who were more prone to pay attention and respond to a marketing message on their mobile device as opposed to the young and older generations that were more likely to ignore the messages as they would be either disinterested or unfamiliar with it, the biggest number of respondents fell in between two categories of 20 to 30 and 30 to 40 years of age. Figure 3.4 supports the previous claim, as it can be seen that out of 422 respondents, 189 are aged between 20 and 30, standing at 44.8 percent, while 166 of them are aged between 30 and 40, holding 27.5 percent of the total respondents. The other age categories are nearly equally split, with 58 respondents being aged between 40 and 50, which makes up about 13.7 per cent of overall respondents, while respondents who were under 20, held a 9 per cent total, and those 21 respondents who were aged above 50, held a 5 per cent total. Though a smaller number of questionnaire respondents were aged below 20 and more than 50, their numbers are still a significant amount, as it shows people are becoming more interested in mobile marketing and what it represents, especially considering the fact that these age categories were not the primary target ones, and, yet, together they occupied a 14 per cent out of the total number of respondents.

Table 3.4: Residence Type.

Residence Type	Frequency	Percent	Valid Percent	Cumulative Percent
Urban	346	82.0	82.0	82.0
Suburban	54	12.8	12.8	94.8
Rural	22	5.2	5.2	100.0
Total	422	100.0	100.0	

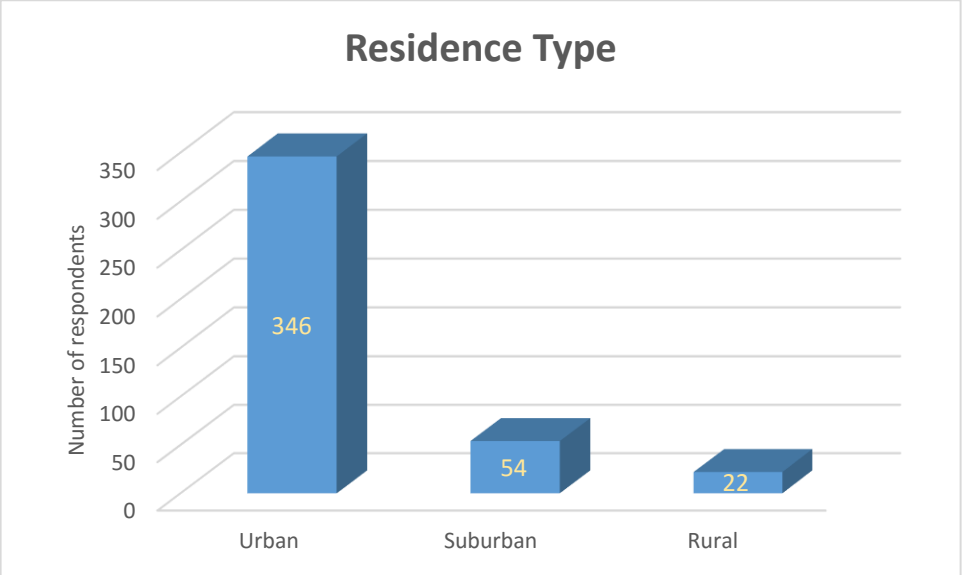

Figure 3.5: Residence Type

The third demographic question in the survey was focusing on the respondents' residential status. It looked at whether those in urban areas are more familiar with mobile marketing or those in the outskirts and further away from the buzzing cities. The vast majority of the respondents selected they were from the urban area, all 346 of them, which makes up of about 82 percent in total number of respondents. The 12.8 per cent of respondents were from the suburban area, which adds to 54 of them selecting they live in the outskirts, and the remaining 22 respondents, which totaled 5.2 per cent, signified that they live out of town. As the survey was done online via Internet, it was open to anyone who had access to the WWW and was thus not exclusive to one single area, meaning that as long as the person had access to the Internet in the span of two weeks when the survey was being carried out, then that person could have done the

questionnaire. As such, from table 3.4 and figure 3.5 we can see that respondents who answered the questionnaire were primarily from the urban areas, which supports the claim that mobile marketing has a bigger and more resounding effect on those living in the urban and suburban areas, as they have immediate access to the Internet.

Table 3.5: Education Status.

Education Status	Frequency	Percent	Valid Percent	Cumulative Percent
Elementary	0	0.0	0.0	0.0
High School	97	23.0	23.0	23.0
Undergraduate	247	58.5	58.5	81.5
Graduate	62	14.7	14.7	96.2
PhD	16	3.8	3.8	100.0
Total	422	100.0	100.0	

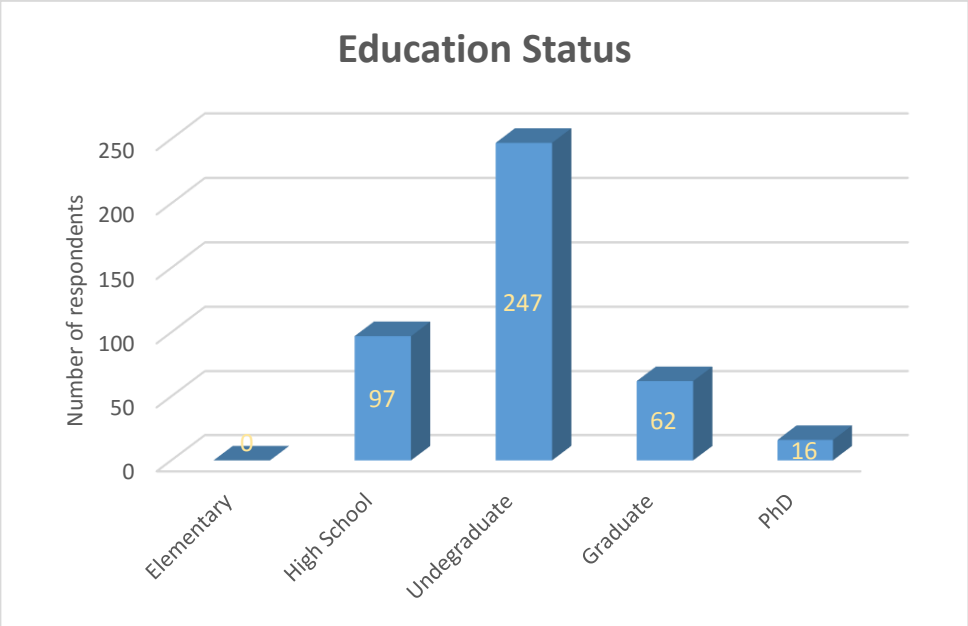

Figure 3.6: Education Status

Looking at figure 3.6 it can be seen that a little over half of the respondents, 247 to be exact, have already gained either a bachelor's or an associate degree, making up 58.5 per cent of the total number of respondents to the questionnaire. The other respondents were primarily high school graduates, all 97 of them, which added up to 23 per cent,

while the other 14.7 per cent of respondents were those with graduates' degree, which was 62 out of the total 422 respondents. The remaining 3.8 per cent of the respondents reeled in 16 people who already obtained a PhD degree. Lastly, though the option was given also for people who only finished elementary school, there were none who selected that option, as it can be also established from table 3.5 and in figure 3.6. This once again helps the notion that this survey was focused on young and working adults who already had started receiving some income and will pay more attention to marketing messages being delivered on their mobile devices.

Table 3.6: Income Level.

Income Range	Frequency	Percent	Valid Percent	Cumulative Percent
<200 BAM	75	17.8	17.8	17.8
200-400 BAM	34	8.1	8.1	25.8
400-600 BAM	44	10.4	10.4	36.3
600-800 BAM	43	10.2	10.2	46.4
800> BAM	226	53.6	53.6	100.0
Total	100.0	100.0	100.0	

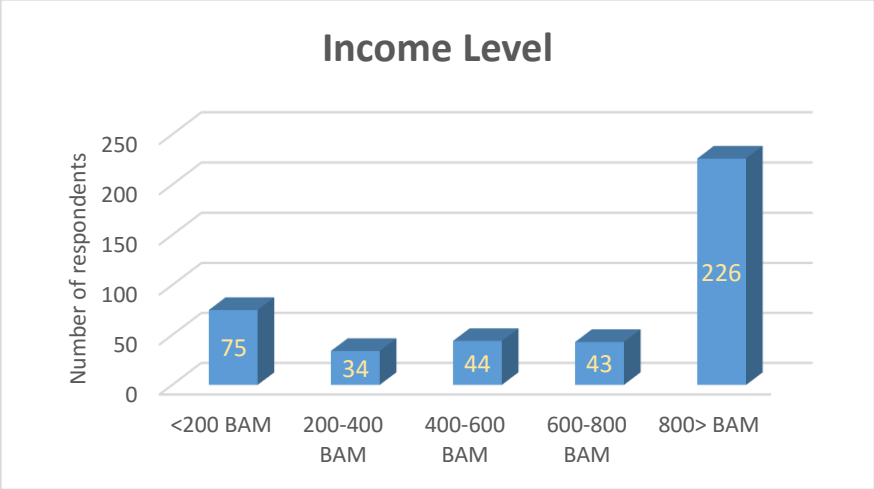

Figure 3.7: Income Level

Income level question was asked in the questionnaire in order to determine how big of an effect the person's monthly income has on their ability to purchase access to the WWW on their mobile device and whether they will be willing to respond to the

marketing messages they receive, if they had the necessary funds to obtain the product or service that is being advertised to them. As the questionnaire was done in Bosnia and Herzegovina, the currency and numbers showcased in table 3.6 and figure 3.7 are representing Bosnian Convertible Markas and the average income levels according to the standard of living in that country. Almost exactly half of the respondents, 226 of them, which was a little bit over 50 per cent, 53.6 per cent in total, selected they receive more than 800 BAM per month, which correlates back to the previous statements that most of the respondents in the questionnaire were aged between 20 and 40, indicating that most of them are out of school and have a paying job. The other half of the respondents were nearly equally balanced out in the other income level categories. The biggest number, 75 of the respondents, which was 17.8 per cent, selected they receive less than 200 BAM per month. The ones who received between 200 and 400 BAM per month added up to 8.1 per cent, which was 34 of the total number of respondents. The remaining two income level categories had nearly the same number of respondents selecting they receive between 400 and 600, all 44 of them, which was 10.4 per cent in total, and between 600 and 800, all 43 of them, which occupied the remaining 10.2 per cent of the total number of respondents.

3.2.3 Responses to the acceptance of mobile marketing via SMS

The following tables and figures represent the questions and statements given to the questionnaire respondents on whether they would accept mobile marketing via SMS faster if they agreed with the mentioned statement.

Table 3.7: The content of the marketing message suits my needs.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	33	7.8	7.8	7.8
Disagree	38	9.0	9.0	16.8
Neutral	88	20.9	20.9	37.7
Agree	138	32.7	32.7	70.4
Strongly agree	125	29.6	29.6	100.0

Total	422	100.0	100.0	

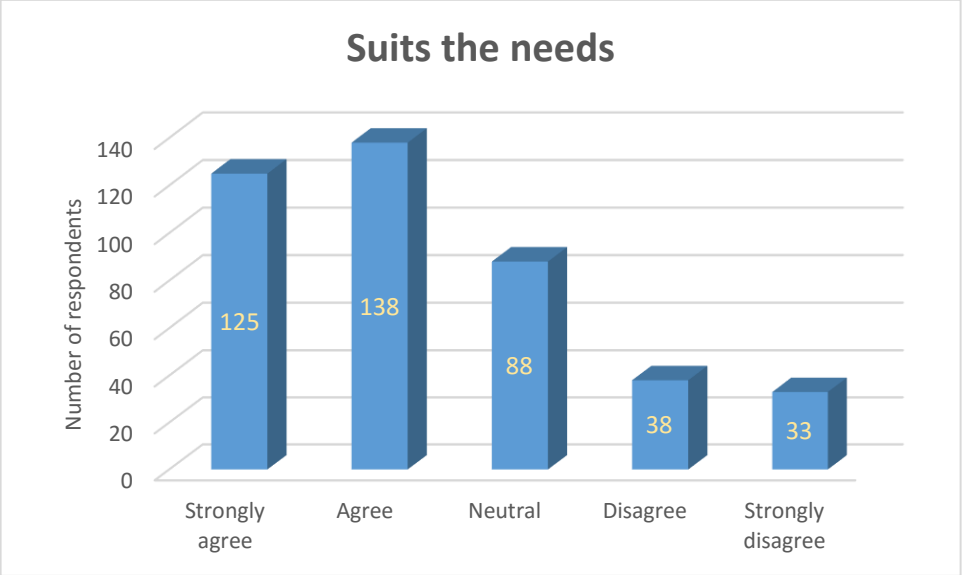

Figure 3.8: The content of the marketing message suits my needs

As it can be seen in figure 3.8, the majority of respondents agreed to some extent that they would accept mobile marketing if the content of the message they receive via SMS suits their needs. About 32.7 per cent, which was 138 respondents in total, selected that they agree, while 29.6 per cent, 125 respondents in total, selected they strongly agree that they would accept mobile marketing faster if the content of the advertisement suits their needs. The other majority fell into a neutral position, where 88 of the respondents, 20.9 per cent in total, neither agreed nor disagreed with the said statement. Those who disagreed were in the lower numbers, and were almost equally divided between disagreeing and strongly disagreeing. The ones who strongly disagreed collected 33 people, about 7.8 per cent, and the ones who just disagreed were at 9 per cent, which was 38 respondents in total.

Table 3.8: The content of the marketing message is useful.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	33	7.8	7.8	7.8
Disagree	37	8.8	8.8	16.6
Neutral	79	18.7	18.7	35.3
Agree	149	35.3	35.3	70.6
Strongly agree	124	29.4	29.4	100.0
Total	422	100.0	100.0	

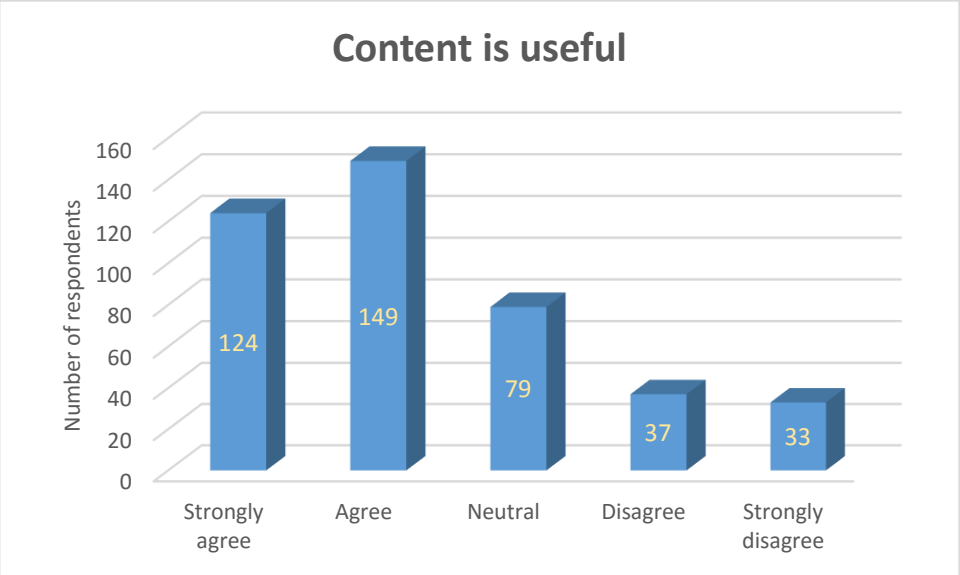

Figure 3.9: The content of the marketing message is useful

In the second statement that asked whether the respondent would accept mobile marketing via SMS faster if the content of the said marketing message is useful, as in the previous question, the majority of respondents agreed with the statement. All 149 of the respondents, 35.3 per cent in total, agreed they would accept if faster, and 124 of them, 29.4 per cent in total, strongly agreed they would accept mobile marketing via SMS faster if the content of the advertisement is useful. The biggest number of respondents after that, 79 of them, remained neutral, neither agreeing or disagreeing with the statement. Lastly, a similar case as in the previous statement, 37 of respondents,

8.8 per cent, disagreed with the mentioned statement, and all 33 of the remaining ones, 7.8 per cent in total, strongly disagreed with the statement that they would accept mobile marketing via SMS faster if the content of the message is useful to them.

Table 3.9: The content of the marketing message is creative.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	32	7.6	7.6	7.6
Disagree	49	11.6	11.6	19.2
Neutral	101	23.9	23.9	43.1
Agree	145	34.4	34.4	77.5
Strongly agree	95	22.5	22.5	100.0
Total	422	100.0	100.0	

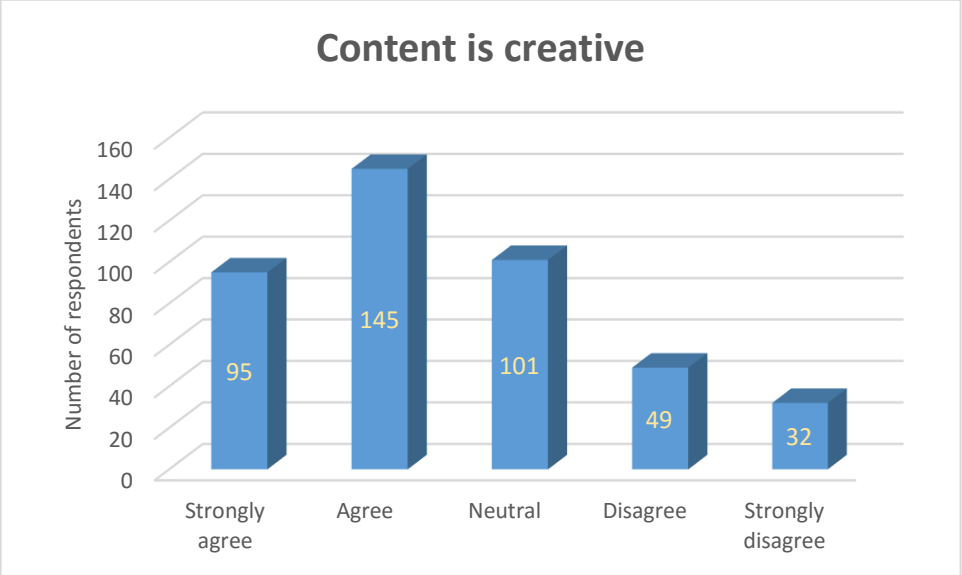

Figure 3.10: The content of the marketing message is creative

The third statement asked the respondents to select whether they agreed or disagreed with the statement that they would accept mobile marketing via SMS faster if the content of the advertisement sent to them is creative. While in this case, as also in the previous two statements, as the majority agreed with this statement, there was also a very big number of those respondents, 101 in total, which was 23.9 per cent, that

remained neutral to the statement. This indicates that though majority might have agreed and would prefer more creative advertisements, there are also those that do not put a lot of importance on such details. Out of 422 respondents, 49 of them, or 11.6 per cent in total, disagreed, while 32 of them, 7.6 per cent in total strongly disagreed. Those that disagreed seem to be nearly the same number of people as in the previous two statements. The biggest number of respondents, 145 of them, or 34.4 per cent in total, selected they agreed with the statement, while 95 of the respondents, 22.5 per cent, selected that they strongly agreed with the statement, which was just a little below the number of people who remained neutral about the advertisement needing to be creative in order to be accepted.

Table 3.10: The content of the marketing message is interesting.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	30	7.1	7.1	7.1
Disagree	63	14.9	14.9	22.0
Neutral	96	22.7	22.7	44.8
Agree	141	33.4	33.4	78.2
Strongly agree	92	21.8	21.8	100.0
Total	422	100.0	100.0	

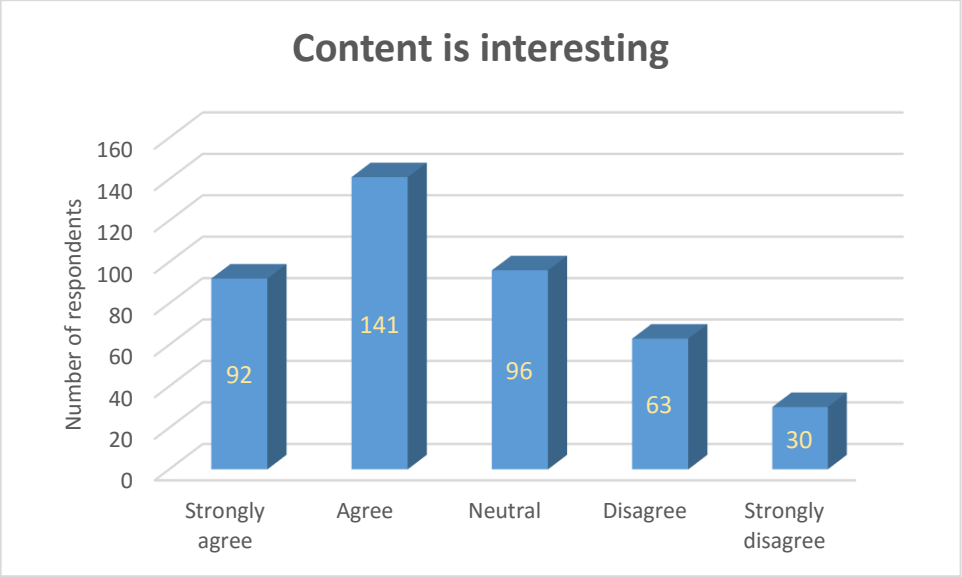

Figure 3.11: The content of the marketing message is interesting

The statement shown in table 3.10 and figure 3.11 follows closely the previous three statements that focused on the respondent's willingness to accept mobile marketing faster if the content is interesting. Just like the ones before, this statement focused primarily on the content of the advertisement, and similar to the previous statement, the numbers are closely reflective of each other. In total, 92 of the respondents strongly agreed that they would accept mobile marketing quicker is the content of the message is interesting, which ends up being 21.8 per cent of the total number of respondents. Those who strongly disagreed with the said statement fell under 7.1 per cent, which totaled 30 of the respondents. Almost a similar number of those who strongly agreed with the statement, also selected that they are neutral about it, all 96 of them, which added up to 22.7 per cent of the total sample. The biggest number of respondents, 141 (33.4 per cent), selected that they agreed with the statement and that they would prefer to have their marketing messages they receive on SMS be interesting and less boring. Lastly, 63 of the respondents, which is 14.9 per cent of the total number, disagreed with the statement.

Table 3.11: I gave permission beforehand to receive the message.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	58	13.7	13.7	13.7
Disagree	55	13.0	13.0	26.8
Neutral	104	24.6	24.6	51.4
Agree	91	21.6	21.6	73.0
Strongly agree	114	27.0	27.0	100.0
Total	422	100.0	100.0	

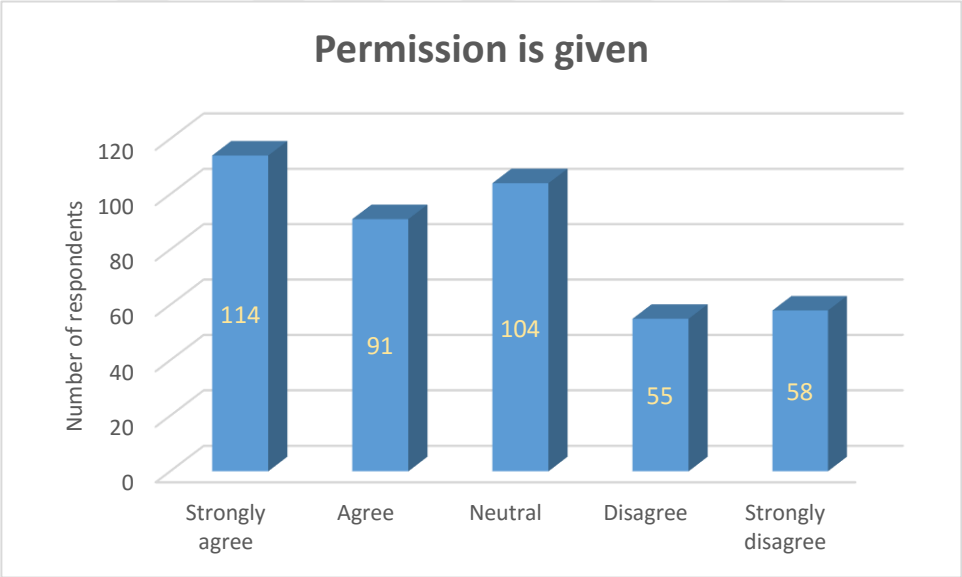

Figure 3.12: I gave permission beforehand to receive the message

Table 3.11 and figure 3.12 look at how respondents feel that the marketing messages they receive on their mobile devices via SMS was not pre-planned and that they were not given prior notification of receiving such messages in the future. The statement looks at how aware the respondents are of the fact that their permission is needed in order for companies to send them promotional messages. Unlike the previous statements, this one has seen the biggest number of respondents, 114 to be exact, to strongly agree, making 27 per cent of the total sample feel very much concerned about giving permission to companies in order for them to send marketing messages to their

mobile devices. A nearly close number also chose to agree, 91 respondents, or 21.6 per cent, and 104 of the respondents chose to remain neutral, which added up to 24.6 percent of the total sample. A bit over a 100 of the total 422 respondents disagreed with the statement in one form or the other. Almost equally the respondents chose that they disagreed, 55 of them, 13 per cent out of the total, and 58 strongly disagreed, 13.7 per cent out of the total 422 respondents.

Table 3.12: Marketing messages are not sent to me at an inappropriate time.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	47	11.1	11.1	11.1
Disagree	61	14.5	14.5	25.6
Neutral	100	23.7	23.7	49.3
Agree	114	27.0	27.0	76.3
Strongly agree	100	23.7	23.7	100.0
Total	422	100.0	100.0	

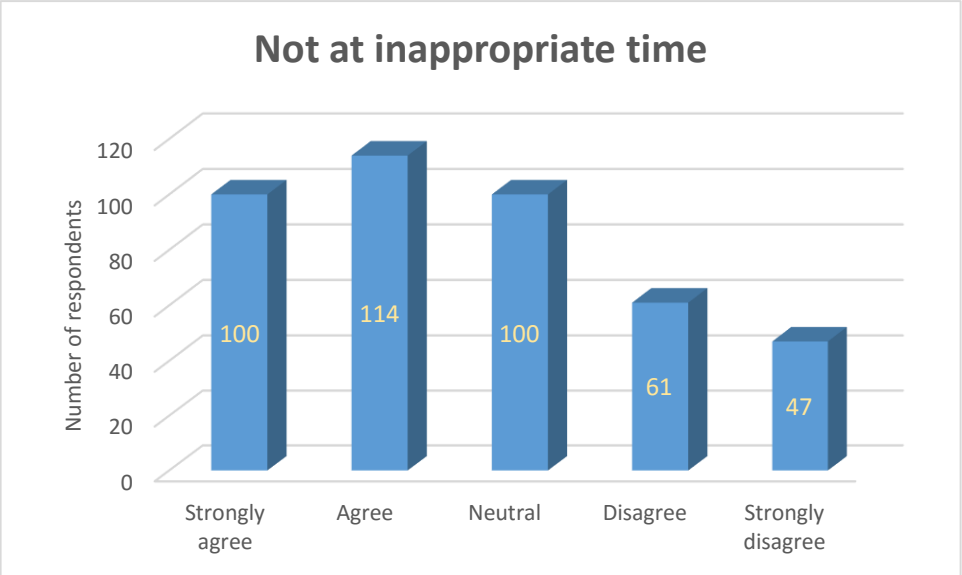

Figure 3.13: Marketing messages are not sent at an inappropriate time

Tables 3.12 and figure 3.13 represent the data of how the questionnaire respondents feel about receiving marketing messages via SMS at a time that they seem inappropriate,

such as lunch time, night hours, sleeping time, and similar. The majority, once again, chose to agree with this statement, 100 (23.7 per cent) strongly agreeing, and 114 (27 per cent) moderately agreeing with the statement. Whereas, a 100 other respondents, which was another 27 per cent, chose to remain neutral, thus neither agreeing or disagreeing with the statement. The remaining number of respondents, 108 disagreed with the said statement, implying that regardless of when they would receive the marketing message via SMS it would not have much influence in their faster acceptance of such form of marketing. Out of 108 respondents, 47 (11.1 per cent) strongly disagreed with the statement, and 61 (14.5 per cent) mildly disagreed with it, as it is shown in figure 3.13.

Table 3.13: The marketing message are not too frequent.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	47	11.1	11.1	11.1
Disagree	57	13.5	13.5	24.6
Neutral	73	17.3	17.3	41.9
Agree	114	27.0	27.0	69.0
Strongly agree	131	31.0	31.0	100.0
Total	422	100.0	100.0	

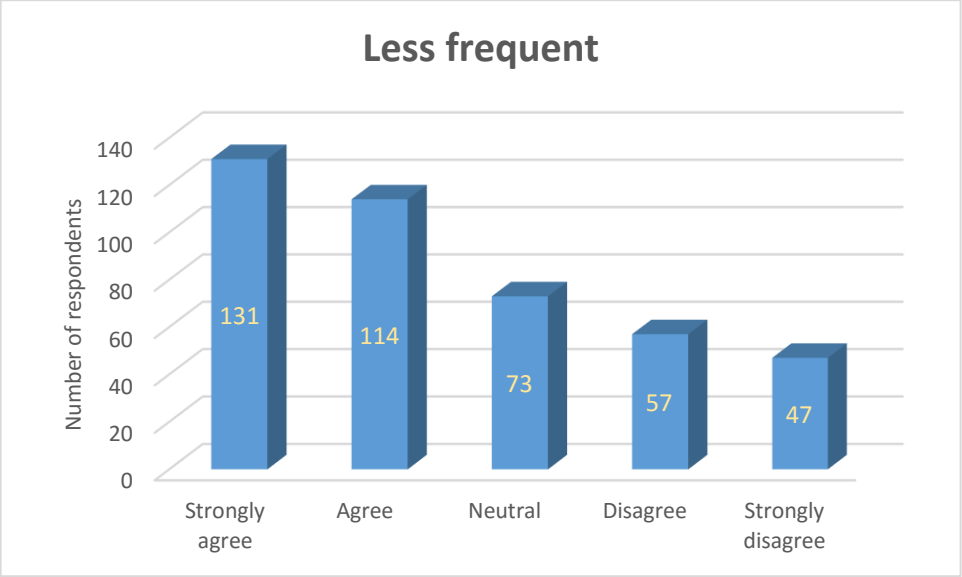

Figure 3.14: The marketing messages are not too frequent

Table 3.13 gives an overview of the data collected about a statement asking the questionnaire respondents to agree or disagree with their choice of accepting mobile marketing via SMS faster if the messages sent to them are not too frequent. Figure 3.14 gives a nice visualization of respondents feeling a strong need to receive less marketing messages, as often times they have no use for them. All 131 of the respondents, the biggest percentage, 31 per cent, strongly agreed with the statement, while another 114 respondents, 27 per cent just agreed with it. In figure 3.14, it is also seen that 73 respondents, 17.3 per cent of the total sample, remained neutral, implying that they would not be bothered with the big frequency of marketing messages as long as they are either useful, interesting, or creative to them. Those who chose to disagree with the statement were in the minority, occupying 13.5 per cent, 57 in total number, of those who disagreed, and 47 respondents, 11.1 per cent, strongly disagreeing with the statement.

Table 3.14: The marketing messages are about a brand that's in close proximity.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	41	9.7	9.7	9.7
Disagree	60	14.2	14.2	23.9
Neutral	110	26.1	26.1	50.0
Agree	141	33.4	33.4	83.4
Strongly agree	70	16.6	16.6	100.0
Total	422	100.0	100.0	

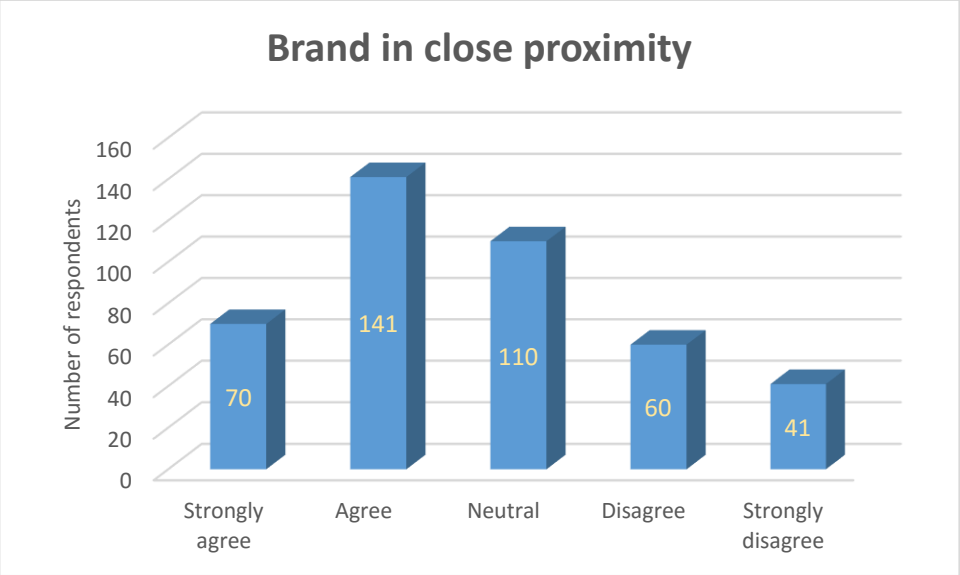

Figure 3.15: The marketing message are about a brand in close proximity

In figure 3.15 it can be seen that the respondents of the questionnaire are mostly agreeing with the statement that they would accept mobile marketing faster if the marketing messages sent to their mobile devices via SMS are about brands which are in close proximity, meaning, that the brands that are being advertised in these messages should be easily accessible and would not require the person to travel long distance to find it. All 141 respondents, 33.4 per cent in total, agreed with this statement. Another 70 respondents, 16.6 per cent in total, felt they strongly agreed and would prefer to have the marketing message talk about brands that are close to where they are located. The

other majority remained neutral about this, and did not place too much importance on where the brand is located, leaving 26.1 percent, or 110 respondents, neither disagreeing nor agreeing with the said statement. The last hundred respondents chose to disagree with the statement, leaving 41 respondents to strongly disagree with it, making it about 9.7 per cent of the total sample, and the last 14.2 per cent mildly disagreeing with the statement, adding up to 60 respondents of the total 422.

Table 3.15: The marketing messages are clear and concise.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	35	8.3	8.3	8.3
Disagree	39	9.2	9.2	17.5
Neutral	83	19.7	19.7	37.2
Agree	146	34.6	34.6	71.8
Strongly agree	119	28.2	28.2	100.0
Total	422	100.0	100.0	

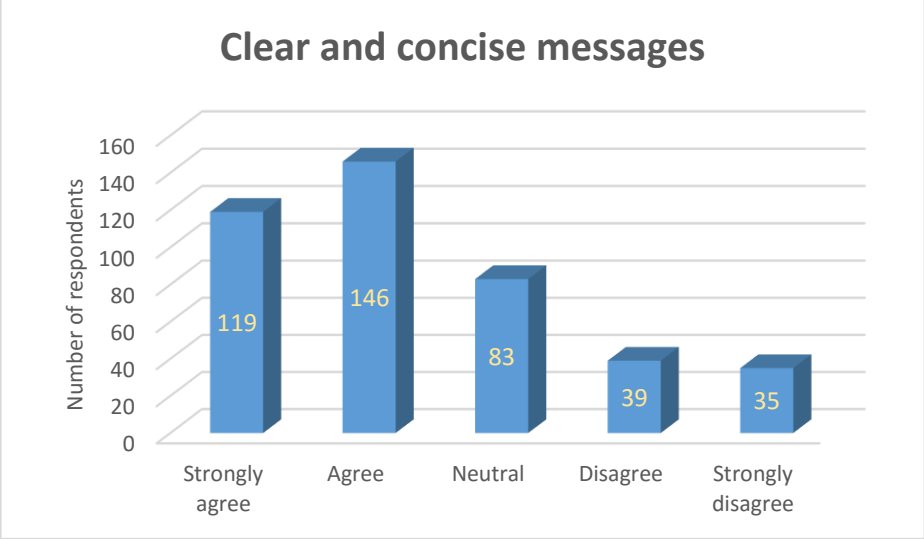

Figure 3.16: The marketing messages are clear and concise

Table 3.15 and figure 3.16 give an overview of how the questionnaire respondents feel about marketing messages delivered to them via SMS that are clear and concise,

meaning that the messages can be easily understood and do not heavily rely on putting too much information, but only the most important and relevant stuff. As it can be seen in table 3.15 a very small percentage disagrees with this statement, 9.2 per cent disagreeing mildly, and 8.3 per cent disagreeing strongly, adding up to 39 and 35 respondents respectively. As with the previous statements, figure 3.16 shows that the biggest majority of the questionnaire respondents, 146 people, or 34.6 per cent in total, agree with the said statement, while another 119 people, or 28.2 per cent, strongly agreed with the mentioned statement. Those that remained neutral occupied the remaining 19.7 percentage, collecting 83 respondents who chose to neither agree or disagree with the statement.

Table 3.16: I know my private information is protected.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	40	9.5	9.5	9.5
Disagree	35	8.3	8.3	17.8
Neutral	76	18.0	18.0	35.8
Agree	81	19.2	19.2	55.0
Strongly agree	190	45.0	45.0	100.0
Total	422	100.0	100.0	

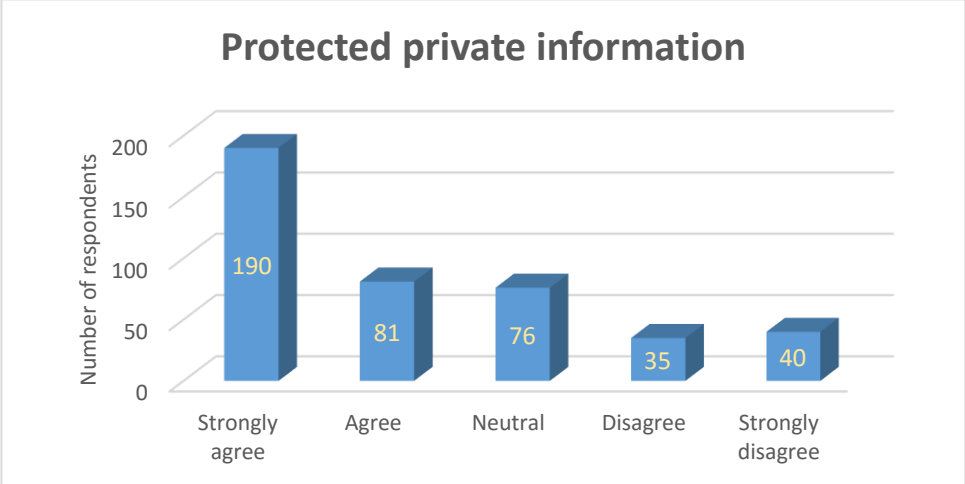

Figure 3.17: I know my private information is protected

As figure 3.17 is showing, out of all the statements so far about accepting mobile marketing via SMS faster, the statement about people knowing that their private information is protected if they accept such form of marketing, has the highest number of questionnaire respondents strongly agreeing, all 190 of them, which is approximately 45 per cent in total, making it nearly half of the sample. Those who disagreed were in the minority, with 35 (8.3 per cent) disagreeing with the statement, and another 40 (9.5 per cent) strongly disagreeing with the statement. Those who agreed with the statement held a 19.2 percentage, collecting 81 respondents, and those who remained neutral, and did not put a lot of importance on whether their private information is protected or not, were the remaining 18 per cent, adding up 76 respondents out of the total sample of 422.

3.2.4 Responses to the acceptance of mobile marketing via social media

The following tables and figures represent the second set of statements given in the questionnaire and look at the people's responses to how they feel about social media and marketing through social media and its applications.

Table 3.17: I frequently use social media on my mobile device.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	28	6.6	6.6	6.6
Disagree	17	4.0	4.0	10.7
Neutral	54	12.8	12.8	23.5
Agree	88	20.9	20.9	44.3
Strongly agree	235	55.7	55.7	100.0
Total	422	100.0	100.0	

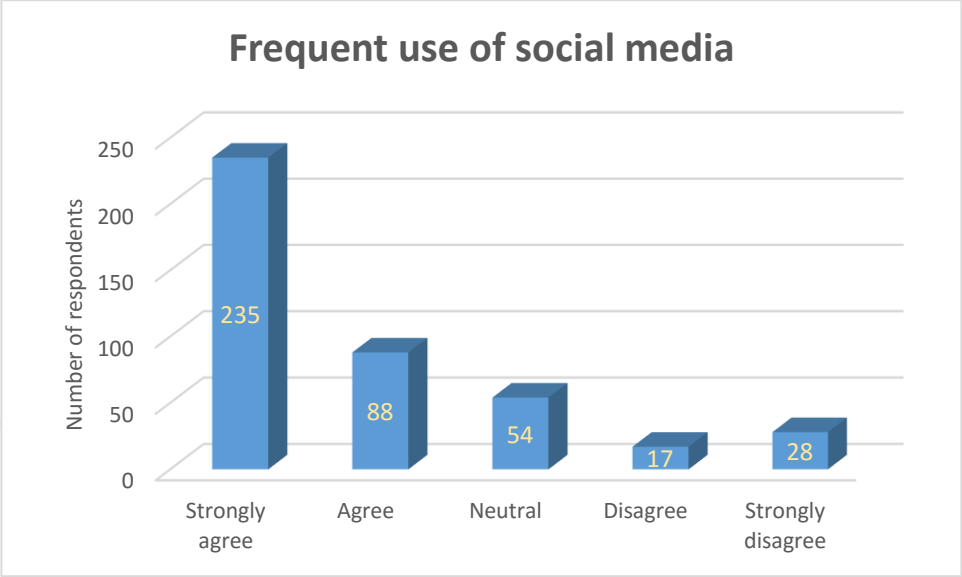

Figure 3.18: Frequent use of social media on mobile device

The first statement given in the questionnaire related to social media, was to see if the respondents use social media on their mobile device, and as it was expected, it can be clearly seen in figure 3.18 that the majority use it on their mobile device, 323 people to be exact. Out of those 323 people, 235 said they strongly agree with the statement, which adds up to 55.7 per cent, a little over half of the respondents, thus indicating that not only do they use social media on their mobile device, but that they most likely use it often. The remaining 88 respondents, or 20.9 per cent in total, said they agreed with the statement, while another 54 respondents remained neutral, which is 12.8 per cent, as according to table 3.17, possibly indicating that though they might have social media applications on their mobile devices, they do not feel they use it too frequently, or they use it just seldom. Only 17 respondents, or 4 per cent out of the entire sample, disagreed with the statement, while the remaining 28 respondents (6.6 per cent) strongly disagreed with it, leaving the notion that respondents might have felt that their use of social media applications is very limited or non-existent at all.

Table 3.18: The marketing messages I receive on social media bother me.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	26	6.2	6.2	6.2
Disagree	43	10.2	10.2	16.4
Neutral	124	29.4	29.4	45.7
Agree	92	21.8	21.8	67.5
Strongly agree	137	32.5	32.5	100.0
Total	422	100.0	100.0	

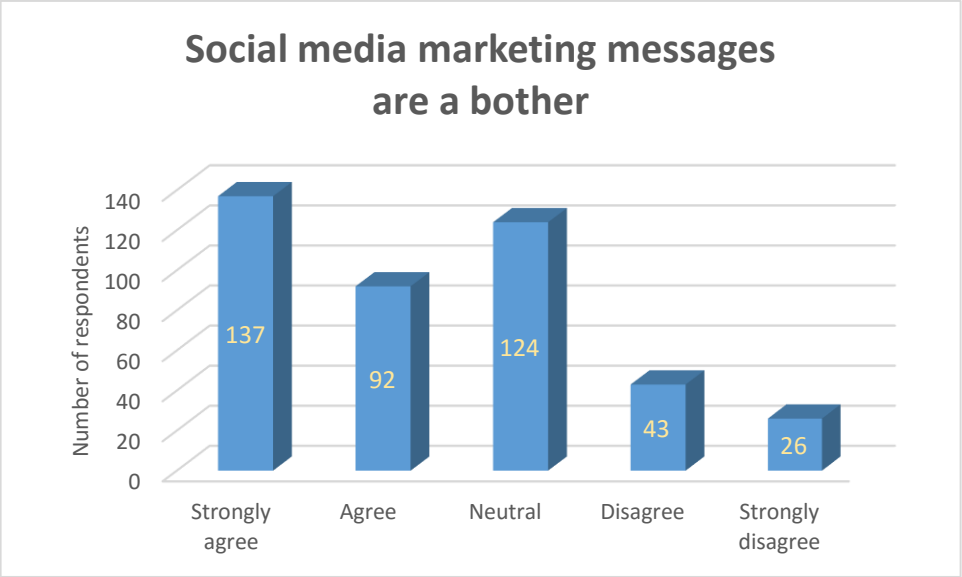

Figure 3.19: Marketing messages received on social media are a bother

The following statement given in the questionnaire looks at how people feel when marketing messages are sent to them via social media, as unlike SMS and other mediums, social media gives the other person or entity a glimpse of the person from whom they are receiving the message. That faint glimpse is seen either by the profile picture that the target person posts on the social media, or their public status and other information they might leave openly visible to the public. In this statement, as per figure 3.19, most of the respondents felt bothered by the marketing messages they received on

their social media, and as little as 26 people, or merely 6.2 per cent strongly disagree with that statement. Another 43 respondents, or 10.2 per cent in total, slightly disagreed with it. Those that remained without an opinion were hanging out at 29.4 per cent, with 124 people in total not choosing either side. Remaining neutral might possibly indicate that some messages would be acceptable given proper variables, and some might not be acceptable. Those who agreed with the statement, were on the stronger side, and out of 229 respondents left, 137, or 32.5 per cent, strongly agreed with the statement, and 92 mildly agreed, making up the remaining 21.8 per cent.

Table 3.19: I prefer to communicate with brands via social media.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	61	14.5	14.5	14.5
Disagree	70	16.6	16.6	31.0
Neutral	161	38.2	38.2	69.2
Agree	90	21.3	21.3	90.5
Strongly agree	40	9.5	9.5	100.0
Total	422	100.0	100.0	

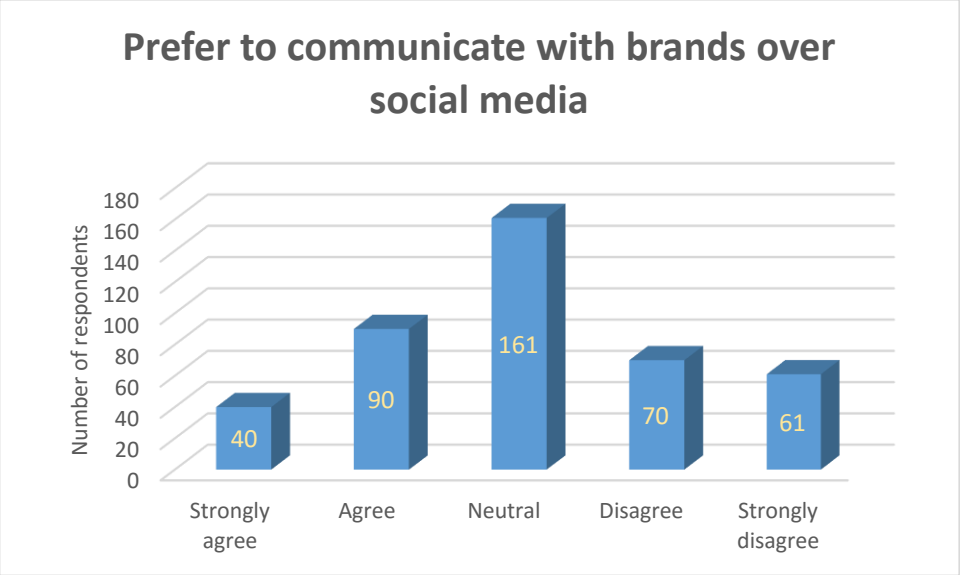

Figure 3.20: Communication with brands via social media is preferable

Another statement was given to see how people felt about communicating with brands and businesses over social media, and if that sort of medium is preferable over other communication mediums. Unlike the previous two statements, with this statement, most respondents remained neutral, 161 of the total 422 respondents, adding up to a total of 38.2 per cent as in table 3.19. Those who disagreed and agreed seem to be of similar numbers, as it can be visibly seen in figure 3.20. Those who agreed had 90 people, collecting 21.3 per cent of the total sample, and those who disagreed had 70 people, adding another 16.6 per cent of the total sample. Furthermore, those who felt a strong disagreement had 14.5 per cent, as in table 3.19, thus collecting 61 respondents, and those who felt a strong agreement had 9.5 per cent, collecting 40 respondents. As both sides had an almost equal number of people, with majority still remaining indecisive about it, it can be said that other variables influence on which medium is better for marketing communication between businesses and target markets, so there is no definite consensus that social media is preferred over other ones.

Table 3.20: I don't care which social media I use to receive marketing messages.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	62	14.7	14.7	14.7
Disagree	73	17.3	17.3	32.0
Neutral	152	36.0	36.0	68.0
Agree	85	20.1	20.1	88.2
Strongly agree	50	11.8	11.8	100.0
Total	422	100.0	100.0	

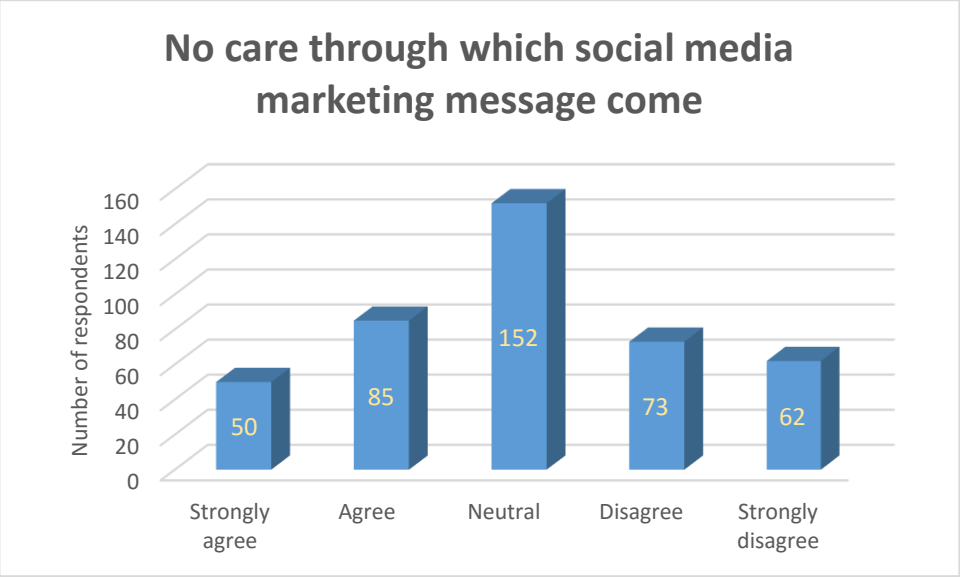

Figure 3.21: No care through which social media marketing messages are received

Table 3.20 and figure 3.21 represent data from the statement that asked the questionnaire respondents whether they have a certain preference on which social media they would like to receive marketing messages. As there are many social media applications open for use, each having its own use and charm, sometimes people get more attached to one particular platform as opposed to another. Alas, a similar case is seen as with the previous statement, where the respondents do not have a strong opinion about which social media is better for communication with various businesses, with 152 respondents, in total 36 per cent, chose to remain neutral. Once again, the number of respondents who disagreed and agreed with the said statement are almost equal on both sides, as it can be visually seen in figure 3.21. Out of 422 respondents in total, 85 (20.1 per cent) chose to agree, and 73 (17.3 per cent) chose to disagree. The ones who felt that it does not matter to them on which social media they receive marketing message held a 11.8 percentage, gathering 50 people, and as for those who felt it does matter which social media businesses use, hence indicating that they too have a certain preference of which social media would be the best, have gathered the remaining 14.7 per cent of people, 62 in total.

Table 3.21: Marketing messages on social media are more interesting than on other mediums.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	74	17.5	17.5	17.5
Disagree	79	18.7	18.7	36.3
Neutral	147	34.8	34.8	71.1
Agree	72	17.1	17.1	88.2
Strongly agree	50	11.8	11.8	100.0
Total	422	100.0	100.0	

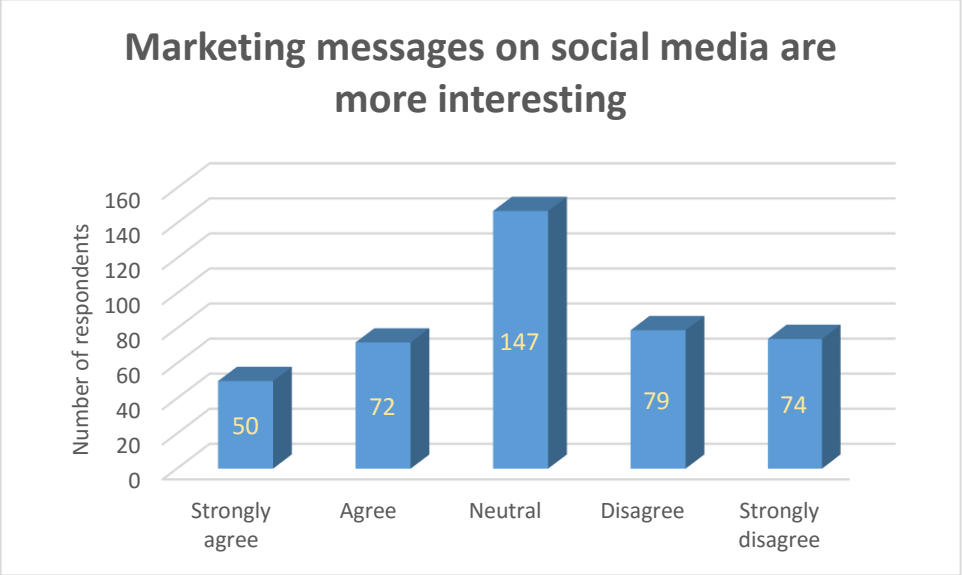

Figure 3.22: Marketing messages on social media are more interesting than on other mediums

Once again, figure 3.22 is showing that with the given statement, there is not a strong consensus as to whether marketing messages are more interesting or less interesting when received through a social media platform. Out of 422 respondents, 74 strongly disagree with the statement, or 17.5 per cent in total, as in table 3.21, implying that the marketing message they receive on social media are not the least bit interesting, and have probably found more cases on other mediums where the messages have peaked their interest. An additional 79 people also disagreed with the statement, adding another

18.7 per cent to the total, implying that up till this moment no messages they received on social media have been interesting. Similar can be said about the 147 people that chose to remain neutral, thus neither agreeing or disagreeing with the said statement, further implying that perhaps there might have been some interesting marketing messages and also some that were not, but nothing that would bring about a strong emotion out of them. Those who remained neutral collected 34.8 per cent of the total sample. Those who agreed that the marketing messages on social media are more interesting than on other mediums, had 17.1 per cent in total, collecting 72 respondents who felt the same. The remaining 50 respondents felt a strong agreement with the statement, and added the final 11.8 per cent to the total sample.

Table 3.22: I will participate in an event faster if I read the marketing message on social media.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	52	12.3	12.3	12.3
Disagree	83	19.7	19.7	32.0
Neutral	128	30.3	30.3	62.3
Agree	97	23.0	23.0	85.3
Strongly agree	62	14.7	14.7	100.0
Total	422	100.0	100.0	

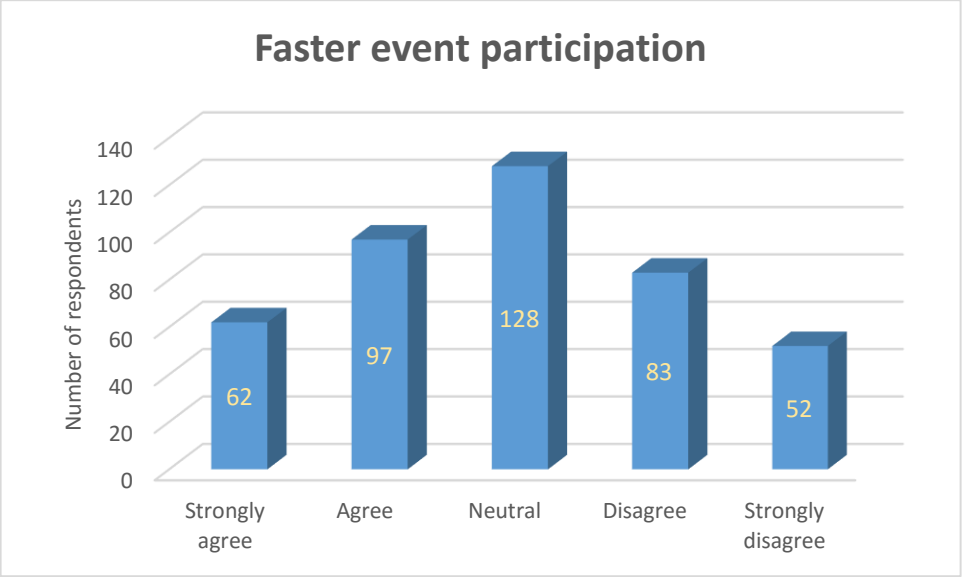

Figure 3.23: Faster event participation if marketing message is read on social media

Figure 3.23 and table 3.22 show the data of whether the respondents would feel more inclined to participate in an event if they read the marketing message on social media, as opposed to reading it on other mediums, i.e. through SMS. As per table 3.22, the biggest percentage of 30.3, 128 respondents in total, remained neutral about the statement, neither disagreeing nor agreeing with it. Those who strongly agreed and would go through and participate in an event if they read a marketing message on social media, gathered 14.7 per cent, or 62 respondents in total, along with another 97, or 23 per cent out of the whole sample, who also agreed, but less strongly than the others. As for those who strongly disagreed, implying it would not make a difference to them where they would read the marketing message and their incentive to participate in an event, had 12.3 per cent out of the total sample, which was 52 respondents in total, and the last 83 people, and the remaining 19.7 per cent, felt they disagreed with the statement, but less strongly about it.

Table 3.23: I'm more satisfied when I can read the marketing message at a time chosen by me personally.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	36	8.5	8.5	8.5
Disagree	32	7.6	7.6	16.1
Neutral	109	25.8	25.8	41.9
Agree	132	31.3	31.3	73.2
Strongly agree	113	26.8	26.8	100.0
Total	422	100.0	100.0	

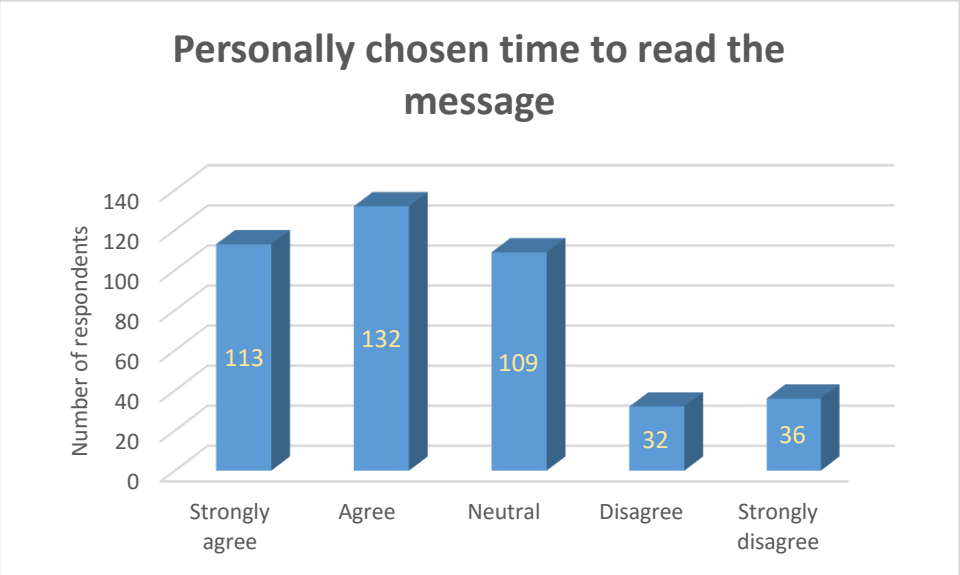

Figure 3.24: Personally chosen time to read the marketing message

Unlike the previous statement, the statement of having a choice when to read the marketing message strongly resonated with the respondents. A little less than 70 people disagreed with the said statement, 36 (8.5 per cent) strongly disagreeing, and 32 (7.6 per cent) just disagreeing. Out the remaining 354 respondents, 113 strongly agreed with the statement, which was 26.8 per cent of the total sample, as per table 3.23, and another 132 respondents or 31.3 percentage-wise also agreed with it. The remaining 109 people, the last 25.8 per cent, did not have a particular preference of when they can read the marketing messages.

Table 3.24: I'm more satisfied when I can get a quick response to my inquiry.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	18	4.3	4.3	4.3
Disagree	24	5.7	5.7	10.0
Neutral	45	10.7	10.7	20.6
Agree	132	31.3	31.3	51.9
Strongly agree	203	48.1	48.1	100.0
Total	422	100.0	100.0	

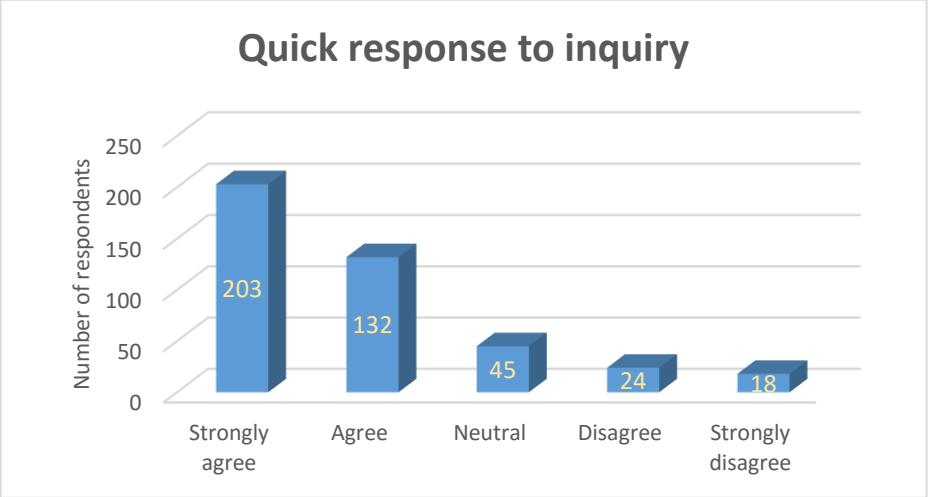

Figure 3.25: More satisfaction when getting a quick response to an inquiry

Out of all the statements related to mobile marketing on social media, the statement on getting quick response to an inquiry had the strongest following. A clear indication in figure 3.25 shows that a little less than a half of the respondents, 48.1 per cent, or 203 respondents to be exact strongly agreed that they would be more satisfied if the businesses would answer their questions quickly without prolonging any unnecessary time. Also another 132 people, an additional 31.3 per cent, agreed with the said statement, adding to an even bigger percentage of people who overall agree with the said statement. Those who remained neutral, and not really had a strong opinion about receiving a quick reply to their inquiries, gathered 10.7 per cent, which was 45 out of the 422 respondents. There were also those who disagreed with this statement, though they were in a small minority, having the last 10 per cent of the sample, and 24

respondents disagreeing and 18 strongly disagreeing that they would feel more satisfied if they got a quick reply to their questions.

Table 3.25: I feel more protected when I communicate with a brand on social media than face to face.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	102	24.2	24.2	24.2
Disagree	95	22.5	22.5	46.7
Neutral	145	34.4	34.4	81.0
Agree	48	11.4	11.4	92.4
Strongly agree	32	7.6	7.6	100.0
Total	422	100.0	100.0	

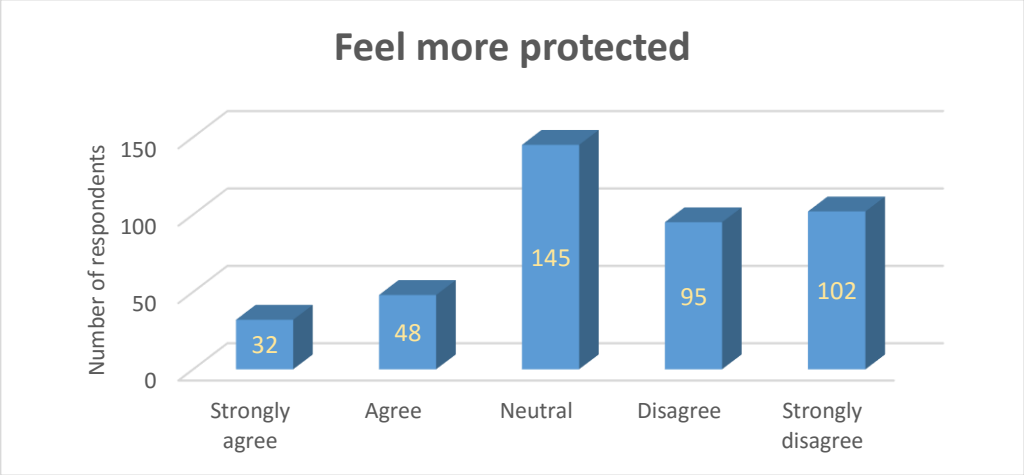

Figure 3.26: Feel more protected when communicating through social media than face to face

Contrary to the statements so far, the statement about feeling protected when communicating via social medium as opposed to face to face, had a different response than any other statements covered so far. Figure 3.26 shows that 102 respondents, a 24.2 percentage, strongly disagreed with the statement, thus implying that they feel safer when they can communicate with a brand face to face, possibly minimizing the chances of being tricked or cheated over during some business transaction. Another 95 respondents felt similar and disagreed with the statement, adding another 22.5 per cent to the table. As seen in table 3.25, a little less than 20 per cent were those who agreed

with the statement. Those who agreed gathered 11.4 per cent, 48 people in total, and those who strongly felt that they feel more protected when communicating with brands over social media as opposed to face to face, had approximately 7.6 per cent of the total amount, or 32 people in total. Finally, those who were not leaning towards either side of the spectrum, gathered the remaining 34.4 per cent, largest percentage out of the entire table 3.25. The ones who remained neutral had 145 respondents out of the entire sample.

Table 3.26: It's easier to communicate with brands through social media than through other mediums.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	49	11.6	11.6	11.6
Disagree	75	17.8	17.8	29.4
Neutral	129	30.6	30.6	60.0
Agree	100	23.7	23.7	83.6
Strongly agree	69	16.4	16.4	100.0
Total	422	100.0	100.0	

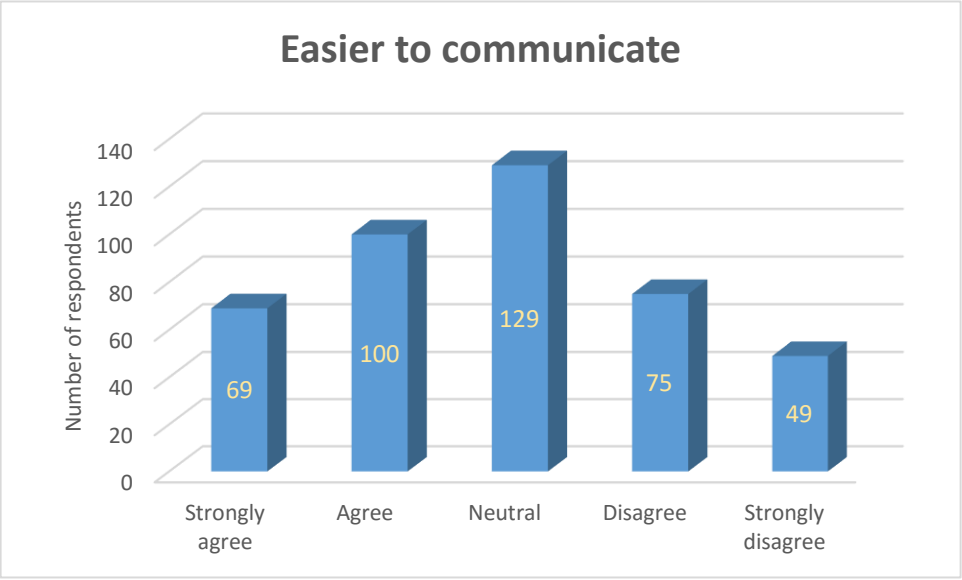

Figure 3.27: Easier to communicate with brands through social media than through other mediums

A similar statement was given again earlier in the questionnaire where the respondents were asked if they prefer to use social media as a means of communication with brands as opposed to SMS, voice calling, and other mediums. This statement follows a similar pattern, where the respondents were asked if they considered communicating with brands through social media easier than through other mediums, as something being preferable does not necessarily correlate with its ease of use. Nevertheless, a similar observation can be made, if figure 3.26 is observed, as the biggest majority of respondents, 129 people (30.6 per cent) remained neutral, thus neither agreeing or disagreeing with the said statement. Those who disagreed were in a slightly less minority, as according to table 3.26, having 17.8 per cent, or 75 people in total disagreeing, and another 11.6 per cent strongly disagreeing, which adds up to 49 people out of the 422 respondents. These that disagreed, especially the 49 who strongly disagreed, most likely find communicating with brands through social media rather difficult, though many reasons why that might be the case are possible. On the other hand, according to figure 3.26, 100 respondents agreed that it is easier to communicate with brands through social media, gathering 23.7 per cent, and the remaining 16.4 per cent, or 69 respondents, strongly agreed that it is indeed easier to communicate with through this medium than any other one.

3.2.5 Responses to the acceptance of mobile marketing applications

The third batch of questions and statements given in the questionnaire focused on people's acceptance and opinions of mobile marketing application and what would they prefer to have in a certain mobile application made by a brand, that they would accept it faster and have it on their mobile device.

Table 3.27: I'd rather use a brand's mobile application than its mobile website.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	54	12.8	12.8	12.8
Disagree	70	16.6	16.6	29.4
Neutral	134	31.8	31.8	61.1
Agree	88	20.9	20.9	82.0
Strongly agree	76	18.0	18.0	100.0
Total	422	100.0	100.0	

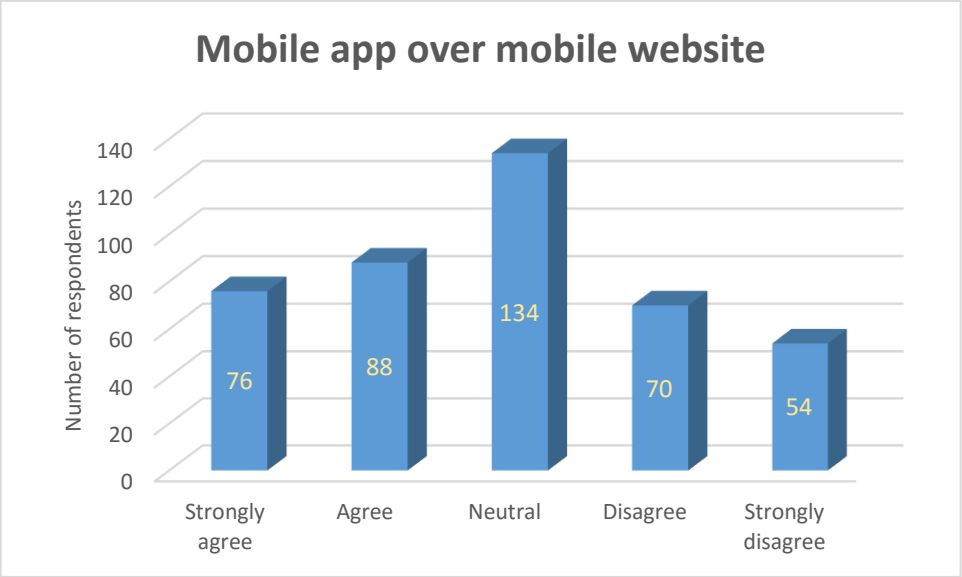

Figure 3.28: Brand's mobile application is preferable over its mobile website

The first statement in the third batch of the questionnaire looked at what people found more preferable, using a brand's mobile website or its mobile application in order to conduct its business transactions. From table 3.27 it can be seen that the biggest percentage, 31.8 per cent, had respondents who chose to neither disagree or agree with the given statement, adding to 134 people out of 422 respondents. Those who agreed were in a slightly higher advantage, having 88 (20.9 per cent) who agreed and 78 (18 per cent) who strongly agreed, translating to that that these respondents feel that the brand's mobile application does more to help them than the brand's mobile website. As

for those who did not quite agree that the brand's mobile application is more preferable, gathered 16.6 per cent, as shown in table 3.27, or 70 people as seen in figure 3.28, as well as another 54 people, 12.8 per cent, who strongly disagreed with the said statement.

Table 3.28: Mobile applications that have more options are appealing.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	36	8.5	8.5	8.5
Disagree	43	10.2	10.2	18.7
Neutral	125	29.6	29.6	48.3
Agree	126	29.9	29.9	78.2
Strongly agree	92	21.8	21.8	100.0
Total	422	100.0	100.0	

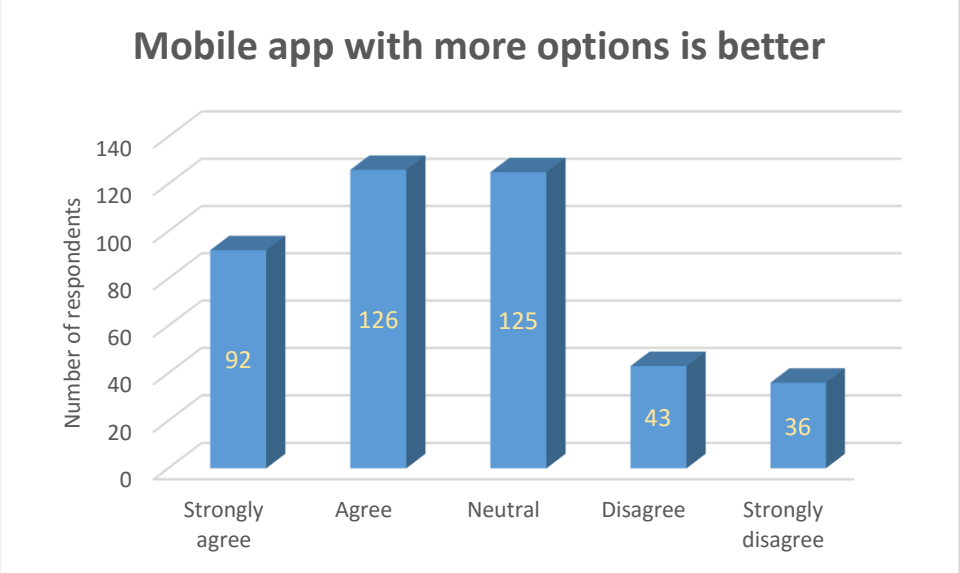

Figure 3.29: Brand's mobile application with more options are more appealing

The next, and the following statements, was given in order to see what the questionnaire respondents find most appealing about a brand's mobile application that will make them use it. As figure 3.29 gives a visual representation, there were only a little less than 80 people who disagreed with the statement. Out of 422 respondents, 36 strongly disagreed that brand's mobile application with more options are more appealing, and another 43 respondents added to that disagreement, gathering a total of 8.5 and 10.2 per cent

respectively of the total number. Those who remained neutral had almost the exact same number of respondents, 125 (29.6 per cent), as those who agreed with the given statement, 126 (29.9 per cent). Lastly, the remaining number of respondents, 92, felt a strong agreement that a brand's mobile application with more options is more appealing, gathering the remaining 21.8 per cent of the total amount.

Table 3.29: Mobile applications that are not complicated to use are more appealing.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	22	5.2	5.2	5.2
Disagree	24	5.7	5.7	10.9
Neutral	67	15.9	15.9	26.8
Agree	154	36.5	36.5	63.3
Strongly agree	155	36.7	36.7	100.0
Total	422	100.0	100.0	

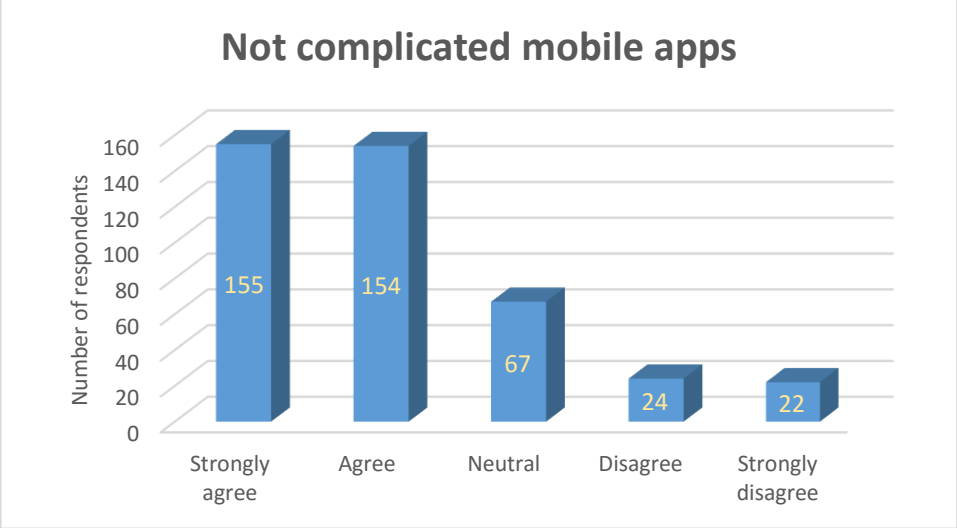

Figure 3.30: Brand's mobile applications that are not complicated to use are more appealing

Similar statement to the previous one, this statement tries to find out what do the questionnaire respondents find more appealing about a brand's mobile application. In this case, it looks at the complexity of the mobile application and if those mobile applications that are less complicated, or not complicated at all, are more appealing to

the respondents. As visibly seen in figure 3.30, the biggest number of supports agreed with the statement, with 155 people, or 36.7 per cent, strongly agreeing with it, and another 154 people, or 36.5 per cent, just agreeing with it. Only a small number of 22 respondents, equal to 5.2 per cent, as per table 3.28, strongly disagreed, and another close number, 24 people, equaling to 5.7 per cent, disagreed that those brand's mobile applications that are not complicated to use are more appealing. Furthermore, 67 people chose to remain neutral, adding to the last 15.9 per cent of the total sample, thus indicating that if given the proper tools and enough knowledge, those applications that users might find interesting or intriguing, albeit complicated, can still be entertaining and more appealing.

Table 3.30: I believe my private information is not secure if I use mobile applications.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	52	12.3	12.3	12.3
Disagree	106	25.1	25.1	37.4
Neutral	148	35.1	35.1	72.5
Agree	69	16.4	16.4	88.9
Strongly agree	47	11.1	11.1	100.0
Total	422	100.0	100.0	

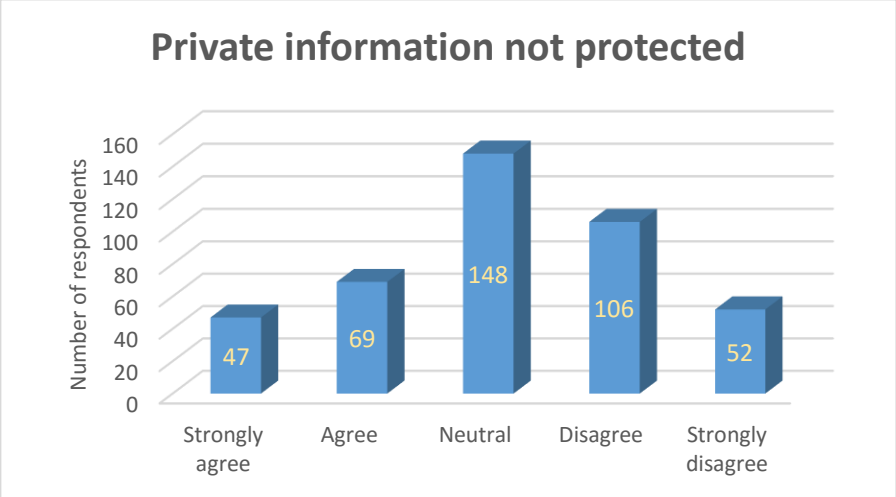

Figure 3.31: Private information is not protected with the use of brand's mobile applications

As with previous sets of statements in the questionnaire, this third set also had a statement that looked at how people felt when it comes to protection of their private information and whether they feel safe using mobile applications. Similar to the previous two statements that asked a similar question, figure 3.31 shows that most people were either neutral about it, 148 of them, or 35.1 per cent in total, or they disagreed with the statement that they feel their private information is not protected when they use the brand's mobile application. Those who strongly disagreed had gather 12.3 per cent, according to table 3.30, collecting 52 respondents, and another 25.1 per cent, or 106 people in total, simply disagreed. On the other hand, 47 respondents, or 11.1 per cent, strongly agreed that they felt their private information is not fully protected when they use a certain brand's mobile application. The last 16.4 per cent out of the total sample, had 69 people who also agreed with this statement.

Table 3.31: I believe every brand needs to have its own mobile application.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	36	8.5	8.5	8.5
Disagree	63	14.9	14.9	23.5
Neutral	121	28.7	28.7	52.1
Agree	107	25.4	25.4	77.5
Strongly agree	95	22.5	22.5	100.0
Total	422	100.0	100.0	

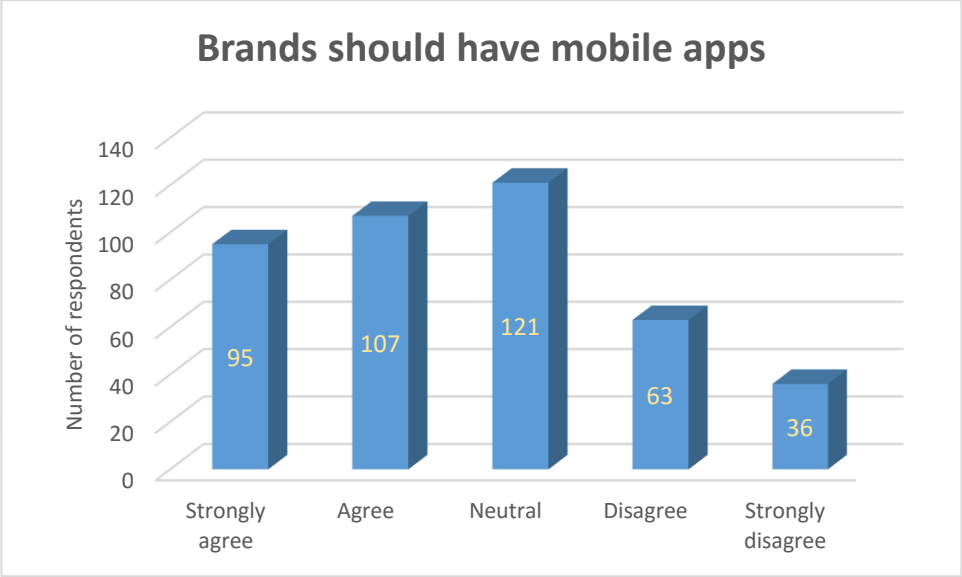

Figure 3.32: Every brand should have its own mobile application

Figure 3.32 and table 3.31 show data on whether the questionnaire respondents feel that every brand out there should have its own mobile application, and if looking at figure 3.32, it is clearly seen there were only a slightly few who disagreed with this. Out of 422 respondents, 36 (8.5 per cent) strongly disagreed, and another 63 (14.9 per cent) respondents simply disagreed, instigating that it might be unnecessary for every brand to have its own mobile application. Those who remained neutral, all 121 of the respondents, or 28.7 per cent, felt that they do not hold any strong opinion about the said statement. Possibly implying that given certain variables when put into play, such as the benefit it comes with the consumer of using the mobile application, it might be best to have the brand have its own mobile application, or perhaps, if there is no benefit, or the brand is not something that the consumer looks at often, nor is it big enough to gain mass attention, then perhaps, it might be better for the time being, for the brand not to have its own mobile application. Those who felt a strong agreement with this possibility, had 22.5 per cent out of the total sample, thus gathering 95 respondents, as per figure 3.32. The remaining 25.4 per cent had 107 people who responded that they simply agree with the statement.

Table 3.32: I prefer to use a brand's mobile application if it offers some benefits.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	25	5.9	5.9	5.9
Disagree	41	9.7	9.7	15.6
Neutral	92	21.8	21.8	37.4
Agree	159	37.7	37.7	75.1
Strongly agree	105	24.9	24.9	100.0
Total	422	100.0	100.0	

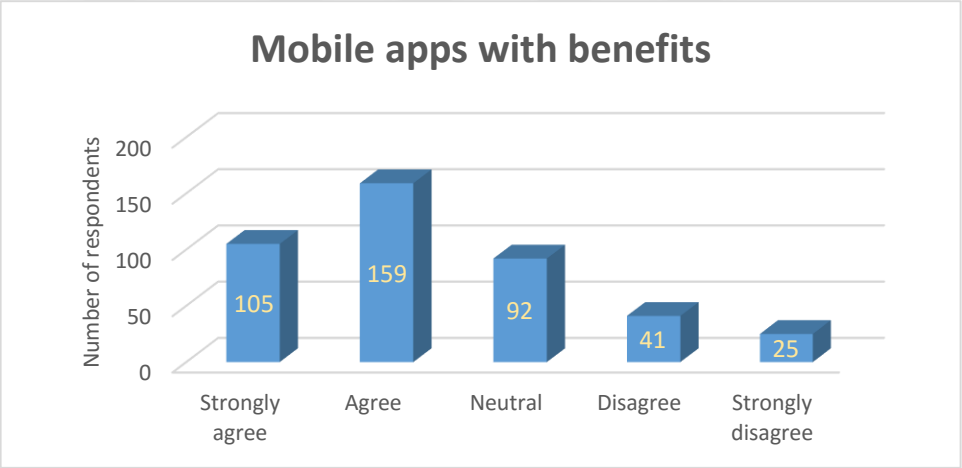

Figure 3.33: Brand's mobile applications with benefits are preferable

A bit different than the previous answers to the questionnaire, brand's mobile application that contain certain benefits for the consumer are seen to be more preferable, as 159 agreed and another 105 respondents strongly agreed with this statement, as per figure 3.33. These numbers add up to more than half of the respondents, 63.6 per cent to be exact, choosing to agree with the statement. The other percentage, 21.8 per cent, chose to remain neutral, having 92 respondents choosing that option, and those who disagreed gathered the remaining 15.6 per cent. Out of the 15.6 per cent of the respondents, 41 chose to disagree and the last 25 people chose to strongly disagree, implying that brand's mobile applications with benefits to the user do not necessarily have to contain any benefits in order for the consumers to use them.

Table 3.33: I prefer to use a brand's mobile application if it doesn't slow my mobile device.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	19	4.5	4.5	4.5
Disagree	20	4.7	4.7	9.2
Neutral	66	15.6	15.6	24.9
Agree	125	29.6	29.6	54.5
Strongly agree	192	45.5	45.5	100.0
Total	422	100.0	100.0	

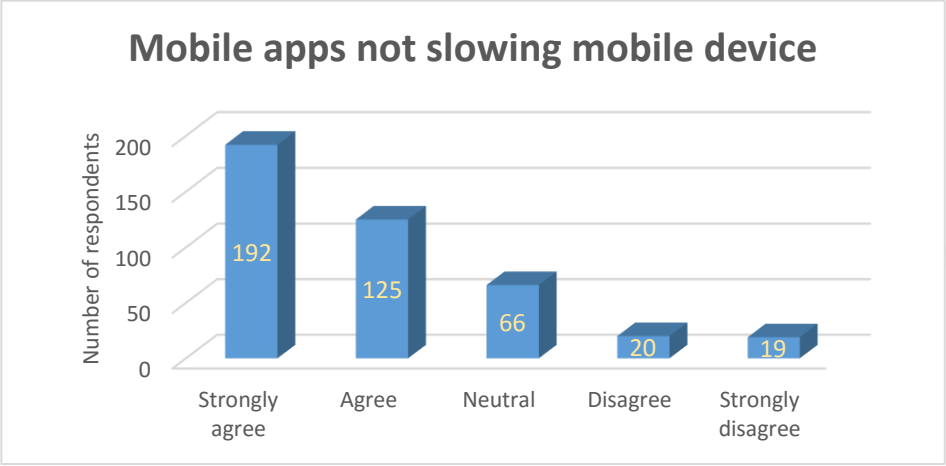

Figure 3.34: Brand's mobile applications that don't slow the mobile device are preferable

The next statement given in the questionnaire looks at the processing memory in the user's mobile device and how important for them that things work quickly and smoothly on these devices. When looking at figure 3.34, one can see that it is very important to the questionnaire respondents that the brand's mobile application do not slow down their mobile device, as a total of 192 respondents, or 45.5 per cent, strongly agreed with this, with another 125 of them, an additional 29.6 per cent, also choosing to agree with the statement. A little less than 40 people chose to disagree with this, indicating that how fast their mobile device performs certain functions will not have any effect in choosing or not choosing to have a certain brand's mobile application. Out of the 9.2 per cent who chose to disagree, 4.5 per cent, 19 people in total, chose to strongly

disagree, and 4.7 per cent, or 20 respondents, chose to just disagree. Finally, there were also those that neither agreed or disagreed if mobile applications that do not slow down their mobile device are more preferable, indicating that there are certain other variables that influence their decision on what a certain brand's mobile application should have in order to make it preferable, thus leaving the remaining 66 people, or 15.6 per cent undecided.

Table 3.34: I prefer to use a brand's mobile application that does not take up too much memory on my mobile device.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	27	6.4	6.4	6.4
Disagree	23	5.5	5.5	11.8
Neutral	55	13.0	13.0	24.9
Agree	136	32.2	32.2	57.1
Strongly agree	181	42.9	42.9	100.0
Total	422	100.0	100.0	

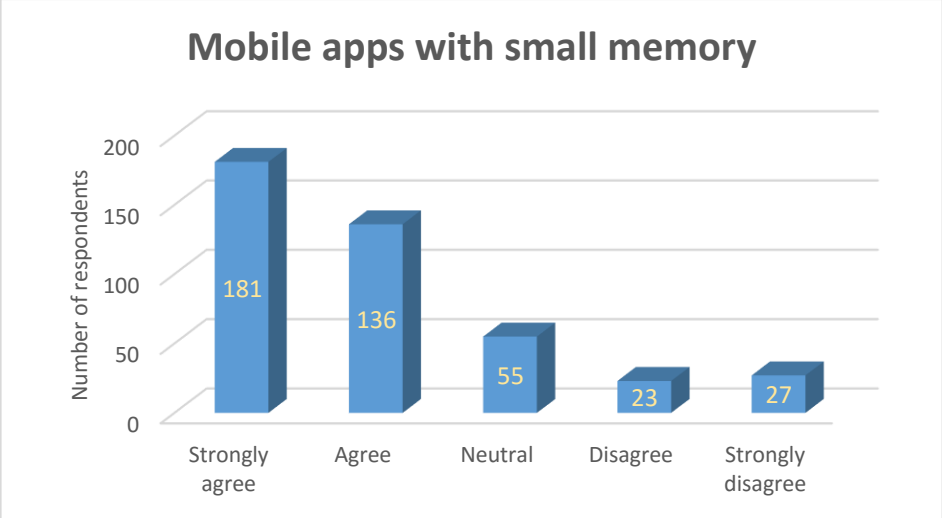

Figure 3.35: Brand's mobile application that don't take up too much memory on the mobile device are preferable

Similar to the previous statement, figure 3.35 shows another visual representation of how the majority of the questionnaire respondents feel that they either strongly agree, 181 (42.9 per cent) people in total, or just agree, 136 (32.2 per cent) people with the

given statement of how they would prefer a brand's mobile application that does not take up too much memory on their mobile device. Those who had no particular opinion about it gathered 13 per cent, or 55 people, and the remaining number of respondents stated they disagreed with this. Out of the entire sample, 27 respondents, or 6.4 per cent, strongly disagreed that they would prefer a mobile application that does not take up too much memory on their mobile device, implying that given certain benefits in having that mobile application, it being too large would not affect their choice in having it. Similar answer gave the last 23 respondents, the remaining 5.5 per cent, and chose to disagree with the said statement.

Table 3.35: It's important for me that the database on the brand's mobile application is regularly updated.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	23	5.5	5.5	5.5
Disagree	21	5.0	5.0	10.4
Neutral	87	20.6	20.6	31.0
Agree	143	33.9	33.9	64.9
Strongly agree	148	35.1	35.1	100.0
Total	422	100.0	100.0	

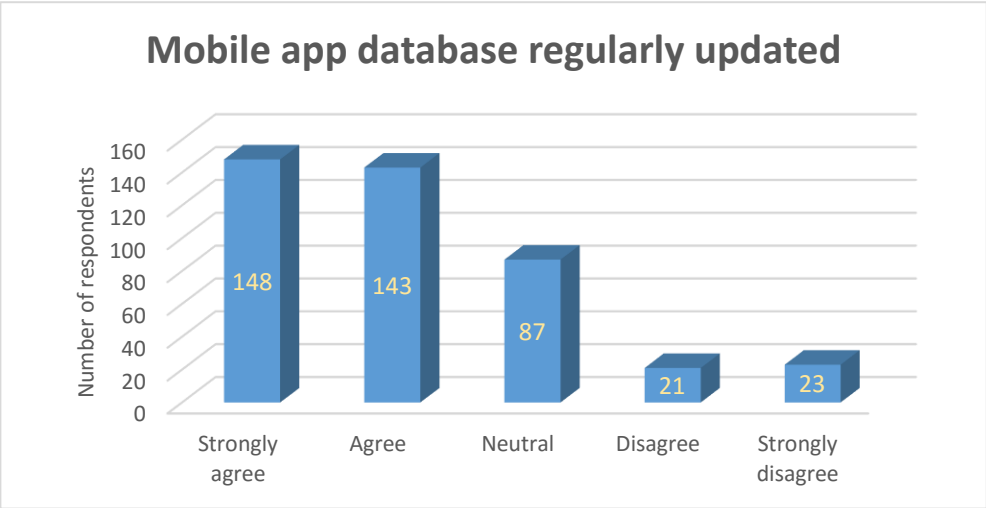

Figure 3.36: Brand's mobile application databases should be regularly updated

Another statement had very similar answers as with the previous couple before this one, as figure 3.36 clearly shows that the biggest majority of questionnaire respondents skews towards agreeing that a brand's mobile application database should be regularly updated. About 5 per cent chose to disagree with the statement, gathering merely 21 respondents, and another 23, an additional 5.5 per cent, chose to strongly disagree with the statement. Out of 422 questionnaire respondents, 87 remained neutral, adding 20.6 to the total number, according to table 3.35, thus implying that a regularly updated mobile application database of a certain brand does not have a big importance to them and whether they chose to use that mobile application or not. The remaining percentage, 35.1 per cent and 33.9 per cent chose to agree with the statement. The 35.1 per cent had 148 respondents who strongly agreed that the databases in the mobile applications should be regularly updated, and the last 143 respondents followed along and answered that they too agree that these databases should be regularly updated, and thus increasing the likelihood of consumers choosing to use them as well as for prolonged use and not a onetime thing.

Table 3.36: It's important for me that the payment process on the brand's mobile application is quick and simple.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	21	5.0	5.0	5.0
Disagree	13	3.1	3.1	8.1
Neutral	61	14.5	14.5	22.5
Agree	131	31.0	31.0	53.6
Strongly agree	196	46.4	46.4	100.0
Total	422	100.0	100.0	

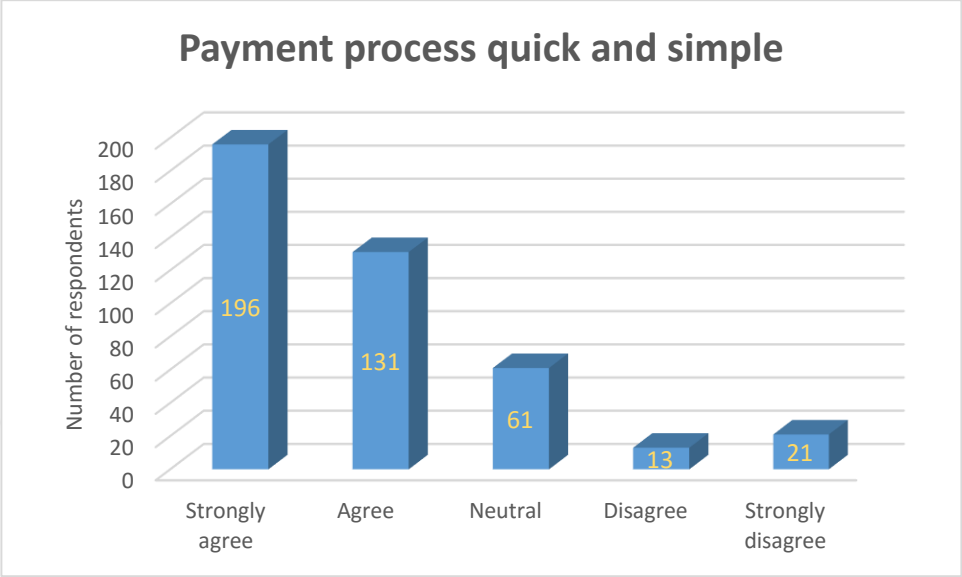

Figure 3.37: Payment process on mobile application is quick and simple

Out of all statements given in the third set of questions, the payment process seemed to have the strongest response, as visually observed in figure 3.37. A staggering 46.4 per cent alone, which ends up being 196 respondents out of the total 422, felt a strong agreement that the payment process on a brand's mobile application should be quick and simple. Another 131 people, additional 31 per cent also agreed that the payment process should not be complicated nor too long. There were also those that remained neutral, 61 in total, or 14.5 per cent, thus maybe believing that a quick and simple payment process is not always the best solution nor that is the worst. A mere number of 13 disagreed that it is better to have the payment process less complicated, gathering a 3.1 percent, and the remaining 5 per cent also felt a strong disagreement, collecting the last 21 respondents, implying that payment process on a brand's mobile application should not be either too quick or too simple, as it might possibly cause people to make easier mistakes.

3.2.6 Responses to the general acceptance of mobile marketing and use of mobile device

The following three statements were given in the questionnaire in order to see what do the respondents feel about mobile marketing in general, without focusing on a particular

mobile marketing service, and how they feel about their mobile device and their personal connection to it.

Table 3.37: If I'm satisfied with the marketing message, I will recommend it to my friends and family members.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	38	9.0	9.0	9.0
Disagree	27	6.4	6.4	15.4
Neutral	62	14.7	14.7	30.1
Agree	162	38.4	38.4	68.5
Strongly agree	133	31.5	31.5	100.0
Total	422	100.0	100.0	

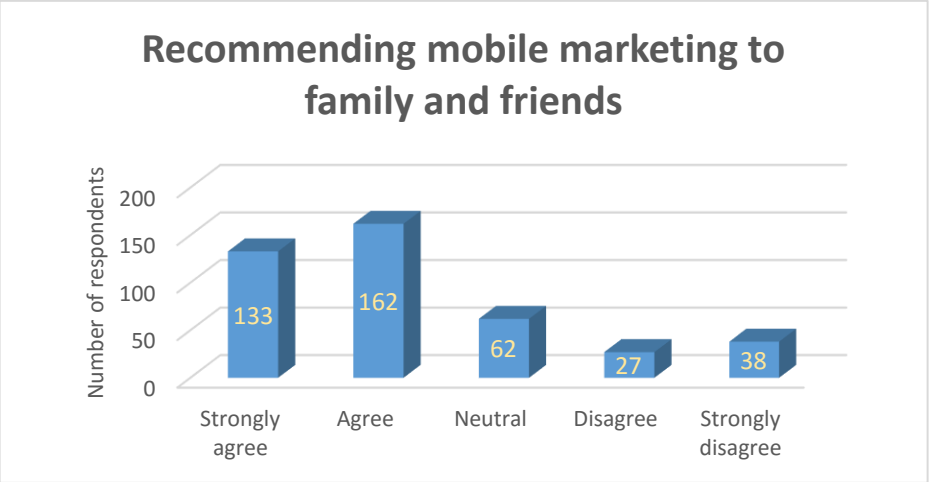

Figure 3.38: Recommending mobile marketing to friends and family members if satisfied with the message

As it can be seen from figure 3.38, more than half of the questionnaire respondents felt that they would recommend accepting mobile marketing to their friends and family members, if they themselves were satisfied with the marketing message. About 162 respondents, which is 38.4 per cent in total, agreed with the said statement, and 133 respondents, which is 31.5 per cent, strongly agreed with it. Those who disagreed where in the minority, with 27 respondents disagreeing, and 38 strongly disagreeing, which is

6.4 and 9 per cent respectively. Those that remained neutral, the remaining 14.7 per cent, the last 62 respondents, chose to remain neutral feeling that being satisfied with the marketing message had no big effect on their choice of recommending it to their friends and family members.

Table 3.38: I believe my mobile device reflects my personality.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	77	18.2	18.2	18.2
Disagree	81	19.2	19.2	37.4
Neutral	103	24.4	24.4	61.8
Agree	86	20.4	20.4	82.2
Strongly agree	75	17.8	17.8	100.0
Total	422	100.0	100.0	

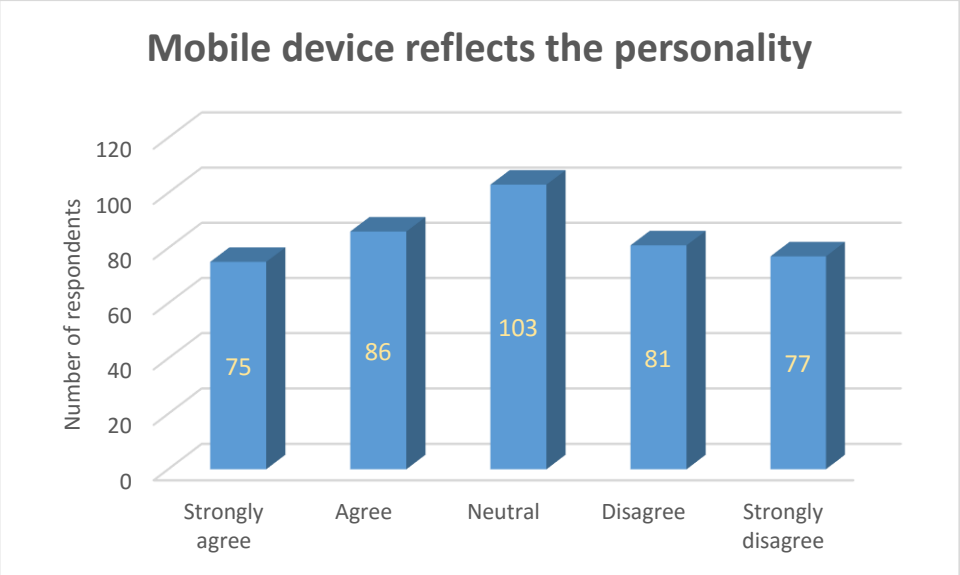

Figure 3.39: Mobile devices reflect a person's personality

Another statement was given in the questionnaire to see how the respondents feel about their mobile devices, as it was previously mentioned throughout the paper, that many people feel these days that their mobile devices represent themselves and their personality. Thus, this statement was given to reiterate if the previous researches has

any value in a country such as Bosnia and Herzegovina. Unlike the previous statements, it can be seen in figure 3.39 that the bars and numbers are more spread out, making almost an equal amount of respondents that agree with the statement in one way or another and those that disagree in one way or another. The highest number of respondents, 103 in total, or 24.4 in percentage wise, remained neutral, and thus implying that they do not feel an explicit connection with their mobile devices nor that they feel that their mobile devices are a reflection of their personality, as would perhaps more developed countries would show in their own figures. As table 3.38 is showing, 17.8 per cent of respondents, or 75 people in total strongly agreed that their mobile devices reflects their personality, and another 20.4 per cent, or 86 people in total, simply agreed with the statement. Those that disagreed had similar numbers, 19.2 per cent disagreeing, adding up to 81 respondents, and 18.2 per cent, which is 77 people in total, that felt a strong disagreement with the aforementioned statement.

Table 3.39: I believe mobile devices are the best mediums for marketing.

Likert Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	41	9.7	9.7	9.7
Disagree	61	14.5	14.5	24.2
Neutral	167	39.6	39.6	63.7
Agree	84	19.9	19.9	83.6
Strongly agree	69	16.4	16.4	100.0
Total	422	100.0	100.0	

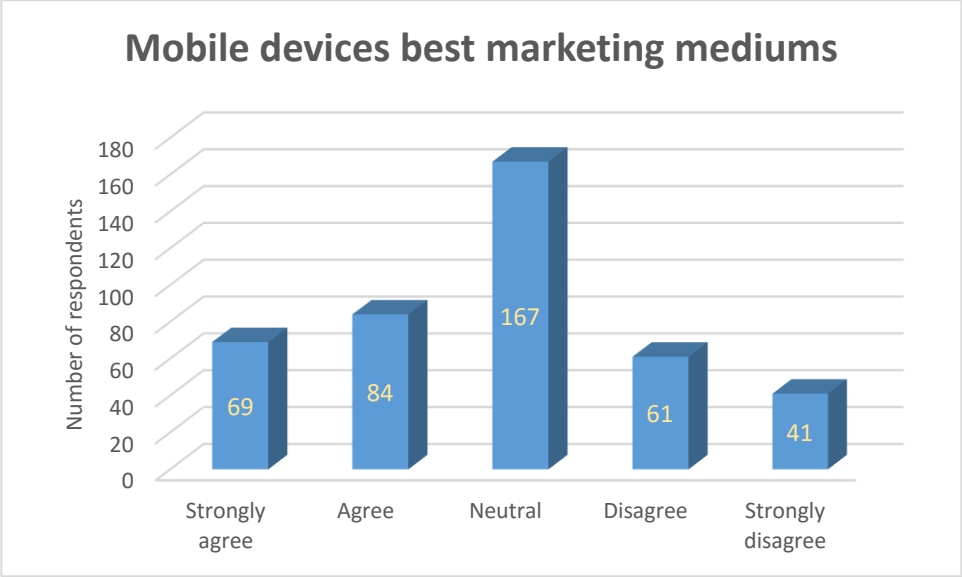

Figure 3.40: Mobile devices are the best mediums for marketing

The last statement that was given in the questionnaire, tried to see whether people feel that mobile devices, as they are becoming more popular these days, are a better option for businesses to market their products to them, than other mediums, such as TV commercials, billboards, radio segments, and so on. As figure 3.40 shows, the majority of respondents did not feel anything special about which medium is the best for business to advertise their products, as most people, 167 to be exact, or 39.6 per cent in total, remained neutral about this statement. As table 3.39 and figure 3.40 shows, there was a slightly bigger number of those that agreed than those that disagreed. Out of 422 respondents, 84 (19.9 per cent) agreed with the statement, and 69 strongly agreed with it, which was another 16.4 per cent. Furthermore, approximately 61 (14.5 per cent) respondents disagreed and 41 (9.7 per cent) strongly disagreed with the statement that mobile devices are the best mediums for businesses to advertise their products and service.

3.2.7 Descriptive findings

The following tables and results will present the descriptive statistics for each of the statements given in the questionnaire.

Table 3.40: Descriptive statistics according to the mobile marketing via SMS variable.

I will accept mobile marketing via SMS faster if…	Mean	Mode	Std. Dev.
The content of the marketing message suits my needs.	3.67	4	1.210
The content of the marketing message is useful.	3.70	4	1.203
The content of the marketing message is creative.	3.53	4	1.179
The content of the marketing message is interesting.	3.48	4	1.189
I gave permission beforehand to receive the message.	3.35	5	1.363
Marketing messages are not sent to me at an inappropriate time (e.g. sleeping, lunch)	3.38	4	1.292
The marketing messages are not too frequent.	3.53	5	1.346
The marketing messages are about a brand that's in close proximity.	3.33	4	1.193
The marketing messages are clear and concise.	3.65	4	1.215
I know my private information is protected.	3.82	5	1.337

As it can be seen from table 3.40, which shows the descriptive statistics of the respondents' answers according to the first set of statements given in the questionnaire, the most common value chosen by the respondents is 4. Other than 4, which was selected as agreeing with the statement, number 5, which was strongly agreeing with the statement was the second most common answer, while the other answers were not that common in any of the given statements in the first batch of questions.

Table 3.41: Descriptive statistics according to the mobile marketing via social media variable.

Statements	Mean	Mode	Std. Dev.
I frequently use social media on my mobile device.	4.15	5	1.193
The marketing messages I receive on social media bother me.	3.64	5	1.207
I prefer to communicate with brands via social media.	2.95	3	1.156
I don't care which social media I use to receive marketing messages.	2.97	3	1.199
Marketing messages on social media are more interesting than on other mediums.	2.87	3	1.233
I will participate in an event faster if I read the marketing message on social media.	3.08	3	1.226
I'm more satisfied when I can read the marketing message during a time chosen by me personally.	3.60	4	1.201
I'm more satisfied when I can get a quick response to my	4.13	5	1.088

inquiry.			
I feel more protected when I communicate with the brand through social media than face to face.	2.56	3	1.190
It's easier to communicate with brands through social media than through other mediums.	3.15	3	1.230

As for the second set of statements that looks at mobile marketing via social media variable, table 3.41 shows its descriptive and, unlike the first batch, here the most common value is 3. However, there were also statements where strongly agreeing, number 5, and agreeing, number 4, were found to be the most common values among certain statements.

Table 3.42: Descriptive statistics according to the mobile marketing via mobile applications variable.

Statements	Mean	Mode	Std. Dev.
I'd rather use a brand's mobile application than its mobile website.	3.15	3	1.260
Mobile applications that have more options are more appealing.	3.46	4	1.185
Mobile applications that are not complicated to use are more appealing.	3.94	5	1.105
I believe my private information is not secured if I use mobile applications.	2.89	3	1.159
I believe every brand needs to have its own mobile application.	3.38	3	1.225
I prefer to use a brand's mobile application that offers some benefits.	3.66	4	1.129
I prefer to use a brand's mobile application that doesn't slow my mobile device.	4.07	5	1.097
I prefer to use a brand's mobile application that does not take up too much memory on my mobile device.	4.00	5	1.165
It's important for me that the database on the brand's mobile application is regularly updated.	3.88	5	1.111
It's important for me that the payment process on the brand's mobile application is quick and simple.	4.11	5	1.082

Table 3.42 shows the descriptive statistics of brands using their own mobile application to perform mobile marketing, and once again, the most common value is different than the other two batches of questions. Here the most common value is 5, which

respondents chose when the strongly agreed with a certain statement. The other two most common values were 3 and 4, which were neutral and agreeing, respectively.

Table 3.43: Descriptive statistics for general mobile marketing acceptance and use of mobile devices.

Statements	Mean	Mode	Std. Dev.
If I'm satisfied with the marketing message, I will recommend it to my friends and family members.	3.77	4	1.216
I believe my mobile device reflects my personality.	3.00	3	1.357
I believe mobile devices are the best mediums for marketing.	3.19	3	1.164

Finally, table 3.43, just shows the descriptive statistics of how the respondents feel about their mobile device and their general opinion about mobile marketing. Most common value was neutral for the questions about the respondents' connection with their mobile device, as well as using it for mobile marketing, while on the statement of whether they would suggest mobile marketing to someone else if they are satisfied, the respondents most commonly answered that they will do it, making 4 the most common value in that statement.

3.2.8 Hypothesis tests

In order to see if the hypotheses stay true to its values, a new set of variables are set in order to test the hypotheses. Therefore, a recoded Likert scale was created so as to get new values for the new derived variables to test against the demographic questions that were asked in the questionnaire, such as the age, gender, residence type, education level, and monthly income. The new recoded Likert scale can be seen in table 3.44 below, which is very similar to the original one, where the scale titles stay the same, from 1 being strongly disagree to 5 being strongly agree.

Table 3.44: Recoded Likert Scale Range Points.

Points	Range Points	Likert Scale
1	1.00-1.79	Strongly Disagree
2	1.80-2.59	Disagree
3	2.60-3.39	Neutral
4	3.40-4.19	Agree
5	4.20-5.00	Strongly Agree

To get the new set of values to test the hypotheses, the sum of all the same answers from each statement was taken and then its mean value was calculated. Afterwards, the mean values were recoded using the recoded Likert scale range points, shown in table 3.44. The descriptive statistics and the frequencies were then pulled out from the recoded mean values.

Table 3.45: Descriptive statistics and frequency of mobile marketing via SMS recoded variable.

Likert Scale	Frequency	Percent	Cumulative Percent	Mean	Mode	Std. Deviation
Strongly Disagree	21	5.0	5.0	3.73	4	1.124
Disagree	43	10.2	15.2			
Neutral	85	20.1	35.3			
Agree	155	36.7	72.0			
Strongly Agree	118	28.0	100.0			
Total	422	100.0	100.0			

Table 3.45 shows the descriptive statistics and the frequencies of the answers in the mobile marketing via SMS batch of statements after being recoded into different variables. The mean is seen to be 3.73, while the most common value was 4, which means that the respondents primarily chose to agree with the said statements.

Table 3.46: Descriptive statistics and frequency of mobile marketing via social media recoded variable.

Likert Scale	Frequency	Percent	Cumulative Percent	Mean	Mode	Std. Deviation
Strongly Disagree	11	2.6	2.6	3.44	4	0.893
Disagree	46	10.9	13.5			
Neutral	149	35.3	48.8			
Agree	179	42.4	91.2			
Strongly Agree	37	8.8	100.0			
Total	422	100.0	100.0			

Table 4.46 shows the descriptive statistics and frequencies of the answers in the mobile marketing via social media batch of statements after being recoded into different variables. Similar to the previous table 3.45, in table 3.46 it can be seen that the mean was around 3.44, while the most common value was 4, meaning that the respondents in this set of questions once again chose to agree with the given statements.

Table 3.47: Descriptive statistics and frequency of mobile marketing via mobile applications recoded variable.

Likert Scale	Frequency	Percent	Cumulative Percent	Mean	Mode	Std. Deviation
Strongly Disagree	13	3.1	3.1	3.88	4	0.967
Disagree	26	6.2	9.2			
Neutral	70	16.6	25.8			
Agree	204	48.3	74.2			
Strongly Agree	109	25.8	100.0			
Total	422	100.0	100.0			

Following the path of the previous sets of questions, table 3.47 shows the descriptive statistics and frequencies of mobile marketing via mobile applications after being recoded with the new set of variables. Same as the previous sets, table 3.47 shows that

the most common value was once again 4, stating that the questionnaire respondents most commonly chose to agree with the given statements in this set of questions, while the mean remained close to the mode value, hanging at 3.88.

Table 3.48: Descriptive statistics and frequency of general mobile marketing acceptance and use of mobile devices recoded variable.

Likert Scale	Frequency	Percent	Cumulative Percent	Mean	Mode	Std. Deviation
Strongly Disagree	37	8.8	8.8	3.37	3	1.164
Disagree	43	10.2	19.0			
Neutral	152	36.0	55.0			
Agree	108	25.6	80.6			
Strongly Agree	82	19.4	100.0			
Total	422	100.0	100.0			

Finally, in table 3.48, that shows the descriptive statistics of the last batch of questions after being recoded into different variables, it can be seen that the most common value was 3, which was neutral, while the mean is shown to be 3.37. However, as the last batch of statements had no particular connection to each other, but are given as standalone statements to get a closer insight of the respondents' previous opinions about the topic at hand, the table 3.48 is merely a representation of what the majority of answers were in that batch of questions.

In order to test the hypotheses against the demographic variables that were presented in the questionnaire two types of tests were used, which are Mann-Whitney U test and Kruskal-Wallis H test. These two tests were chosen for testing the hypotheses in this study because it was determined that the data in the questionnaire is not normally distributed. In order to test the normality of the data, Kolmogorov-Smirnov and Shapiro-Wilk tests were used and it was shown that the significance value for each variable was 0.000, which is below the required significance value of $\alpha = 0.05$, thus leading to the conclusion that the data is not normally distributed and the null hypotheses was thus rejected. Both Mann-Whitney U test and Kruskal-Wallis H test are

non-parametric tests, with the former being used to compare two independent groups with one dependent variable, and the later one being an extension of Mann-Whitney U test, where two or more groups of independent variables are used to see if there is any significant difference with the dependent variable.

Three dependent variables, which are mobile marketing via SMS, mobile marketing via social media, and mobile marketing via mobile applications, will be used to test against each independent variable, that was found in the questionnaire, and those were gender, age, residential type, education level, and monthly income, so as to see if there is any significant difference in them and thus providing insight on should the hypotheses be rejected or not.

$H_{1.1}$: The effect of mobile marketing via SMS differs according to gender on mobile marketing acceptance.

Table 3.49: Man-Whitney U test of mobile marketing via SMS effect according to gender.

	Gender	**N**	**Mean Rank**	**Sum of Ranks**	**Z**	**Sig.**
Effect of mobile marketing via SMS according to gender	Female	222	213.49	47394.00	-0.368	0.713
	Male	200	209.30	41859.00		
	Total	422				

For the first hypothesis, the Mann-Whitney U test was used, as there were only two independent groups, which are female and male. From the table 3.49, it can be seen that the z statistic was brought to -0.368, while the significance probability was 0.713. Since the significance value was higher than our chosen significance level of $\alpha = 0.05$, the first hypothesis, $H_{1.1}$, is rejected. There seems to be no difference according to gender on mobile marketing's acceptance and the effect of mobile marketing via SMS it has on an individual.

$H_{1.2}$: The effect of mobile marketing via SMS differs according to age on mobile marketing acceptance.

Table 3.50: Kruskal-Wallis H test of mobile marketing via SMS effect according to age.

	Age	N	Mean Rank	X^2	Sig.
Effect of mobile marketing via SMS according to age	<20	38	188.36	5.417	0.247
	20-30	189	216.21		
	30-40	116	217.16		
	40-50	58	189.49		
	50>	21	240.55		
	Total	422			

Table 3.50 above show the results of the Kruskal-Wallis H test conducted in order to see if there is any significant difference between the effect of mobile marketing via SMS and the age for mobile marketing's acceptance. The value of chi-square is shown to be 5.417, while the significance value p is 0.247 which is above the required significance level of $\alpha = 0.05$, thus prompting to reject the second hypothesis, $H_{1.2}$. The effect of mobile marketing via SMS seems to not differ according to age on mobile marketing's acceptance.

$H_{1.3}$: The effect of mobile marketing via SMS differs according to residence type on mobile marketing acceptance.

Table 3.51: Kruskal-Wallis H test of mobile marketing via SMS effect according to residence type.

Effect of mobile marketing via SMS on residence type	Residence Type	N	Mean Rank	X^2	Sig.
	Urban	346	209.57	1.759	0.415
	Suburban	54	229.80		
	Rural	22	196.91		
	Total	422			

Kruskal-Wallis H test was also done for hypothesis 3, $H_{1.3}$, and the results were presented in table 3.51. From the table it can be seen that the chi-square is 1.759 and the p-value is 0.415. As the p-value is above the given significance value of $\alpha = 0.05$, the 3rd hypothesis will be rejected. The effect of mobile marketing via SMS does not differ according to residence type on mobile marketing's acceptance.

$H_{1.4}$: The effect of mobile marketing via SMS differs according to education level on mobile marketing acceptance.

Table 3.52: Kruskal-Wallis H test of mobile marketing via SMS effect according to education level.

	Age	N	Mean Rank	X^2	Sig.
Effect of mobile marketing via SMS according to education level	Elementary	0	0	0.899	0.826
	High School	97	210.01		
	Undergraduate	247	209.08		
	Graduate	62	224.45		
	PhD	16	207.69		
	Total	422			

Table 3.52 represents the results of the Kruskal-Wallis H test conducted in order to test if there is any significant difference between the effect of mobile marketing via SMS and the education level on mobile marketing's acceptance. As the chi-square shown in table 3.52 is 0.899 and the significance value is 0.826, it is higher than the required significance level of $\alpha = 0.05$. Since the significance level is higher than $\alpha = 0.05$ the hypothesis, $H_{1.4}$, will be thus rejected. The effect of mobile marketing via SMS does not significantly differ according to education level on mobile marketing's acceptance.

$H_{1.5}$: The effect of mobile marketing via SMS differs according to monthly income on mobile marketing acceptance.

Table 3.53: Kruskal-Wallis H test of mobile marketing via SMS effect according to monthly income.

	Age	N	Mean Rank	X^2	Sig.
Effect of mobile marketing via SMS according to monthly income	<200 BAM	75	198.50	4.454	0.348
	200-400 BAM	34	241.78		
	400-600 BAM	44	212.24		
	600-800 BAM	43	229.41		

	800 BAM>	226	207.71		
	Total	422			

To test hypothesis 1.5, which looks at the effect of mobile marketing via SMS if it differs according to the monthly income on mobile marketing's acceptance, and in order to test that, Kruskal-Wallis H test was conducted and the results were presented in table 3.53. The chi-square value is shown to be 4.454, however, the p-value is once more above the required significance value, $\alpha = 0.05$, standing at 0.348. Considering that p-value is above $\alpha = 0.05$, hypothesis 1.5 will also be rejected. The effect of mobile marketing via SMS does not significantly differ according to monthly income on mobile marketing's acceptance.

$H_{2.1}$: The effect of mobile marketing via social media differs according to gender on mobile marketing acceptance.

Table 3.54: The Man-Whitney U test of mobile marketing via social media effect according to gender.

	Gender	**N**	**Mean Rank**	**Sum of Ranks**	**Z**	**Sig.**
Effect of mobile marketing via social media according to gender	Female	222	215.63	47870.50	-0.783	0.434
	Male	200	206.91	41382.50		
	Total	422				

Table 3.54 shows the results of Mann-Whitney U test made based on marketing via social media and whether or not there is difference across two genders. The z-value is shown to be -0.783, while the significance value is at 0.434. Seeing as how the p-value is greater than the $\alpha = 0.05$, this hypothesis, $H_{2.1}$, is rejected. The effect of mobile marketing via social media does not differ according to gender on mobile marketing's acceptance.

$H_{2.2}$: The effect of mobile marketing via social media differs according to age on mobile marketing acceptance.

Table 3.55: Kruskal-Wallis H test of mobile marketing via social media effect according to age.

	Age	N	Mean Rank	X^2	Sig.
Effect of mobile marketing via social media according to age	<20	38	242.54	13.707	0.008
	20-30	189	212.40		
	30-40	116	211.64		
	40-50	58	170.89		
	50>	21	258.57		
	Total	422			

Table 3.55 presents the results from the Kruskal-Wallis H test done in order to see if there is any significant difference between the effect of mobile marketing via social media and the age on mobile marketing's acceptance. Considering that the chi square is 13.707, while the p-value is 0.008, which is below the marked significance level of $\alpha = 0.05$, the given hypothesis, $H_{2.2}$, is not rejected. The effect of mobile marketing via social media significantly differs according to age on mobile marketing's acceptance.

$H_{2.3}$: The effect of mobile marketing via social media differs according to residence type on mobile marketing acceptance.

Table 3.56: Kruskal-Wallis H test of mobile marketing via social media effect according to residence type.

Effect of mobile marketing via social media on residence type	Residence Type	N	Mean Rank	X^2	Sig.
	Urban	346	209.35	6.710	0.035
	Suburban	54	241.84		
	Rural	22	170.89		
	Total	422			

Table 3.56 presents the results of Kruskal-Wallis H test done for hypothesis eight, $H_{2.3}$. It shows the results of whether the effect of mobile marketing via social media differs according to residence type on mobile marketing's acceptance, and since table 3.56 shows that the chi-square is 6.710 and the significance value is 0.035, the hypothesis,

$H_{2.3}$, will not be rejected. Reason being is that the significance value in the table is below the required significance level of $\alpha = 0.05$.

$H_{2.4}$: The effect of mobile marketing via social media differs according to education level on mobile marketing acceptance.

Table 3.57: Kruskal-Wallis H test of mobile marketing via social media effect according to education level.

	Age	N	Mean Rank	X^2	Sig.
Effect of mobile marketing via social media according to education level	Elementary	0	0	0.849	0.838
	High School	97	212.44		
	Undergraduate	247	208.10		
	Graduate	62	219.35		
	PhD	16	227.94		
	Total	422			

By analyzing table 3.57, which represents the results of another Kruskal-Wallis H test done in order to test if there is any significant difference in the effect of mobile marketing via social media and the education level, it can be seen that the chi-square value is 0.849 while the p-value is 0.838. Since the p-value is higher than the accepted significance value of $\alpha = 0.05$, the hypothesis, $H_{2.4}$, will be rejected. The effect of mobile marketing via social media does not significantly differ according to education level on mobile marketing's acceptance.

$H_{2.5}$: The effect of mobile marketing via social media differs according to monthly income on mobile marketing acceptance.

Table 3.58: Kruskal-Wallis H test of mobile marketing via social media effect according to monthly income.

	Age	N	Mean Rank	X^2	Sig.
Effect of mobile marketing via social media according to monthly income	<200 BAM	75	188.29	12.469	0.014
	200-400 BAM	34	268.78		
	400-600 BAM	44	222.65		

	600-800 BAM	43	200.55		
	800 BAM>	226	210.50		
	Total	422			

The final hypothesis tested in the second batch of statements, looks at whether there is any significant difference in the effect of mobile marketing via social media and the monthly income on mobile marketing's acceptance. In order to test this hypothesis, Kruskal-Wallis H test was used and the results were presented in table 3.58. The results show that the chi-square value is 12.469, and the p-value is 0.014. Considering the fact that in order to accept the hypothesis, the p-value needs to be lower than the significance level of $\alpha = 0.05$, the p-value shown in table 3.58 is indeed lower and the hypothesis, $H_{2.5}$, is thus not rejected. The effect of mobile marketing via social media does significantly differ according to monthly income on mobile marketing's acceptance.

$H_{3.1}$: The effect of mobile marketing via mobile applications differs according to gender on mobile marketing acceptance.

Table 3.59: The Man-Whitney U test of mobile marketing via mobile applications effect according to gender.

	Gender	**N**	**Mean Rank**	**Sum of Ranks**	**Z**	**Sig.**
Effect of mobile marketing via mobile applications according to gender	Female	222	217.10	48197.00	-1.069	0.285
	Male	200	205.28	41056.00		
	Total	422				

Table 3.59 shows the independent variable, gender, being compared to the third and last dependent variable. As with previous gender tests, here, once again, the Mann-Whitney U test was used in table 3.59. The results show that the z-value is -1.069, while the p-value is 0.285, which is greater than the needed significance level of $\alpha = 0.05$, and thus prompting to reject the given hypothesis, $H_{3.1}$. The effect of mobile marketing via

mobile applications does not differ according to gender on mobile marketing's acceptance.

$H_{3.2}$: The effect of mobile marketing via mobile applications differs according to age on mobile marketing acceptance.

Table 3.60: Kruskal-Wallis H test of mobile marketing via mobile applications effect according to age.

	Age	N	Mean Rank	X^2	Sig.
Effect of mobile marketing via mobile applications according to age	<20	38	204.84	13.088	0.011
	20-30	189	221.07		
	30-40	116	215.81		
	40-50	58	164.75		
	50>	21	242.74		
	Total	422			

Kruskal-Wallis H test was done also on hypothesis 3.2, as to see if there is any significant difference between the effect of mobile marketing via social media and the age on mobile marketing's acceptance. Table 3.60 represents the results of this test and shows that the chi-square value is 13.088, while the p-value is below the required significance level of $\alpha = 0.05$, holding at 0.011. Since the p-value is lower than the required significance level, the 12th hypothesis, $H_{3.2}$, is not rejected. The effect of mobile marketing via social media significantly differs according to age on mobile marketing's acceptance.

$H_{3.3}$: The effect of mobile marketing via s mobile applications differs according to residence type on mobile marketing acceptance.

Table 3.61: Kruskal-Wallis H test of mobile marketing via mobile applications effect according to residence type.

Effect of mobile marketing via mobile applications on residence type	Residence Type	N	Mean Rank	X^2	Sig.
	Urban	346	210.10	0.875	0.646
	Suburban	54	224.20		
	Rural	22	202.27		
	Total	422			

Table 3.61 presents the results of Kruskal-Wallis H test done using the effect of mobile marketing via mobile applications as the dependent variable and the residence type as the independent variable. Seeing as how the chi-square is 0.875 and the p-value is 0.646, which is above the required significance level of $\alpha = 0.05$, the given hypothesis, $H_{3.3}$, will have to be rejected. The effect of mobile marketing via mobile application does not significantly differ according to residence type on mobile marketing's acceptance.

$H_{3.4}$: The effect of mobile marketing via mobile applications differs according to education level on mobile marketing acceptance.

Table 3.62: Kruskal-Wallis H test of mobile marketing via mobile application effect according to education level.

	Age	**N**	**Mean Rank**	**X^2**	**Sig.**
Effect of mobile marketing via mobile applications according to education level	Elementary	0	0	8.560	0.036
	High School	97	197.88		
	Undergraduate	247	212.95		
	Graduate	62	240.09		
	PhD	16	160.91		
	Total	422			

As with the previous hypotheses, in table 3.62 are shown results of the Kruskal-Wallis H test that was done in order to test the hypothesis, $H_{3.4}$, and see whether there is any significant difference between the effect of mobile marketing via mobile applications and the education level on mobile marketing's acceptance. In table 3.62 it can be seen that the chi-square stands at 8.560, while the p-value is 0.036, which is lower than the required significance level of $\alpha = 0.05$, indicating that the hypothesis is not rejected. Thus, the effect of mobile marketing via mobile applications does significantly differ according to education level on mobile marketing's acceptance.

$H_{3.5}$: The effect of mobile marketing via mobile applications differs according to monthly income on mobile marketing acceptance.

Table 3.63: Kruskal-Wallis H test of mobile marketing via mobile applications effect according to monthly income.

	Age	N	Mean Rank	X^2	Sig.
Effect of mobile marketing via mobile applications according to monthly income	<200 BAM	75	222.87	9.188	0.057
	200-400 BAM	34	239.16		
	400-600 BAM	44	192.93		
	600-800 BAM	43	243.17		
	800 BAM>	226	201.15		
	Total	422			

The last hypothesis, $H_{3.5}$, was tested using the Kruskal-Wallis H test in order to see if there is any significant difference between the effect of mobile marketing via mobile applications and the monthly income on mobile marketing's acceptance. Looking at table 3.63, it can be seen that the chi-square is 9.188, and the p-value is 0.057, which is very close to the required p-value of $\alpha = 0.05$. However, since the significance value in table is higher than the needed significance level of 0.05, the hypothesis, $H_{3.5}$, will have to be rejected. The effect of mobile marketing via mobile applications does not significantly differ according to monthly income on mobile marketing's acceptance.

Table 3.64: The results of the tested hypotheses with mobile marketing via SMS.

	Hypothesis	Result
$H_{1.1}$	The effect of mobile marketing via SMS differs according to gender on mobile marketing acceptance.	*Rejected*
$H_{1.2}$	The effect of mobile marketing via SMS differs according to age on mobile marketing acceptance.	*Rejected*
$H_{1.3}$	The effect of mobile marketing via SMS differs according to residence type on mobile marketing acceptance.	*Rejected*

$H_{1.4}$	The effect of mobile marketing via SMS differs according to education level on mobile marketing acceptance.	*Rejected*
$H_{1.5}$	The effect of mobile marketing via SMS differs according to monthly income on mobile marketing acceptance.	*Rejected*

Table 3.65: The results of the tested hypotheses with mobile marketing via social media.

	Hypothesis	Result
$H_{2.1}$	The effect of mobile marketing via social media differs according to gender on mobile marketing acceptance.	*Rejected*
$H_{2.2}$	The effect of mobile marketing via social media differs according to age on mobile marketing acceptance.	*Not Rejected*
$H_{2.3}$	The effect of mobile marketing via social media differs according to residence type on mobile marketing acceptance.	*Not Rejected*
$H_{2.4}$	The effect of mobile marketing via social media differs according to education level on mobile marketing acceptance.	*Rejected*
$H_{2.5}$	The effect of mobile marketing via social media differs according to monthly income on mobile marketing acceptance.	*Not Rejected*

Table 3.66: The results of the tested hypotheses with mobile marketing via mobile applications.

	Hypothesis	Result
$H_{3.1}$	The effect of mobile marketing via mobile applications differs according to gender on mobile marketing acceptance.	*Rejected*
$H_{3.2}$	The effect of mobile marketing via mobile applications differs according to age on mobile marketing acceptance.	*Not Rejected*
$H_{3.3}$	The effect of mobile marketing via mobile applications differs according to residence type on mobile marketing acceptance.	*Rejected*
$H_{3.4}$	The effect of mobile marketing via mobile applications differs according to education level on mobile marketing acceptance.	*Not Rejected*
$H_{3.5}$	The effect of mobile marketing via mobile applications differs according to monthly income on mobile marketing acceptance.	*Rejected*

4. CONCLUSIONS AND LIMITATIONS FOR FUTURE STUDIES

The research was conducted in order to test and analyze what kind of effect do various mobile marketing services have on selected demographic variables. Out of the big set of mobile marketing services that are openly available to all businesses, three services, in particular, were used to test against a selected number of demographic variables. Mobile marketing via SMS, mobile marketing via social media, and mobile marketing via mobile applications were used to see how it effects the population of Bosnia and Herzegovina and their subsequent willingness to acceptance such services.

A sample of 422 people was taken from the population of Bosnia and Herzegovina, and was primarily aimed at young and working adults who have had at least one experience in their life with mobile marketing and are more open to react and take action when seeing a marketing message on their mobile device. The sample size was defined by using a confidence level of 95 per cent and confidence interval of 5 per cent to allow for any possible error. The survey was piloted in the summer of 2017, throughout Bosnia and Herzegovina, in an online form that was made available to anyone who had an access link to the survey. The survey form was made as such that the respondents had to answers all the questions in the survey if they wish to submit it for processing. If all the answers were not selected, the data was not accepted nor presented in the final results. Other than the mandatory demographic questions, a 5-point Likert scale was utilized to collect primary data on the people's opinions about several mobile marketing services.

In the collected data, there was a slightly higher number of females than males, gathering 222 females and 200 males out of the 422 respondents. Moreover, the majority of the respondents happened to be aged between 20 and 30 years old, while the second biggest group was aged between 30 and 40. These results correspond with the primary goal of seeking out to young and working adults who have had some connection with mobile marketing at some point in their life and thus this topic would

have more relevance to them as well as being a helpful guide to businesses in their targeted marketing campaigns. From this it can be reiterated that younger age groups are more prone to ignore marketing messages on their device, and older age groups are more likely unfamiliar and uninterested in how mobile marketing works, thus the expected results in this area. In addition to all of this, from the results it can be seen that most of these young and working adults were from the city area, with a monthly income of above 800 BAM ($480). It is also important to note that more than half of the respondents, have finished undergraduate studies, and the other majority was still in the process of finishing it.

In order to conduct the necessary analysis on the pre-constructed hypotheses, there were two tests that were primarily used, and those were non-parametric tests Mann-Whitney U test and Kruskal-Wallis H tests. Both of the tests were ran through the SPSS program where the three dependent variables, mobile marketing via SMS, mobile marketing via social media, and mobile marketing via mobile applications, were tested against five different demographic variables to see if there is any significant difference between them. The five demographic variables that the mobile marketing services were put to test with were gender, age, residence type, education level, and monthly income.

In the first hypothesis, where the Mann-Whitney U test was used, basing off of the higher than accepted significance value, it can be seen that gender does not have any influence on the individual's urge to accept mobile marketing based of the effect of mobile marketing via SMS, so H_1 hypothesis had to be rejected. Meaning that, regardless of the individual's gender, mobile marketing via SMS can be accepted faster but it also does not need to be. Same can be said for hypothesis H_6 and hypothesis H_{11}, as they also tested gender against the other two dependent variables, mobile marketing via social media and mobile marketing via mobile applications. Both of the hypotheses showed a significance value higher than $\alpha = 0.05$, prompting the study to reject both of them. Gender seemed to be not one of the variables that are influencing the individual's mobile marketing acceptance based on the effect of mobile marketing via social media and mobile marketing via mobile applications had had on an individual.

As for the second hypothesis, H_2, the research showed that age also does not have any significant effect on the mobile marketing's acceptance based off of the mobile

marketing via SMS variable. After doing the Kruskal-Wallis H test, the results showed that the significance value is once again higher than the required significance level of $\alpha = 0.05$, thus the second hypothesis, H_2, can also not be accepted. Basically meaning that regardless of how old the individual is it will not have a significant difference on whether they will accept mobile marketing faster or slower based on the effect of mobile marketing via SMS. However, that does not apply to the other two dependent variables, mobile marketing via social media, and mobile marketing via mobile applications. In both of the latter cases, their hypotheses, H_7 and H_{12}, were accepted, as their Kruskal-Wallis H test results showed a significance value lower than the required one of $\alpha = 0.05$. This shows that age does play a part in how fast will an individual accept mobile marketing based on the effect the mobile marketing done via social media and via mobile applications has on the particular individual.

The next hypothesis, H_3, also followed along the same lines as its predecessors, and by the result of the Kruskal-Wallis H test, it too was rejected. The hypothesis was testing whether or not individual's mobile marketing's acceptance based off of their place of where they live has anything to do with how mobile marketing via SMS influences that particular individual. Since the test results showed another significance level higher than the required one of $\alpha = 0.05$, it shows that where a particular individual lives, does not have a very significant difference in how that fast will that individual accept mobile marketing if looking at the effect the mobile marketing via SMS has on that individual. The third dependent variable follows the same pattern, with hypothesis, H_{13}, being rejected, thus prompting the answer that the effect of mobile marketing via mobile applications does not have a very significant influence on the individual's faster mobile marketing acceptance based off of the location of where they live. However, the same cannot be said for H_8 hypothesis, as the results of its Kruskal-Wallis H test did show a lower than the required significance level of $\alpha = 0.05$, and thus making this hypothesis be accepted. Further indicating that individual's place of residence does have an effect on how fast they will accept mobile marketing by the influence of mobile marketing via social media. Considering the fact that Bosnia and Herzegovina is still not a highly developed country, especially when it comes to the availability and connection to high-speed broadband Internet and Wi-Fi, in order to use social media, one has to be

connected to the Internet. As the Internet is not as available outside of the cities as it is inside the city areas, it does help make a better understanding of how mobile marketing can be affected by where the individual is located.

Education level was the fourth independent demographic variable that was tested with the Kruskal-Wallis H test to see if there is any difference in what level of education did the individual obtain and the effect of mobile marketing's three services on the individual's mobile marketing's acceptance. Here it can be seen that just as in the previous test, when looking at mobile marketing via SMS, its hypothesis, H_4, has been rejected, along with hypothesis, H_9, that looks at mobile marketing via social media variable, as both of the Kruskal-Wallis H tests done with these variables show that there is no significant difference in what level of education did the individual obtain and their speed of mobile marketing's acceptance, based off of the effect each of these variables had on a certain individual. Then again, H_{14} hypothesis had different results than the other two, and its Kruskal-Wallis H test results showed a low enough significance level, making the hypothesis not get rejected. Meaning that the individual's education level does seem to have an effect on how fast will they accept mobile marketing looking at the influence that the mobile marketing via mobile applications has on these individuals. Considering that more than one half, an approximately 247 respondents, of the sample population selected undergraduate studies as their education level, it is safe to say that these are the same individuals that are guiding these results which indicate that the education level influences individual's acceptance of mobile marketing based off of the effect mobile marketing via mobile applications has on them.

Lastly, a significant difference was spotted in hypothesis H_{10}, further supporting the statement that the individual's monthly income influences the effect mobile marketing via social media has on the individual's mobile marketing's acceptance. Since the Kruskal-Wallis H test results showed the significance value to be lower than $\alpha = 0.05$, H_{10} hypothesis was not rejected. On the other hand, H_5 hypothesis and H_{15} hypothesis did not have the same faith and because of the results that showed the significance values to be higher than the required one, the said hypotheses were rejected. There seems to be no significant difference in the effect of mobile marketing via SMS and via mobile application and the individual's monthly income on their mobile marketing's

acceptance. Meaning that, regardless of how much money an individual obtains each month it does not have a very big significance in how individuals perceive the effect of mobile marketing via SMS and via mobile application and thus prompting them to accept mobile marketing faster. Nevertheless, it is essential to note that hypothesis H_{15} had a significance value of 0.057, which is very close than the accepted significance level of $\alpha = 0.05$. As it can be seen from the results conducted for this hypothesis, the number of individuals who selected they receive more than 800 BAM per month is over the half line cut off of the sample population. Approximately 226 respondents chose this option in the survey, and from that it can be said that with a few more individuals selecting this option, the tested hypothesis could be reversed in its results.

Overall, mobile marketing seems to be gaining more attention and popularity among businesses in Bosnia and Herzegovina, and its residents that have come across mobile marketing through one way or another have strong opinions about what exactly they want from the messages they receive on their mobile devices. As a great number of individuals consider their mobile device as a personal item, they are not particularly opposed to receive marketing messages through these devices, but if they already have to, then it would be smart for businesses to look into what makes mobile marketing different than traditional marketing services and what is the best way to utilize such services, while keeping the customers satisfied. The businesses need to realize that mobile marketing depends more on interpersonal relationships than traditional marketing, and as such if those things are easily ignored it can greatly backfire and damage the company's business and shorten the company's lifespan. In addition to that, businesses are advised to pay attention to the technology's development and advancement in Bosnia and Herzegovina, as it was seen through this study, that without proper technology or access to wireless Internet, the effect of mobile marketing considerably drops down. As such, businesses should be in tune with the latest technology advancement, while innovating also within themselves new methods of marketing their products, services, and events.

This conducted research and study also has its own few limitations, primarily in the sense that out of the ten discussed mobile marketing services in this paper, only three were used to collect and analyze data. In addition to that, the sample population focused

primarily on young and working adults and was led with the assumption that younger and older generations are not too familiar with mobile marketing and thus were not fully observed and represented in the study.

There is also the limitation in the demographic questions given in the survey. It was not specified and clearly stated in the question about the education level that whether the individual has finished the selected level or if they are still in the process of obtaining it. It was created with the assumption that the individual will chose the level that they have already obtained and not the one they are currently in the process of obtaining. Furthermore, in the question about monthly income, it was not stated whether the income comes from another person, i.e. parents and other family members; from a savings account; from a job with a steady income; or perhaps from everything put all together. Another limitation was that the previous data in the same and similar field is very minimal when observing only the country Bosnia and Herzegovina, and thus cannot be compared to provide further proof of validity of this study and the difference between years.

For future research it will be good to expand the selection of mobile marketing services to understand how individuals also feel about other service besides the one through SMS, social media, and mobile applications. Changing and expanding the main independent demographic variables, is also another option that can be done in future researches. As the sample population in this study is of limited size and cannot fully represent a large population, it is recommended to look at a broader spectrum of people in Bosnia and Herzegovina, and gather the number of respondents on a larger scale. Nevertheless, as this thesis is of explorative character it should be also considered as such and should serve as a guidance and predictions material for further quantitative and qualitative studies.

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APPENDIX

Bosnian Version

Anketa

O istraživanju na temu "uticaja mobilnog marketinga na zadovoljstvo potrošača u Bosni i Hercegovini", koja je dio naučnoistraživačkog projekta koji se radi u okviru magistarske teze na Istanbul Aydin Univerzitetu.

Mobilni marketing je oblik marketinga koji koristi mobilne uređaje (mobilni telefon, pametni mobitel, tablet, pejđer) za brzu i jednostavnu dvosmjernu komunikaciju između brendova i potrošača, bez obzira na vrijeme i mjesto u kojem se potrošač nalazi.

Svi podaci i informacije koji se nalaze u anketi su anonimni i koristiće se samo u naučne svrhe. Uzimajući u obzir činjenicu da će provedena istraživanja imati značaja, kako u teorijskoj tako i u praktičnoj primjeni, molimo Vas da izdvojite vrijeme i odgovorite na pitanja iz ankete.

Ako radite anketu na mobilnom uređaju, okrenite uređaj horizontalno da Vam se prikažu sve opcije.

Zahvaljujemo, uz srdačan pozdrav.

* Required

Tvrdnje

Molimo da označite stepen vašeg slaganja s navedenim tvrdnjama
Skala se sastoji od 5 stepeni:
1 - "u potpunosti se ne slažem" 2 - "ne slažem se" 3 - "neutralan/na" 4 - "slažem se"
5 - "u potpunosti se slažem"

1. **Najprije ću prihvatiti mobilni marketing ako...** *
Mark only one oval per row.

	1	2	3	4	5
1. Sadržaj marketinške poruke odgovara mojim interesima.	◯	◯	◯	◯	◯
2. Sadržaj marketinške poruke je koristan.	◯	◯	◯	◯	◯
3. Sadržaj marketinške poruke je kreativan.	◯	◯	◯	◯	◯
4. Sadržaj marketinške poruke je zanimljiv.	◯	◯	◯	◯	◯
5. Sam odobrio/la primanje marketinških poruka.	◯	◯	◯	◯	◯
6. Marketinške poruke nisu poslane u neprimjereno vrijeme (npr. vrijeme spavanja, ručka).	◯	◯	◯	◯	◯
7. Marketinške poruke nisu previše učestale.	◯	◯	◯	◯	◯
8. Marketinške poruke koje dobijem se odnose na brend koji je u mojoj blizini.	◯	◯	◯	◯	◯
9. Marketinške poruke su kratke i jasne.	◯	◯	◯	◯	◯
10. Znam da su moji privatni podaci zaštićeni.	◯	◯	◯	◯	◯

2. **Sljedeće tvrdnje se odnose na korištenje društvenih mreža na mobilnim uređajima (npr. Facebook, Viber, WhatsApp, Twitter, Instagram, itd.)** *

Mark only one oval per row.

	1	2	3	4	5
1. Često koristim društvene mreže na mobilnom uređaju.	◯	◯	◯	◯	◯
2. Smetaju mi marketinške poruke koje primam preko društvenih mreža.	◯	◯	◯	◯	◯
3. Radije komuniciram sa kompanijama preko društvenih mreža.	◯	◯	◯	◯	◯
4. Nije mi važno koju društvenu mrežu koristim za primanje marketinških poruka.	◯	◯	◯	◯	◯
5. Marketinške poruke su mi zanimljivije na društvenim mrežama nego na drugim medijima.	◯	◯	◯	◯	◯
6. Prije ću učestvovati u nekoj akciji ako pročitam marketinšku poruku na društvenoj mreži.	◯	◯	◯	◯	◯
7. Zadovoljniji/ja sam kad imam priliku pročitati marketinšku poruku u vrijeme koje ja odredim.	◯	◯	◯	◯	◯
8. Zadovoljniji/ja sam kad mogu dobiti brz odgovor na moje upite.	◯	◯	◯	◯	◯
9. Osjećam se zaštićenijim/jom kada komuniciram putem društvenih mreža nego uživo.	◯	◯	◯	◯	◯
10. Lakše mi je komunicirati sa kompanijama putem društvenih mreža nego putem drugih medija.	◯	◯	◯	◯	◯

3. **Sljedeće tvrdnje se odnose na korištenje mobilnih aplikacija koje kompanija napravi za svoje potrošače (npr. Raiffeisen Bank m-app, NewYorker m-app, Sezam m-app, itd.)** *

Mark only one oval per row.

	1	2	3	4	5
1. Radije koristim mobilne aplikacije nego mobilne stranice za svoje potrebe.	◯	◯	◯	◯	◯
2. Privlačnije su mi mobilne aplikacije koje imaju dosta opcija.	◯	◯	◯	◯	◯
3. Privlačnije su mi mobilne aplikacije koje nisu previše komplikovane za koristiti.	◯	◯	◯	◯	◯
4. Vjerujem da je moja privatnost ugrožena ako koristim mobilne aplikacije.	◯	◯	◯	◯	◯
5. Mislim da svaki brend treba da ima svoju mobilnu aplikaciju.	◯	◯	◯	◯	◯
6. Najprije ću koristiti mobilnu aplikaciju ako nudi neke povoljnosti.	◯	◯	◯	◯	◯
7. Najprije ću koristiti mobilnu aplikaciju ako mi ne usporava mobilni uređaj.	◯	◯	◯	◯	◯
8. Najprije ću koristiti mobilnu aplikaciju ako mi ne zauzima previse memorije na mobilnom uređaju.	◯	◯	◯	◯	◯
9. Bitno mi je da je baza podataka na mobilnoj aplikaciji ažurirana.	◯	◯	◯	◯	◯
10. Bitno mi je da je proces kupovine preko mobilne aplikacije brz i jednostavan.	◯	◯	◯	◯	◯

4. **Sljedeće tvrdnje se odnose na uopšteno korištenje mobilnih uređaja i mobilni marketing.** *

Mark only one oval per row.

	1	2	3	4	5
1. Ako sam zadovoljan/na sa marketinškom uslugom, podijeliću to sa prijateljima i porodicom.	◯	◯	◯	◯	◯
2. Vjerujem da moj mobitel predstavlja moju ličnost.	◯	◯	◯	◯	◯
3. Vjerujem da su mobiteli najbolji uređaji za marketing.	◯	◯	◯	◯	◯

5. **Spol** *

Mark only one oval.

- ◯ Muško
- ◯ Žensko

6. **Starost** *

Mark only one oval.

- ◯ <20
- ◯ 20-30
- ◯ 30-40
- ◯ 40-50
- ◯ 50>

7. **Tip naselja** *

Mark only one oval.

- ◯ Gradsko
- ◯ Prigradsko
- ◯ Seosko

8. **Nivo obrazovanja** *

Mark only one oval.

- ◯ osnovna
- ◯ srednja
- ◯ fakultet
- ◯ magisterij
- ◯ dr nauka

9. **Mjesečni prihod (u KM)** *

Mark only one oval.

- ◯ <200
- ◯ 200-400
- ◯ 400-600
- ◯ 600-800
- ◯ 800>

English Version

Questionnaire

On the topic of "effect of mobile marketing services on customer's mobile marketing acceptance", which is part of a scientific research project done with for a graduate thesis conducted at Istanbul Aydin University.

Mobile marketing is a form of marketing that utilizes mobile devices (smartphones, mobile-cellular telephones, tablets, pagers) for quick and simple two-way communication between companies and their customers, regardless of the time and location where the customer is located.

All data and information collected through the survey will be used solely for research purposes. Having in mind that the following research will have a significant importance both in theory and in application, you are kindly asked to set aside some time and answer the questions in the survey.

If you are doing the survey on your smartphone, turn the device sideways so that all the options show up.

Thank you for your participation.

Statements

From the statements listed below please ***circle*** the number which best represents your opinion.

KEY FOR SCORING ITEMS:

1 = STRONGLY DISAGREE, **2** = DISAGREE, **3** = NEUTRAL, **4** = AGREE, **5** = STRONGLY AGREE

I will accept mobile marketing faster if…

	Statements	**Please circle the appropriate number**				
1.	The content of the marketing message suits my needs.	1	2	3	4	5

2.	The content of the marketing message is useful.	1	2	3	4	5
3.	The content of the marketing message is creative.	1	2	3	4	5
4.	The content of the marketing message is interesting.	1	2	3	4	5
5.	I gave permission beforehand to receive the message.	1	2	3	4	5
6.	Marketing messages are not sent to me at an inappropriate time (e.g. sleeping, lunch)	1	2	3	4	5
7.	The marketing messages are not too frequent.	1	2	3	4	5
8.	The marketing messages are about a brand that's in close proximity.	1	2	3	4	5
9.	The marketing messages are clear and concise.	1	2	3	4	5
10.	I know my private information is protected.	1	2	3	4	5

The following statements refer to the use of social media on your mobile devices (e.g. Facebook, Viber, WhatsApp, Twitter, Instagram, etc.)

	Statements	**Please circle the appropriate number**				
1.	I frequently use social media on my mobile device.	1	2	3	4	5
2.	The marketing messages I receive on social media bother me.	1	2	3	4	5
3.	I prefer to communicate with brands via social media.	1	2	3	4	5
4.	I don't care which social media I use to receive marketing messages.	1	2	3	4	5
5.	Marketing messages on social media are more interesting than on other mediums.	1	2	3	4	5
6.	I will participate in an event faster if I read the marketing message on social media.	1	2	3	4	5
7.	I'm more satisfied when I can read the marketing message during a time chosen by me personally.	1	2	3	4	5
8.	I'm more satisfied when I can get a quick response to my inquiry.	1	2	3	4	5
9.	I feel more protected when I communicate with the	1	2	3	4	5

	brand through social media than face to face.					
10.	It's easier to communicate with brands through social media than through other mediums.	1	2	3	4	5

The following statements refer to using mobile applications made by brands for their consumers.

	Statements	**Please circle the appropriate number**				
1.	I'd rather use a brand's mobile application than its mobile website.	1	2	3	4	5
2.	Mobile applications that have more options are more appealing.	1	2	3	4	5
3.	Mobile applications that are not complicated to use are more appealing.	1	2	3	4	5
4.	I believe my private information is not secured if I use mobile applications.	1	2	3	4	5
5.	I believe every brand needs to have its own mobile application.	1	2	3	4	5
6.	I prefer to use a brand's mobile application that offers some benefits.	1	2	3	4	5
7.	I prefer to use a brand's mobile application that doesn't slow my mobile device.	1	2	3	4	5
8.	I prefer to use a brand's mobile application that does not take up too much memory on my mobile device.	1	2	3	4	5
9.	It's important for me that the database on the brand's mobile application is regularly updated.	1	2	3	4	5
10.	It's important for me that the payment process on the brand's mobile application is quick and simple.	1	2	3	4	5

The following statements refer to your use of mobile device and its acceptance of mobile marketing messages.

	Statements	Please circle the appropriate number				
1.	If I'm satisfied with the marketing message, I will recommend it to my friends and family members.	1	2	3	4	5
2.	I believe my mobile device reflects my personality.	1	2	3	4	5
3.	I believe mobile devices are the best mediums for marketing.	1	2	3	4	5

B) The following questions are observed from a sociodemographic standpoint.

1. **Gender:** ☐ Male ☐ Female
2. **Age:** ☐ <20 ☐ 20-30 ☐ 30-4☐ 4☐0 50>
3. **Residential type:** ☐ Urban ☐ Suburban ☐ Rural
4. **Education status:** ☐ primary school ☐ high school ☐ undergraduate ☐ graduate ☐ doctorate or higher

5. **Monthly income:** ☐ <200 ☐ 200-400 ☐ 400-600 ☐ 600-800 ☐ 800>

Evrak Tarih ve Sayısı: 06/10/2017-6449

T.C.
İSTANBUL AYDIN ÜNİVERSİTESİ REKTÖRLÜĞÜ
Sosyal Bilimler Enstitüsü Müdürlüğü

Sayı : 88083623-044-6449 06/10/2017
Konu : Nadina SECERBEGOVIC'nın Etik Onayı Hk.

Sayın Nadina SECERBEGOVIC

Enstitümüz Y1512.130105 numaralı Psikoloji Anabilim Dalı Psikoloji Tezli Yüksek Lisans programı öğrencilerinden Nadina SECERBEGOVIC'nın "EFFECT OF MOBILE MARKETING SERVICES ON CUSTOMER'S MOBILE MARKETING ACCEPTANCE" adlı tez çalışması gereği "Mobile Marketing" ile ilgili anketi 13.09.2017 tarih ve 2017/17 İstanbul Aydın Üniversitesi Etik Komisyon Kararı ile etik olarak uygun olduğuna karar verilmiştir.

Bilgilerinize rica ederim.

Prof. Dr. Özer KANBUROĞLU
Müdür V.

RESUME

NADINA SECERBEGOVIC

LECTURER | MANAGER

LANGUAGES

Bosnian – native
English – native fluency
Japanese – conversational
German – conversational

SKILLS

Microsoft Office, Adobe Photoshop, SAP, Visual Basic, .NET, Internet Research, Windows, SPSS, Leadership, Event Planning, Coaching, Organizing, Communicative, Administration, Accounting, Web Design, Data Analysis, Social Media, Statistics

EXPERIENCE

ENGLISH LECTURER • ISTANBUL AYDIN UNIVERSITY • JANUARY 2015 – JULY 2017
Delivered lectures on the usage of professional English in work life, as well as how to improve fluency, pronunciation, and general oral communication skills through various speaking activities

ADMIN STAFF • TRZNICE-PIJACE D.O.O • OCTOBER 2013 – OCTOBER 2014
Day-to-day activities related to financial planning, billing, and recordkeeping within the organization. Assisted with all aspects of administrative management, directory maintenance, logistics, equipment inventory and storage.

EDUCATION

MASTER OF BUSINESS ADMINISTRATION • 2017 • ISTANBUL AYDIN UNIVERSITY
Business Management, GPA: 3.95/4.00

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Management Information Systems, GPA: 3.26/4.00

VOLUNTEER EXPERIENCE OR LEADERSHIP

Tuzla Startup Weekend 2013, *Co-Organizer* – Coordinated meetings with sponsors, mentors, and judges. Systematized participants' registrations and arranged their accommodation, as well as designing promo material and promoting the event through various social media websites and other media outlets.

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