ISCTE Business School
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# ACCEPTANCE AND ATTITUDES TOWARDS MOBILE PROMOTIONS IN YOUNG PORTUGUESE ADULTS

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## Abstract

This master's thesis is about *Acceptance and Attitudes towards Mobile Promotions in Young Portuguese Adults*.

The research framework of this study intended to test if *past mobile phone usage*, *characteristics of the mobile promotions messages* and the *past experience with mobile promotions* would influence the *attitude towards mobile promotions*. Furthermore, it was also tested if this *attitude* influences *brand engagement* and *behavioral intention*. Finally it was verified if different *mobile users' profiles* had different responses regarding *attitudes*, *brand engagement* and *behavioral intention*.

For research purposes it was applied an online survey to a non-representative sample of Portuguese's young adults, aged between 18 to 29 years old that had received at least one promotional message in the last 6 months. From April 13th to 23rd of 2012 were collected 513 valid surveys.

From this research it was possible to conclude that the past mobile phone usage does not influence the attitude that people have towards mobile promotions.

On the contrary, the characteristics of mobile promotions and the past experience with it influence the attitude towards it in a moderate and positive way. Usefulness is the factor that influences the most. And the majority of the respondents do not consider that had a good past experience with mobile promotions.

Attitudes towards mobile promotions have a strong influence in brand engagement and behavioral intention of using the promotions.

Finally, there were identified 4 clusters of mobile users' profile in this sample: early adopters (46.2%), followers (30.6%), sociable (12.7%) and executives (10.5%).


**Keywords:** Mobile Marketing; Mobile Promotions; Attitudes and Consumer Behavior

**JEL Classification:** *M31 - Marketing* and *M37 - Advertising*

## Resumo

Esta tese de mestrado é sobre a *aceitação e atitudes dos jovens portugueses em relação a promoções móveis.*

O modelo de investigação deste estudo pretende testar se *o tipo de utilização passada do telemóvel*, *as características das mensagens promocionais no telemóvel* e a *experiência passada com as promoções móveis* influenciam a *atitude em relação a promoções móveis*. Além disso, também foi testado, se esta atitude influencia a o envolvimento com a marca e intenção comportamental. Finalmente, foi verificado se diferentes perfis de usuários móveis tiveram respostas diferentes em relação às atitudes, o envolvimento com a marca e a intenção comportamental.

Para fins de investigação foi aplicado um inquérito online a uma amostra não representativa de jovens portugueses, entre 18 a 29 anos, que receberam pelo menos uma mensagem promocional nos últimos 6 meses. De 13 a 23 de Abril de 2012, foram recolhidos 513 inquéritos válidos.

A partir deste estudo foi possível concluir que *o tipo de utilização passada do telemóvel*,não influencia a *atitude* que as pessoas têm face às promoções móveis.

Por outro lado, as *características das promoções móveis* e da *experiência passada destas* influencia a *atitude* de uma forma moderada e positiva. A *utilidade* é o factor que mais influencia. É importante ainda salientar que a maioria dos entrevistados não consideram ter tido uma boa experiência com promoções móveis.

Atitudes face às  promoções móveis têm uma forte influência no envolvimento com a marca e na intenção comportamental de usar as promoções.

Finalmente, foram identificados nesta amostra 4 clusters de perfil de usuários móveis: early adopters (46,2%), seguidores (30,6%), sociáveis (12,7%) e executivos (10,5%).


**Palavras-chave:** Mobile Marketing; Promoções mobile; Atitudes e Comportamento do Consumidor

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## Executive Summary

The increasing number of mobile phones and its *"ability to put the right ad in front of the right person in the right place at the right time"* (Mutter, 2011), makes Mobile Marketing the tool of the future since it *"promises to be the most personal, targeted, and actionable marketing available in our time."* (Krum, 2010)

One of the best opportunities in mobile marketing is the capability to build brand awareness and goodwill with the target market. *"Mobile promotions help customers feel appreciated and, thus, feel more loyal to your brand"* (Krum, 2010). These promotions are one of the possible tools in a Mobile Marketing campaign and they have been used all over the world.

In order to use better this tool it is important to understand the consumer behavior associated with it. It is relevant to find out what is the attitude of the people towards mobile promotions, what can influence this attitude and also if this attitude influences the behavioral intention and brand engagement. Furthermore, it is pertinent to study if there are different answers according to the mobile users' profiles.

This master's thesis theme is the *Acceptance and Attitudes towards Mobile Promotions in Young Portuguese Adults*.

For research purposes it was applied an online survey to a non-representative sample of Portuguese's young adults, aged between 18 to 29 years old that had received at least one promotional message in the last 6 months. From April 13$^{th}$ to 23$^{rd}$ of 2012 were collected 513 valid surveys.

From this research it was possible to conclude that the past mobile phone usage does not influence the attitude that people have towards mobile promotions.

On the contrary, the characteristics of mobile promotions influence the attitude towards it in a moderate and positive way. Usefulness is the factor that influences the most. Women consider mobile promotions more useful and fun than men.

The study also proved that the past experience with mobile promotions has a moderate and positive influence in the attitudes towards mobile promotions. It is

important to highlight that only 31.8% of the respondents considered their quality with past experience good or very good.

From the attitudes towards mobile promotions it is important to point out that 72.4% of the respondents prefer not to receive the current promotional messages, and that 64.6% do not think that mobile promotions messages are personalized and answer their needs.

There is a strong association between the attitudes towards mobile promotions and brand engagement. Regarding this, 83.3% do not associate a mobile promotion with lack of quality.

Attitudes towards mobile promotions also have a strong influence in the behavioral intention of using it. In terms of behavioral intention some points must be highlighted: 63% of the respondents do not have a clear intention of using all the discounts received through mobile promotions and 38.1% intend to share the promotions with their friends, stressing the importance of socializing that companies could invest in snowball promotions;

Finally, there were found 4 clusters of mobile users' profile in this sample that partially matches the ones described in the literature review. They were identified as early adopters (46.2%), followers (30.6%), sociable (12.7%) and executives (10.5%).

However, this research had some a priori limitations that were assumed when the methodologies and search options were defined, but they do not compromise the results of study since it still has a high level of confidence in the conclusions drawn about the working hypotheses and indirectly in the validation (or rejection) of the research hypotheses. The main limitations of this research were the absence of qualitative preliminary studies; the sample composition and recruitment, since it was not a probabilistic sample.

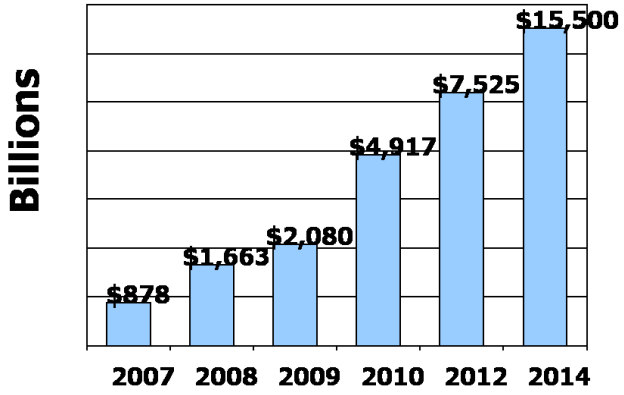
The main implications for Marketing and Management from this research are for companies. They must make a better use their CRM (Customer Relationship Management) – in order to build mobile promotions that are more useful and personalized for their clients. They should also take advantage of the fact that mobile phones are with people all the time and use integrated marketing campaigns to improve the results and strengthen contextually and / or point of sale

messages of a larger campaign - working the call to action. Companies should also have more promotions with a social component since consumers showed in this study that they were willing to share the promotions with their friends. In order to decrease perceived intrusion, companies should have more useful and fun messages, as well as other tools like opt-in (voluntary subscription) to get info on the brand.

# 1. Introduction

The theme of this master's thesis is *Acceptance and Attitudes towards Mobile Promotions in Young Portuguese Adults*, which is inserted in the Mobile Marketing topic. There is not a consensual definition of Mobile Marketing, but according to Dushinski (2009) *"Mobile Marketing connects businesses and each of their customers (through their mobile devices) at the right time and at the right place with the right message and requires the customer's explicit permission and /or active interaction"(*p.3-4). Mobile promotions are an important subject within Mobile Marketing since it is usually is the first tool that companies adopt when they start using mobile as part of their communication strategy.

This theme is relevant for society since Mobile Marketing is the latest generation of Internet Marketing, one of the areas of communications that has been growing the most lately and tends to continue growing. According to industry experts, the mobile advertising industry will grow over 35%, and Mobile advertising spending will reach $15.5 billion by 2014 (See Figure 1), while the total interactive media spending is estimated to hit $55 billion. (Reitsma, 2009)




Source: Forrester 2009

**Figure 1 - Mobile Advertising Industry Growth**

Internet Marketing still has a smaller weight in the Communications Business versus the traditional channels. Mobile is even smaller in comparison. However, Mobile is expected to have the biggest growth in next years since it uses a medium that has much more potential than any other before.

As Sir Martin Sorrel referred in the CES 2012 Conference, Marketers should invest in digital technology between 25 to 30% of their budget instead of 17% to 18% as estimated in 2012 in the United States of America. However, he mentioned that the biggest gap is at mobile because it is known that consumers spent about 70% of their time on mobile use and the investment in this channel has been very low. Therefore, it has a great potential.

Furthermore, not only most people have a mobile phone but also they also have it all the time with them. More than any other medium, mobile has *"the ability to put the right ad in front of the right person in the right place at the right time"* (Mutter, 2011), which makes it the tool of the future.

Mobile Promotions can be applied not only to normal mobile phones, through text messaging, but also to smartphones that enable a variety of services and interactions. According to Marktest[1], there were in the first trimester of 2011, 240 thousands of smartphones in Portugal, which represents 2.8% of the population. The sales of smartphones have increased 18%, while mobile phones decreased their sales. Moreover and according to Fenyo (2011)"Coupon offers are effective. Two out of three consumers say that coupon offers are the most effective way to reach them"

Furthermore, the personal interest in this topic is related with the new and emergent topic in the Marketing Field. Companies are still discovering Mobile Marketing and there are not a lot of people that have knowledge in the subject, therefore, it would be a distinctive factor in the job marketplace. Moreover it helped to more prepared for the changes from traditional models and theories taught in an academic context and up-to-date models adapted to the new needs of the market.

This thesis has four chapters. Chapter one is the Literature Review that approaches Consumer Behavior, Mobile Marketing, the Mobile Promotions and Model used in this study. Each topic has subtitles to better organize the information. In Consumer Behavior topic it is developed the Consumer Technology Adoption Model, since more evolved Mobile promotions are based on the use of new technologies and services, the mobile phones or smartphones and therefore it is important to understand what influences the attitudes and behaviors towards the devices. In this topic, the Consumer Purchase Decision Process and the influence of promotions on it are also explored. Secondly, in the Mobile Marketing topic, its concepts are described, like campaigns typologies and mobile consumer's typologies, and the Mobile Marketing industry. The third topic, Mobile Promotions, clarifies what are mobile promotions are and its concepts. The last topic is the Research Framework used in the study; this item explains the model and the hypotheses designed for the study and their sources.

The second chapter is the Methodology, in which the collection and analysis of the quantitative data is explained. There were collected 513 valid surveys from a convenience

[1] http://pdf.clipping.mediamonitor.pt/pdfTemp/etn_9653848_527_0.pdf

sample through an online basis. The surveys were answered from April 13th to 23rd of 2012. To analyze this data some parametric and non-parametric tests were performed with PASW/SPSS statistical software, along with other descriptive analyses.

Chapter 3 is the Results, and it interprets the results of the study, based on the model presented at the end of the literature review. In this chapter there are six main hypotheses that are going to be tested.

- If *Past Mobile Phone Usage* influences positively the *Attitude towards mobile promotions*, according to different aspects of the past mobile phone usage: mobile access to internet, the use of text messaging and the use of multimedia messaging.
- If the *Characteristics of Mobile Promotions* influence positively the *Attitude towards mobile promotions*, evaluated according to the perceived Usefulness, Ease-of-Use and Fun.
- If the *Past Experience with Mobile Promotions* influences positively the *Attitude towards mobile promotions*.
- The first three hypotheses test what influences the *Attitude towards mobile promotions*, while the following two will test if the attitude influences the *Brand Engagement* and the *Behavioral Intention*. The last one verifies differences in the three appointed dimensions according to different *Mobile Users' Profiles*.

Finally the last chapter is the Discussion and Conclusions that includes the conclusions, the lessons for the future, the limitations of this study and recommendations for future research.

# 2. Literature review

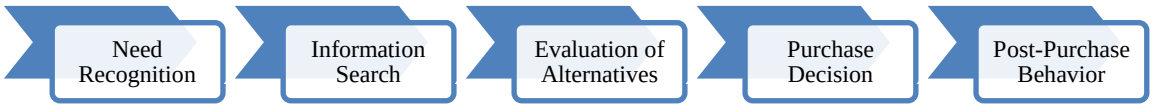
## 2.1. Consumer Behavior

To frame the issue of this thesis, *Young Adults' Consumers' Acceptance and Attitudes towards Mobile Promotions in Portugal*, it is important to understand the consumer behavior, not only the impact that promotions have in the consumers' purchase decision path, but also how consumers are influenced by new technologies and new services made available.

### 2.1.1. Consumer Purchase Decision Process

In order to understand in which context promotions are relevant it is important to explain the consumer purchase decision process. Chiavenato (1997, p. 710) defines decision as the "*process of analysis and choice between several alternatives available in the course of action that the person must follow*".

Solomon (2006) identified five consecutive steps in this process (see Figure 2).




Source: Solomon (2006)

**Figure 2 - Consumer Purchase Decision Process**

The promotions can influence the consumer decision at different stages, it will depend on the purpose of the promotion. Usually promotions are associated with purchase decisions, mostly at point-of-sale, when the consumer is evaluating the alternatives and deciding what is going to purchase. But promotions can be done out of the point-of-sale and work as an attraction to visit the store.

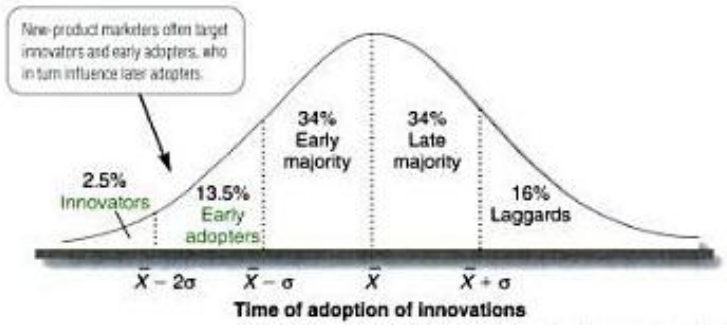
All these concepts can be applied in the mobile context.

### 2.1.2. New products adoption Models

As mobile devices are a relatively new medium for promotions it is also relevant to analyze the adoption process and models of new products.

According to Kotler (2010) there are five stages in the process of adopting a new product or service: awareness, interest, evaluation, trial and adoption. In the awareness stage the consumer becomes aware of the new product, but lacks information about it; in the interest stage the consumer seeks information about the new product; in evaluation the consumer considers whether trying the new product makes sense; the stage of trial is when the consumer tries the new product on a small scale to improve his or her estimate of its value and the last stage is the adoption that happens when the consumer decides to make full and regular use of the new product or service.

The same author also explains that people differ in the readiness to adopt new products. In the beginning there are less people adopting the products, these are the innovators and the early adopters. These people have an enormous importance because they have the power to influence the others; they are usually seen as trendy and *"experts"*. The Figure 3 shows the graphic used in the author's book. In this graphic it is still possible to see the percentages estimated for each group of adopters.




Source: Kotler (2010)

**Figure 3 - Adopter Categorization**

## Consumer Technology Acceptance Model

As mobile promotions imply the use of technology it is pertinent to analyze the Consumer Technology Acceptance Model (c-TAM), as developed by Childers *et al* (2001) and it was an adaptation of the TAM developed by Davis in 1986. The original model was designed to predict the attitudes and behaviors of employees as they were introduced to new technologies in the workplace and considered usefulness and ease-of-use as the most important factors that influenced the attitudes of the employees towards the new technologies. Childers based on this, designed a model not for employees, but for individual consumers. In this new context he found relevant to add a hedonic factor, which was Enjoyment, in the cited article.

Other authors that based their study on Childers model were Kumar and Bruner. They analyze the c-TAM and not only the influence of usefulness and fun in the attitude towards the act, but also the influence of the attitude in the behavioral intention that is based in the Theory of Planned Behavior (Ajzen, 1991) in which was proved that attitudes influence the intention of behavior, and that this influences the actually behavior.

## 2.2. Mobile marketing

### 2.2.1. Definition

There is not a consensual definition of Mobile Marketing, although it is usually defined as "*the use of the mobile medium as a means of marketing communication"* (Karjaluoto & Leppäniemi, 2005).

Dann and Dann (2011) in their book about e-Marketing defined Mobile Marketing as "*a sub-set of e-marketing which focuses on the mobile phone as the technology platform for the marketing interaction. Classic m-marketing relies on the distinctive mobile technologies of short messaging systems (SMS), multimedia messaging (MMS), Bluetooth, wireless access protocol (WAP), and downloadable content*".

Although there is no agreement on which is the best definition, many authors rely on the last definition of the Mobile Marketing Association (MMA). For MMA, "*Mobile Marketing is a set of practices that enables organizations to communicate and engage with their audience in an interactive and relevant manner through any mobile device or network*" (MMA, 2012) [2].

### 2.2.2. Concepts of mobile marketing

Mobile marketing is a very broad term that "*encompasses such a wide variety of activities, including: Mobile advertising, in which brands pay to display visual ads embedded within the content of another website; SMS and MMS; Location-based mobile marketing; Mobile applications; Mobile search marketing (…)*" (Krum, Mobile Marketing, Finding your customers no matter where they are, 2010) among others.

[2] Mobile Marketing Definition, Retrieved April 18th, 2012 from http://www.mmaglobal.com/wiki/mobile-marketing

According to the author of *Mobile Marketing: Finding your Customers no matter where they are* (Krum, Mobile Marketing, Finding your customers no matter where they are, 2010), "*mobile marketing promises to be the most personal, targeted, and actionable marketing available in our time*." It is the most personal form of web marketing because mobile phones are with the owner all the time and they have access to private information like calendar or contact lists, and "*know what kind of entertainment its user likes*".

As the mobile phone and the way it is used can provide powerful demographic and psychographic signals about the owner, it turns mobile the most targeted medium; it is also more immediate than others since any message that is received is immediately available; finally it is more actionable than other forms of web marketing because its technology allows more interactivity and removes some barriers that previously prevented people from responding to the marketing message.

Varnali and Toker (2010) also defend that recent developments in the mobile technology, the increase of mobile devices penetrations rates and the inherent characteristics of the mobile devices morphed the mobile channel into an *"ultimate marketing vehicle, which enables business entities to establish a persuasive electronic presence alongside their customers anytime, anywhere."*

Mobile Marketing appears in communications medium context in which traditional media – broadcast, print and Web – have advantages that justify the huge investment of brands on advertising in these mediums (Belch & Belch, 2011). Mobile marketing combines some of these benefits: it allows sound, motion and visuals, as does TV, and can target people at a pecific time of the day. Like print, it has a more targeted audience, but even more detailed than what is possible with print. Since the mobile device has access to the internet, it has all of its features incorporated. But Mobile Marketing has more power than this combination to become the future tool of marketers. Not only because both smartphones and tablets have unique capabilities like camera, calendar, motion sensor or GPS[3], which allow a more interactive, useful and fun experience, but also because it has the *"ability to put the right ad in front of the right person in the right place at the right time"* (Mutter, 2011). Mutter also believes that mobile will attract more companies in the future because the intimate,

[3] GPS definition= global positioning systems that pinpoint the location of the user, and the direction in which she is travelling (Mutter, 2011)

personalized and immediate quality of the platform makes it the most targetable and effective of all media.

This effectiveness is related with its possibility of interaction: *"Mobile media has, on average, outperformed traditional digital media environments, providing us with higher interaction rates (…) that's not to say we reach more people – meaning impression – but those who do see our ads participate with them at a higher level versus other environments*" (Comer, 2011), in other words, mobile can be a two way personal medium.

There are not a lot of typologies regarding Mobile Marketing because it is a subject relatively new and in constant change. Pousttchi and Wiedemann (2006) propose a Classification of Mobile Marketing Campaigns based on the analysis of 55 case studies. This classification uses as a criterion the methods of adding consumer value. It is divided into 4 categories:

- **Information** refers to programs providing information about products, points of interest, news, weather, traffic, horoscopes and other related content;
- **Entertainment** refers to programs that "produce value to the customers" and provide amusement and emotional triggers (through videos, music, games, personalization) ringtones, wallpapers, etc.);
- **Raffle** refers to programs that provide prizes such as digital content or physical goods;
- **Coupon** refers to programs that offer monetary incentives (like discounts), trial packages, or free services.

Mobile promotions focus mainly in the last category, the Coupon campaigns.

An important issue regarding mobile marketing is the mobile users' profile. Not everyone uses the mobile phone in the same way. According to a study done by Taylor in 2009 and cited by Krum (2010, p. 43) five types of mobile consumers were identified: the up-to-date, the social and curious, the busy and productive, the latest and greatest and the just-the basics (See Table 1). In her book, Krum also explains that is possible that a target audience does not have all these groups.

**Table 1 - Mobile Users' Profile**

| Profile | Description |
|---|---|
| **Up-to-date** | These people are driven to stay current with news, weather, and events at all times. They like to be informed, and others look to them as beacons of information. They use their mobile phone as a resource to stay them connected with real-time information |

| | |
|---|---|
| | about the world around them |
| **Social and curious** | These people are sometimes described as connectors because they enjoy bringing others together, networking, and planning events and outings. They use their mobile phones to keep up with their friends' lives and to stay connected to the people they care about. |
| **Busy and productive** | This group of people is very concerned with all information related to their own personal efficiency and their ability to cope with a busy schedule. They use mobile phones because they are more portable, accessible, or convenient than using traditional computers. They are interested in anything that can help them manage their multiple priorities and meet the demands of their busy day. |
| **Latest and greatest** | These people want to be the first to try something, even if there is no guarantee that they will be satisfied with it. They always want to use the newest technologies and applications, and to be a part of the newest social networks and communities. Friends look to them for reviews and recommendations of new technologies. |
| **Just the basics** | This group of people is not really interested in the phone, except for the fact that it makes their life easier. They are not impressed by the newest technology or the marketing appeals of most applications. They are not early adopters, and they look to reviews and recommendations to find the tools and applications that they want to use on their mobile phone. |

Source: Krum (2010:p.43)

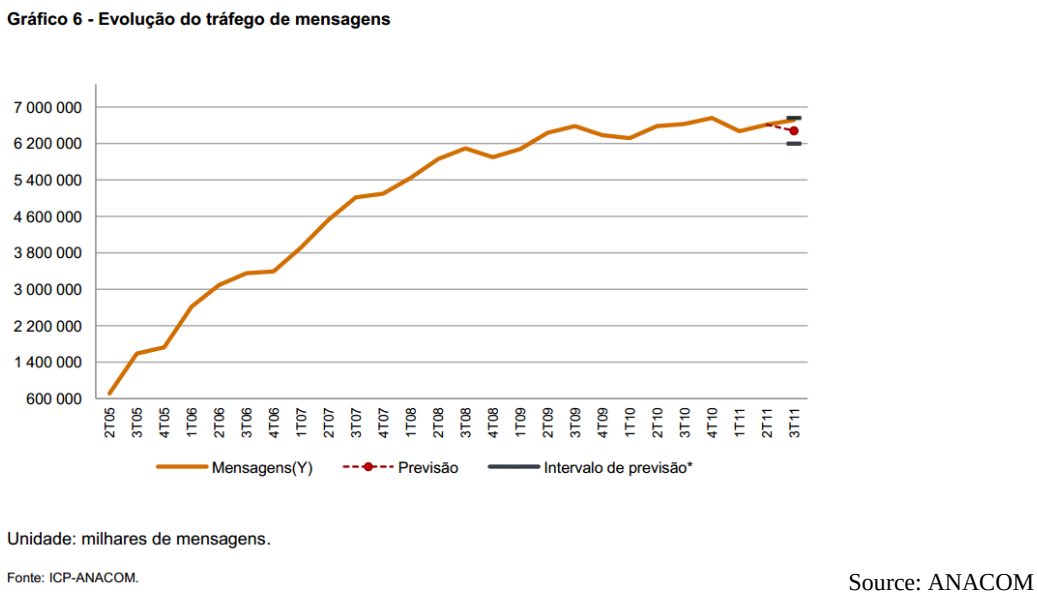
### 2.2.3. Mobile, a growing Business –

Mobile Marketing has been growing very fast. The drivers for this growth are the constant innovation in hardware and mobile services. These are giving people more and more reasons to use the sophisticated capabilities of their handsets. (DIGITAL: Sofa, so good for mobile marketing, 2011).

According to an estimation of Saumweber (2011), in 2011 there were approximately 500 million smartphones worldwide and 52 million tablets. These numbers were expected to increase in the following years. Another source, the report "Beyond the Crystal Ball: Forecasting Mobile's Impact on the Retail Industry in 2012" (Friedman, 2012) from January of 2012, said that 77% of the world population owned at least a basic mobile phone capable of receiving SMS. At the end of 2011 the global smartphone penetration rate was estimated to be 27%.

In Portugal, as stated by IDC Portugal (2012), there were 1.32 million smartphones sold in 2011 and this segment has grown 16.4% in the last year. According to the Mobile Services Report from ANACOM (2011) for the 3rd Trimester of 2011 there were 10.8 million users in Portugal able to use broadband services (65% of the devices), however only 4 million of them use these services.

According to the same study, in Portugal, there were sent 6.7 thousand million SMS only in the 3rd trimester of 2011. This number has been increasing over the years (See Figure 4). On average each Portuguese sent 10 SMS per day.



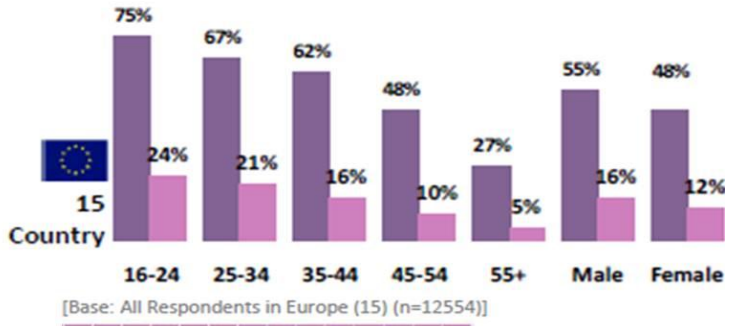

Source: ANACOM

**Figure 4 - SMS traffic evolution in Portugal**

Regarding the MMS, the numbers are lower. 37.4 million MMS were sent in the same period and this number has also been increasing over time. On average a Portuguese sent 8 MMS per month.

One of the characteristics of a smartphone is the fact that it is possible to use it to access the internet. A study on Internet Marketing prepared in 2010, by the European Interactive Advertising Association, in 15 European countries (including Portugal), revealed that 51% of the Portuguese population (4.6 million) used internet via PC/laptop, while only 5% (0.5 million) used the mobile phone or PDA as the device of access. On average the use of internet in the 15 countries is also 51%, but the use of internet with Mobile or PDA is 14%, which is three times more than the Portuguese result (See Appendix 1).

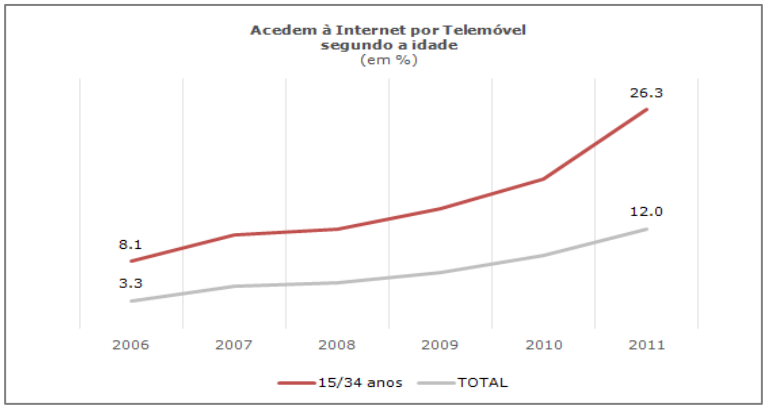
According to the same study, young people between 16 to 24 years old are the ones that use internet the most, 75% of the age group of 16-24 years old use internet via PC/Laptop while 24% use the Mobile Phone or PDA as the device to access Internet as it possible to observe in Figure 5.




Source: Mediascope Europe 2010

**Figure 5 - Weekly internet use - PC vs Mobile (15-EU countries)**

In Portugal, according to Marktest (See Figure 6) more than one quarter of young adults aged between 15 and 34 years old access the internet over their mobile phones.




Source: Marktest

**Figure 6 - Internet access via Mobile Phone in Portugal (15-34 years old)**

## 2.3. Mobile promotions

### 2.3.1. Definition

To define mobile promotions it is necessary to previously define Sales Promotions. According to Kotler (2010), Sales promotions are *"short-term incentives to encourage the purchase or sale of a product or service"*. It includes a wide assortment of tools - coupons, contests, price reductions, premium offers, free goods and others. Companies use sales promotion tools to create a stronger and quicker response. The same author says that sales promotion effects are

usually short-lived, however, and are not effective in building long-run brand preference. Sales promotions are a push strategy, which means that the manufactures or the distributors stimulate the consumer to buy.

In the context of mobile, push messaging are "*any content sent by or on behalf of advertisers and marketers to a wireless mobile device at a time other than when the subscriber requests it. Push Messaging includes audio, short message service (SMS) messages, e-mail, multimedia messaging, cell broadcast, picture messages, surveys, or any other pushed advertising or content*." (MMA, 2012)[4]

The most common mobile promotions are the SMS, MMS, and proximity marketing messages. Other common types are the coupons, discounts, or promotions that are sent directly to the customers' mobile phones urging them to take action. The coupons or discounts can then be redeemed in a variety of ways (Krum, Mobile Marketing, Finding your customers no matter where they are, 2010).

Cindy Krum also said in her book that *"The best opportunity in mobile marketing is the capability to build brand awareness and goodwill with your target market. Mobile promotions help customers feel appreciated and, thus, feel more loyal to your brand"*. (Krum, 2010; p.105)

### 2.3.2. Concepts of Mobile Promotions

Mobile promotions have been more sucessful in Europe and Asia than in the US. This phenomenon is greatly explained by the fact that US carriers charge for receiving text and multimedia messages, therefore people might not want to receive messages since they will be charged for it and to be willing to receive these messages the deals must add more value to the client than they add cost.

The goal of Mobile Coupons (*m-coupons*) is driving revenue by encouraging higher volume and repeat sales. These coupons also help increase product awareness and move overstocked inventory. The mobile medium allows them to be more tailored to the needs of the consumer and less costly than traditional print coupons. Their biggest problem is the way they can be reedem because the most important consideration: they have to be easy to use.

[4] Push Messaging Definition, Retrieved April 18th, 2012, from http://www.mmaglobal.com/wiki/push-messaging

Mobile couponing is very helpful to create loyalty programs because they can give a lot of insights about the customers' preferences, and those preferences should drive future messaging. Through the redemption of the coupons the company is able to understand either where customers redeem the coupons or how long they waited before redeeming the coupon for example. This kind of personalization will help companies really understand their customers' needs and provide a higher level of service, which will improve the lifetime value of their customer base.

The coupons can be delivered by SMS, MMS or location-based technology. From those the most effective and easily redeemable mobile coupons are sent via SMS or MMS. However, they have some limitations. The main constrain of SMS is to only have 160 characters to write a powerful message that provides a clear offer and expiration date. Regarding MMS, the biggest limitation is not in the device itself but in how many people have devices that are able to receive these messages. This is a problem that is likely to be solved in the future because smartphones are widely spread and are cheaper than before.

Mobile coupons can also be delivered directly to your device when you respond to a location-based prompt that is part of a Bluetooth or WiFi broadcast, or is embedded in a billboard or display as a QR code. Location-based marketing has a lot of potential because the "*Mobile promotions reach potential customers when they are most likely to make a purchase."* (Krum, 2010; p.115).

Location-Based Services (LBS) are digital systems that broadcast digital messages to enable devices within a specific radius or proximity. According to McCourtney, quoted by Krum (2010) the advantages of location and proximity marketing are:

- **A captured target**—The consumer is already in or near your place of business;

- **Increased impulse buying**— prompts benefits of immediate response;

- **Development of one-to-one relationship marketing;**

- **Direct marketing spending effectiveness**—no hard copy waste;

- **Psychological nurturing**—The consumer feels like a somebody, building brand recognition and loyalty;

**- Increased return on investment** (ROI)— Time-based incentives or promotions can be sent to increase the total value of the sale.

There are different technologies associated with LBS Marketing, from Bluetooth,WiFi, infrared (IR), near field communication (NFC), to ultra-wide band signals (UWB, not commonly used). Bluetooth is known for sending out coupons, barcodes, applications, vCards, vCal, video, MP3, MP4, and text messages. It is usually used to target shoppers in a retail location, as well as passersby outside the retail location and is an opt-in process (the customer has to accept the service to receive the messages). In order to receive it people must have the bluetooth activated in their mobile phones, which is not so common in Portugal.

Wi-fi is also common and it is known for providing internet acess. The best practices of using these technology are: Broadcasting a signal to send a message to potential customers (like bluetooth); using the name of the network to promote a store/product or special deal; and show advertising to people who had login in your internet.

Radio Frequency Identification (RFID) is a technology that allows items to be "tagged" or tracked using radio waves. It is frequently used for product tracking and asset management.

Another technology is the Near Field Communication (NFC). "*Near field-enabled devices can be used like smart cards that are waved over a reader, but in a marketing scenario, the mobile device is waved over a poster or other off-line marketing material (…) the person receiving the marketing message must swipe their phone over the sending technology to receive the message"* (Krum, 2010;p.118). Google Wallet and TMN Wallet in Portugal already use this type of technology in pilot projects for payments.

InfraRed (IR) is also a technology used, but it is the oldest and most limited form of broadcasting mobile messages. Moreover, it has not been universally adopted by handset manufacturers.

To understand how to use the mobile better to promote it is important to know what influences the attitudes towards mobile promotions. A study from Wang and Acar (2006) tested as one its hypotheses if there was a correlation between past experience of mobile phone usage and mobile promotions, *"the more often respondents received text messages, (…) the better attitudes they would form towards receiving [promotional] text messages on their cellular phones"*(p.85).

### 2.3.3. Mobile Promotion Business

Although the difficulty in finding data, according to Krum (2010) that cites Jupiter Research (2008) in her book, the retailers send out nearly three billion mobile coupons per year worldwide.

Another source is the 56th Annual Advertising Convention 2010, where it was discussed the future of mobile advertising. Among other conclusions, it was said that 61% of the consumers are interested in receiving location-based coupons and offers. They also pointed out that because mobile contact is very personal, brands are required to have the permission to enter in contact with prospect, but high engagement meansrich opportunities. Other insight of the conference related to the use of Mobile refers to the fact that the activites that frequently result from seeing location based mobile advertising are: 36% going to store, 42% look for more information, 35% use a coupon and 26% made a purchase.

## 2.4. Research Framework

Taking into account all the Literature Review it was designed a model that will support the statement of this thesis. The purpose is to understand the attitude and acceptance of mobile promotions. Subsequently it will be explained in which studies the model is based on.

According to Wang and Acar (2006) there is a correlation between Past Mobile Phone Usage and mobile promotions. In order to verify this, it was created the Hypotheses 1 (H1).

- **H1:** Past Mobile Phone Usage influences positively the Attitude towards mobile promotions

Past mobile phone usage was decomposed in three structural elements (frequency of mobile access to internet, frequency of use of text messaging and the frequency of use of multimedia messaging), who gave origin to the split of the main hypothesis in 3 other ones:

- **H1a**: Frequency of mobile access to internet influences positively the Attitude towards mobile promotions
- **H1b**: Frequency of use of text messaging influences positively the Attitude towards mobile promotions

- **H1c**: Frequency of use of multimedia messaging influences positively the Attitude towards mobile promotions

The Consumer Technology Acceptance Model (c-TAM) developed by Childers et al (2001) and adapted by Bruner and Kumar (2005) was also applied in the research framework of this study. The c-TAM is a model that predicts the behavioral intention of acceptance of the technology. Since mobile promotions require a technological medium with a strong service component, the mobile phone, in many cases a smartphone, it is logical to apply the same concepts to the attitudes towards mobile promotions. Therefore it is tested if the characteristics of the mobile promotions influence the attitude towards it in hypothesis 2.

- **H2**: Characteristics of the mobile promotions influences positively the Attitude towards mobile promotions

In these studies it was identified that it was important not only utilitarian but also hedonic factors. For this purpose, as utilitarian, it is going to be verified usefulness (H2a) and Ease-of-Use (H2b), since they are most commonly used on the previous studies, and as hedonic factor it was chosen Fun (H2c), due to the target characteristics (if it was an older target it could have been status, for instance):

- **H2a**: Usefulness of the mobile promotions influences positively the Attitude towards mobile promotions
- **H2b**: Ease-of-use of the mobile promotions influences positively the Attitude towards mobile promotions
- **H2c**: Fun of using the mobile promotions influences positively the Attitude towards mobile promotions

Regarding the fact that Past Mobile Phone Usage might influence mobile promotions, it makes sense to consider that Past Experience with mobile promotions might influence the attitude towards it. Therefore it was defined the hypothesis 3 (H3).

- **H3:**Past Experience with mobile promotions influences positively the Attitude towards mobile promotions

The hypothesis 4 tests the influence of the attitudes towards mobile promotions on the brand engagement. This hypothesis does not have a specific source but since in the literature many

authors discuss the possibility of damage to the brand image and to the brand loyalty when companies use sales promotions excessively, it is suitable to try to understand if it also happens with mobile promotions.

- **H4:** Attitude towards mobile promotions influences positively the Engagement with the brand

Based on the Theory of the Planned Behavior (Ajzen, 1991) in which is proved that Attitudes influence the Behavioral Intention, it was formulated the hypothesis 5 (H5). This Hypothesis is going to test if people that have a positive attitude towards mobile promotions also have a positive behavioral intention regarding them.

- **H5:** Attitude towards mobile promotions influences positively the Behavioral Intention

The last hypothesis of this study is testing if there are differences in the attitudes, brand engagement and behavioral intention regarding their mobile user profile. The mobile users' profiles in which this hypothesis is based on are explained in the Literature Review in the *Concepts of Mobile Marketing* Chapter.

- **H6**: Different Mobile User Profile have significant differences in the attitudes towards mobile promotions, behavioral intentions and engagement with the brands

To finalize it this framework is graphically illustrate in Figure 7.

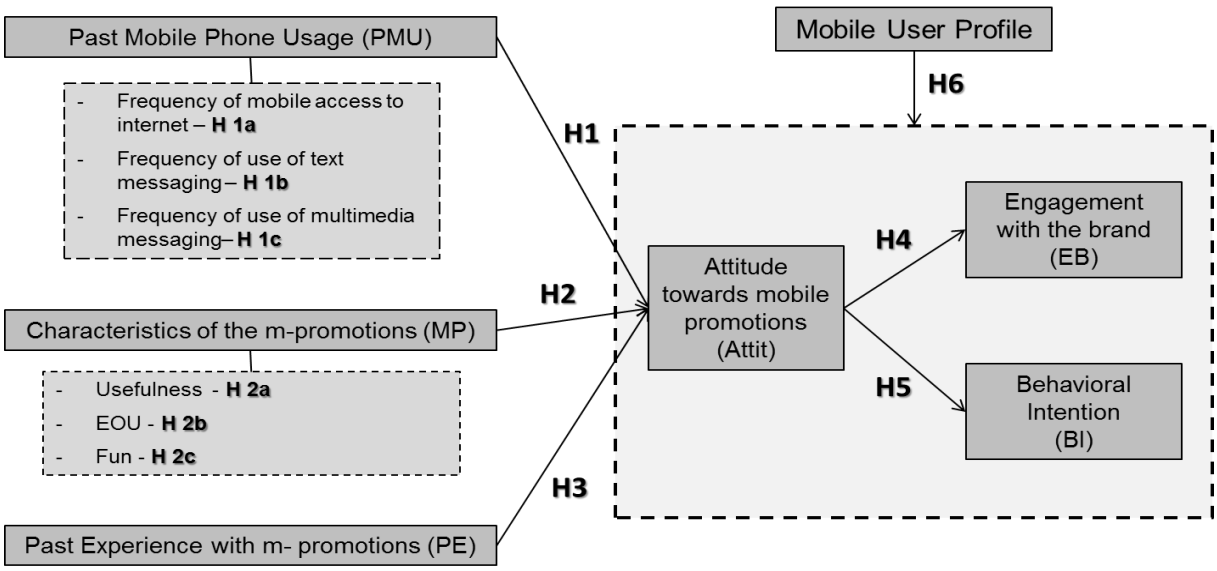



**Figure 7 – Research Framework**

# 3. Methodology

## 3.1. Methodological choices

The study focuses is the *Acceptance and Attitudes towards Mobile Promotions in Young Portuguese Adults.*

The data collection for this study followed an approach of the positivist paradigm. It was assumed that this is a measurable reality and therefore capable of being quantified.

This approach followed the hypothetical-deductive scientific method or test hypotheses, embodied in the techniques of quantitative research, and specifically the research by surveys. This strategy enables to generate primary data that met specific objectives and research hypotheses.

This type of research - empirical research - makes observations to better understand the phenomenon of study, and allows the building of more adequate explanations or theories (Hill and Hill 2008). In this case, it is an extension of papers presented in the literature, by applying the assumptions and methods to new realities (Portugal) and situations (Mobile Promotions), as well as deduction of new hypotheses about the Influence of *Past Experience with Mobile Promotions* on the attitude towards it, and the influence of this attitude on the *Brand Engagement.*

Given the extent of the objectives of research, it was defined the research design - conclusive, descriptive and single cross-sectional. It is conclusive because its purpose is to identify behaviors and get some conclusions from the research; it is descriptive because it analyzes, qualifies and quantifies the answers, the purpose is not getting an explanation of behaviors but instead to understand the relationship between influential factors on the attitude towards mobile promotions and the influence of the attitude on the behavioral intention and the relationship with brands after they promoted via mobile devices. According to Malhotra (2007) this type of study is very suitable for describing characteristics of users (eg. the more favorable, the higher users, etc.) and for estimating the proportion of consumers showing specific behavior and / or the perception of certain characteristics, this is consistent with the purposes of this investigation. The electronic survey conducted in this stage of the research is available for consultation in Appendix 2

### 3.1.1. Sampling

The universe of this study is Portuguese young adults, aged between 18 and 29 years-old, which have a mobile phone and have received a promotional message on their mobile phone in the last 6 months.

The study is restricted to Portuguese not only because each country has its specificities regarding culture, attitudes, behaviors, equipment and mobile phone usage, but also because there are not a lot of studies in this field in Portugal and therefore companies do not know very well the attitudes and behaviors of their consumers regarding mobile promotions.

The focus of the research was 18-29 years old because according to the study of *Instituto Superior Técnico* (IST) and the *Instituto de Telecomunicações* (IT)[5] in 2011, only 0.5% of young people in Portugal do not have a mobile phone. The same study also says that this age group sends, on average per day, more than 100 per person. This shows that this age group is the one that uses the mobile phones the most. Furthermore, young people have the highest penetration rates of Internet usage (Fennah, 2010) and future potential as adopter and disseminator of new technologies and mobile practices.

Taking into account the current size of the universe (about 1.95 million people, equivalent to 18.1% of its population according to the INE), the less time and resources available, and given the nature of the research (Acceptance and Attitudes of Mobile Promotions), it was considered appropriate to use a sampling process that potentiates the dissemination and response through the collection of the data over the Internet.

It is thus assumed a non-probabilistic sampling process with selection of respondents by convenience and proliferation (snow-ball). It was obtained a non-representative sample, so is not possible to extrapolate the findings obtained in the sample to the universe with confidence. However, Hill and Hill (2008) consider this type of sample as appropriate and preferable, to make a good academic research limited in scope and raise ideas and ways to do an investigation of the weak and on a large scale, especially when there is no time or resources available.

The size of the target sample took into account the minimum number of cases needed to perform the various tests and statistical techniques required for the validation of hypotheses,

[5] http://sicnoticias.sapo.pt/economia/2012/01/09/jovens-portugueses-enviam-100-mensagens-por-dia-atraves-do-telemovel

as well as for implementing the Law of Large Numbers (to ensure the approaching of the normal distribution of the various groups and sub-populations of analysis, which requires at least 30 subjects per group / population).

The highest value calculated from the simultaneous application of these criteria pointed to the need for responses from 160 individuals, having been placed for safety and potential occurrence of non-responses and disqualifications, a target of 200 individuals as the initial size of the sample target. It was the purpose of the research that defines its nature and dimension. (Hill and Hill, 2008:42).

Although with the results obtained it is no longer possible to extrapolate with confidence to the conclusions of the Universe, it was generally considered that allow measuring the perceptions of the respondents and draw valid conclusions to meet the objectives of the study and prove or disprove, so statistically adequate, the assumptions operating to meet the payment of research hypotheses.

### 3.1.2. Scales

There are different types of variables in the survey and therefore different types of scales.

A few nominal variables were used, like sex, but mostly scale variables. Most of the scales used were non-comparative with itemized scoring, in other words there were 5 categories Likert type, since those are adequate to measure attitudes and opinions, which is appropriate regarding the research objectives (Malhotra, 2007; Hill and Hill, 2008). In most of the questions that ask for the respondent to evaluate a sentence that explained an attitude or behavior it was used the following scale of concordance was used(See Figure 8).

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly disagree | Disagree | Neither disagree, nor agree | Agree | Strongly agree |

**Figure 8 - Likert Scale**

It was used a non-forced-choice scale, that has not only an odd number of categories and a neutral answer (number 3) but also a “do not answer” choice to improve the quality of results.

### 3.1.3. Instrument construction

The data collection was based in a survey that is a type of research based on the direct and structured inquisition of the respondents (Malhotra, 2007).

The survey was written in Portuguese since the target participants were Portuguese, and there were some initial filter questions (questions 1 and 2 – see Appendix 2) that were able to assure that only the intended target answered the survey.

The survey has 23 questions, 22 of them mandatory. Moreover, it was not possible to go back after you have answered, this method improved the results because the respondents could not go back and correct those, therefore the answers should be more genuine and reliable. Another characteristic of this survey was the fact that most of the questions were in a separate page, helping the respondent to focus in the single question that he/she was answering at the moment.

There were some questions where there was as an available answer "*I don't know/I don't want to answer*" represented by N/A in the questionnaire and by number 6 in the database. This number was considered a missing value when the database was analyzed. The existence of this possible answer should help to decrease measurement and bias errors.

Most of the questions are closed, either multiple choice or dichotomies. There were also some multiple response questions where the respondent was able to choose more than one answer. Having closed questions facilitated not only the completion of the survey (and therefore having a higher rate of responses), but also the analysis of the data.

Before releasing the survey, it was made a pre-test with 15 people representative of the universe. In this test it was corrected some sentences formulation and some other minor corrections. These results were not considered in the final sample.

## 3.2. Data Collection Procedures

The data used to build this quantitative research was gathered in an exploratory study based on secondary data that is presented in the Literature Review chapter. This data was collected from different sources, some books, some scientific articles and some articles from specialized magazines since this is a recent topic of discussion and there are not a lot of scientific sources.

The method used to collect all the data was a quantitative web-based survey. The questionnaire was conducted online through the platform *SurveyMonkey* that allowed the use of filters throughout the survey.

This method has some general advantages and some specific advantages regarding the issue and target of the study. In general, online surveys are: more convenient to answer; it is easier and quicker to collect the answers; the cost per survey answered is lower; it is not necessary to insert all the data in the database, since the respondent does it automatically; and there is no bias regarding the interviewer. However this method has also some limitations such as it being easier for the respondents to quit and do not answer the entire survey; and the data collected it usually is not representative of the population, not only because not everybody has access to internet, but also because all the population does not have the same access to the survey itself. (Malhotra, 2007)

However, since the target uses the internet frequently (Fennah, 2010), it is possible to consider that this limitation is not relevant in this specific study. Other methods were not chosen mainly because they were more expensive and took more time and since the target uses internet frequently the answers are not biased.

To avoid the error of duplication the system blocked IP numbers, therefore an IP address could only answer once. Since it is not statistical valid its prior determination of intended size was not defined by any formula, but several methods of recruitment were deployed to assure a maximization of the number of respondents and the strength of the sample results.

To promote the completion of the survey, its link was sent to personal and professional contacts of the researcher known to be on target, through email and postings on Facebook. To increase the effect of snowball on *Facebook* a video was made and published on *Youtube.*

The promotion of the survey might bias the results of the consumer profiles. It is believed that it does not influence the relationships between the profiles and their behaviors, but influences the number of individuals analyzed in each profile, for example it is more likely to have a high number of "*social and curious*" since these people use social networks more regularly.

The survey was conducted online for 10 days, from April 13$^{th}$ to 23$^{rd}$ of 2012. Six hundred and sixty five Portuguese between 18 and 29 years old took part in this study, with 493 valid and complete answers to be considered in the final obtained sample. This difference results from incomplete surveys, answers that did not belong to the target (Portuguese of 18-29 years

old) and answers from people that do not have a mobile device. Respondents who did not receive a promotional message on their mobile phone in the last six months (4.11% of the respondents) were also not considered.

### 3.3. Data Analysis Procedures

Since the data is automatically inserted by the respondent there is no need for an inserting step in this procedure, reducing the potential associated error in this phase.

After collecting the data from the website in an Excel version, the answers were revised and checked for completion and consistency.

The analysis of the data was made based on the hypotheses of the designed model. Parametric and non-parametric tests were used. Most of them make correlations between scale variable and some compare means regarding the mobile user profile.

In order to validate the research hypotheses presented in the previous chapter there were used several tests: Descriptive statistics; tests to validate assumptions (like homogeneity of variances); Factor Analysis and Clusters Analysis; Chi-square – Cramer's V; and Inductive Statistics (mostly parametric) like Independent samples t-test, , ANOVA, Correlations and Multiple Regression Analysis.

The distributions were considered as normal for almost any situation by applying the Central Limit Theorem, which assumes normal distribution approximation to the distribution of a variable metric where n> 30. This means that is compatible with the implementation of parametric tests on these variables. The test of homogeneity of variance performed was the Levene's test for its power strength.

# 4. Results and Analysis

This section presents not only the results of the study, but also the analysis of the data that was done to validate all the research hypotheses. This section is divided in nine parts:

4.1. Socio Demographic Characterization of the sample
4.2. Past Mobile Phone Usage
4.3. Characteristics of Mobile Promotions
4.4. Past Experience with Mobile Promotions
4.5. Attitude towards Mobile Promotions
4.6. Influences of Past Mobile Phone Usage, Characteristics of Mobile Promotions and Past Experience with Mobile Promotions in Attitudes towards Mobile Promotions
4.7. The influence of Attitudes towards Mobile Promotions in Brand Engagement
4.8. The influence of Attitudes towards Mobile Promotions in Behavioral Intention
4.9. The influence of Mobile Users' Profile

At the end of this chapter a summary table will be presented with the hypotheses that were validated and those that were not.

## 4.1. Socio Demographic Characterization of the sample

This study was limited to young adults between 18 and 29 years-old and the distribution of the sample by age is observed in Figure 9.

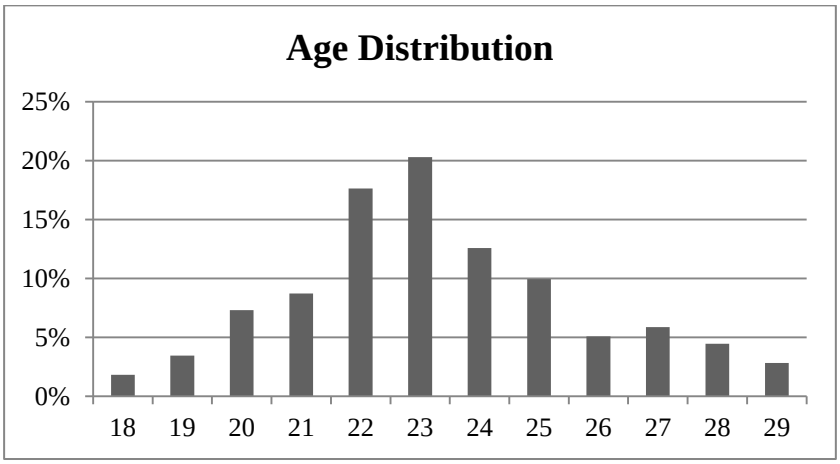



**Figure 9 - Distribution of the sample by Age**

The sample has more women than men (See Figure 10), 69.8% against 30.2%, respectively.

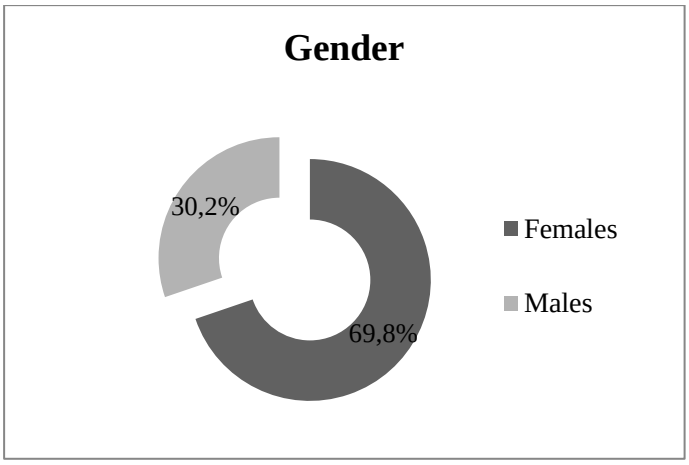



**Figure 10 - Distribution of the sample by Gender**

Therefore this distribution is not representative of the Portuguese population in this age group, which confirms what was said before about that these results not being able be projected outside of this sample.

It was also asked to the respondents if they were currently working. Half of the respondents are currently working, this demographic is coherent with the age group since some people are still studying and others are already working (See Figure 11).

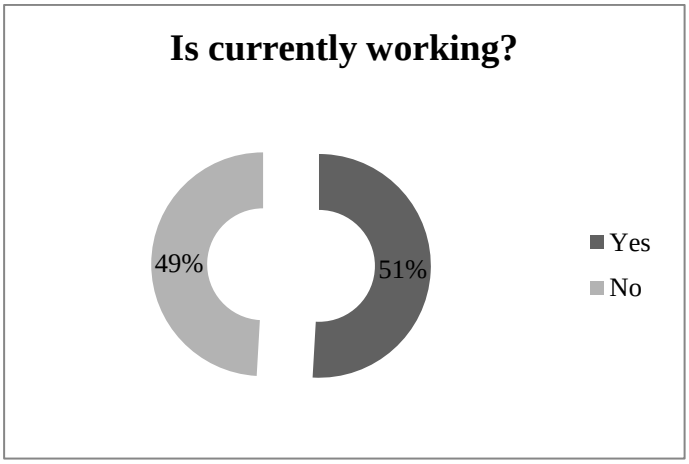



**Figure 11 - Distribution of the sample by Working Status**

The majority of the respondents (88%) live in the Great Lisbon (See Figure 12).

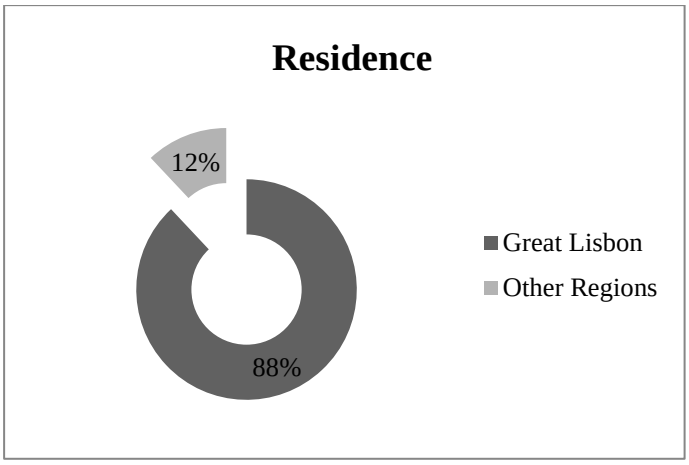



**Figure 12 – Distribution of the sample by Residence**

## 4.2. Past mobile Phone Usage

To investigate the past mobile phone usage the respondents were inquired about the frequency of receiving text messages, multimedia messages and access internet through the mobile phone. The graph that illustrates the results can be analyzed in Figure 13.

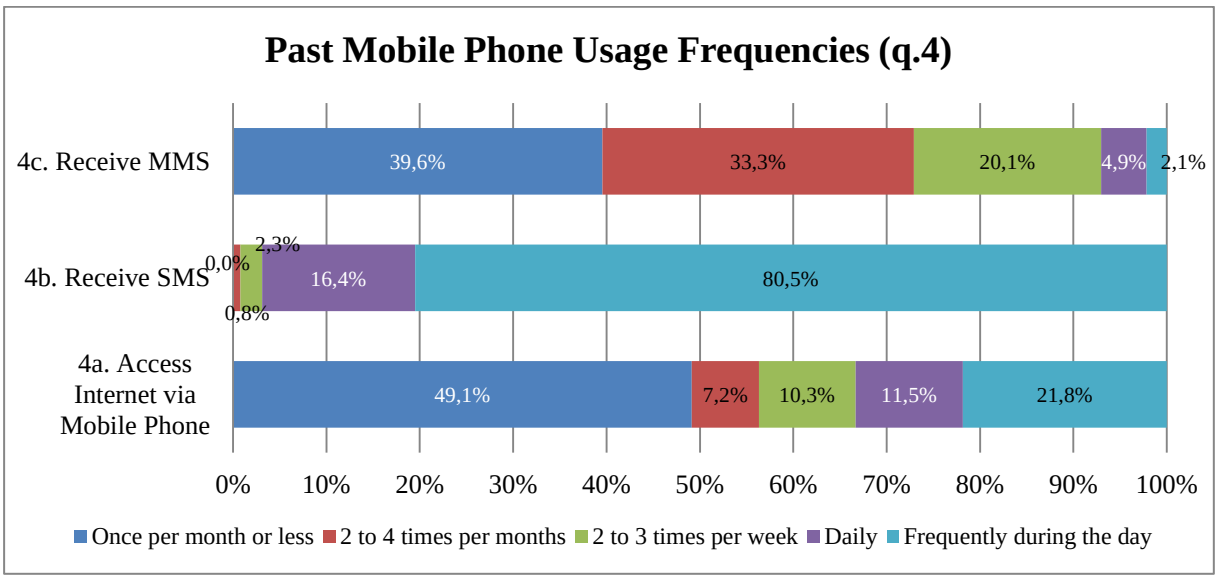



**Figure 13 - Past Mobile Phone Usage Frequencies (q.4)**

From the same graph it is possible to conclude that text messaging is more frequently used, with 96.9% of the respondents receiving text messages once or several times per day. This phenomenon might not be true out of this age group. A possible explanation for these results is the fact that most of the Portuguese Carriers have a discount package in which SMS within the carrier network are free.

The multimedia messages are not so commonly received, 72.9% of the respondents receive once a week or less this type of message. This might be explained by the fact that they are more expensive to send than SMS.

Regarding accessing the internet through the mobile phone interesting data was collected. Almost half of the respondents (49.1%) access it once per month or less, while a third uses the mobile phone to access the internet at least once per day (33.3%). These results suggest that people who have the habit of accessing the internet do that frequently, with social causes (Facebook) potentiating this.

**Gender Comparison**

In order to conclude whether there were any differences between Women and Men an Independent Samples T-Test (See Appendix 5) was done between Gender and Access internet via mobile phone, receiving SMS and receiving MMS.

Firstly it was tested the equality of variances through the Levene's Test. As all the sig were higher than 0.05 (Access Internet=0.901, Receiving SMS=0.082 and Receiving MMS=0.392) the null hypotheses were accepted, this means that the variances were assumed equal.

The t-test evaluates the equality of the means. Analyzing the "equal variances assumed" line it is possible to see that the Receiving SMS and Receiving MMS have sig (SMS=0.320 and MMS=0.544) higher than 0.05, proving that there is no statistical difference between Women and Men.

However, Access to the internet via Mobile Phone has the sig lower than 0.05 (sig=0.000) the H0 was rejected. This means that there is a statistical difference between the answers of Women and Men.

To understand the difference between women and men a crosstabs was made between *Access to the Internet via Mobile Phone/Gender* (See Appendix 4). From this data it was built Figure 14. By analyzing it, it is possible to see that **Men access the Internet** (45.6% access it daily) via Mobile Phone **more frequently** than Women (28.8%).

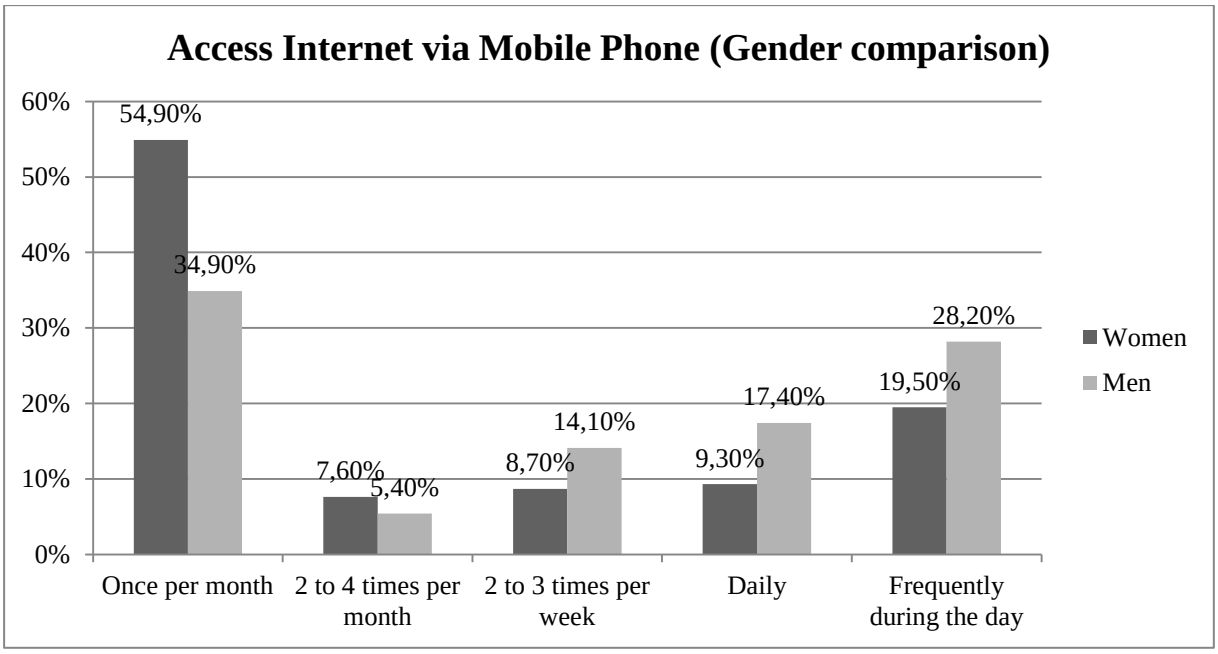



**Figure 14 - Access Internet via Mobile Phone (Gender comparison)**

## Working Status Comparison

In order to understand if there were any differences between people that are currently working and people that are not it was done an Independent Samples T-Test (See Appendix 6) between Working Status and Access internet via mobile phone, receiving SMS and receiving MMS.

On one hand, access to the internet via Mobile Phone has a sig lower than 0.05 (sig=0.000), which means that there is a statistical difference between people that are currently working and people that are not regarding accessing the internet via mobile phone..

On the other hand, Receiving MMS (sig=0.954) Receiving SMS (sig=0.156) have a sig higher than 0.05, therefore the H0 was accepted. This proves that there is no statistical difference between these groups.

To understand the difference between people currently working and people that are not it was done a crosstabs of Access Internet via Mobile Phone/Working Status (See Appendix 8). From this data it was built Figure 15. By analyzing it is possible to see that people that are currently working access more frequently (40.6% access it daily) Internet via Mobile Phone than people that are not currently working (26.8%).

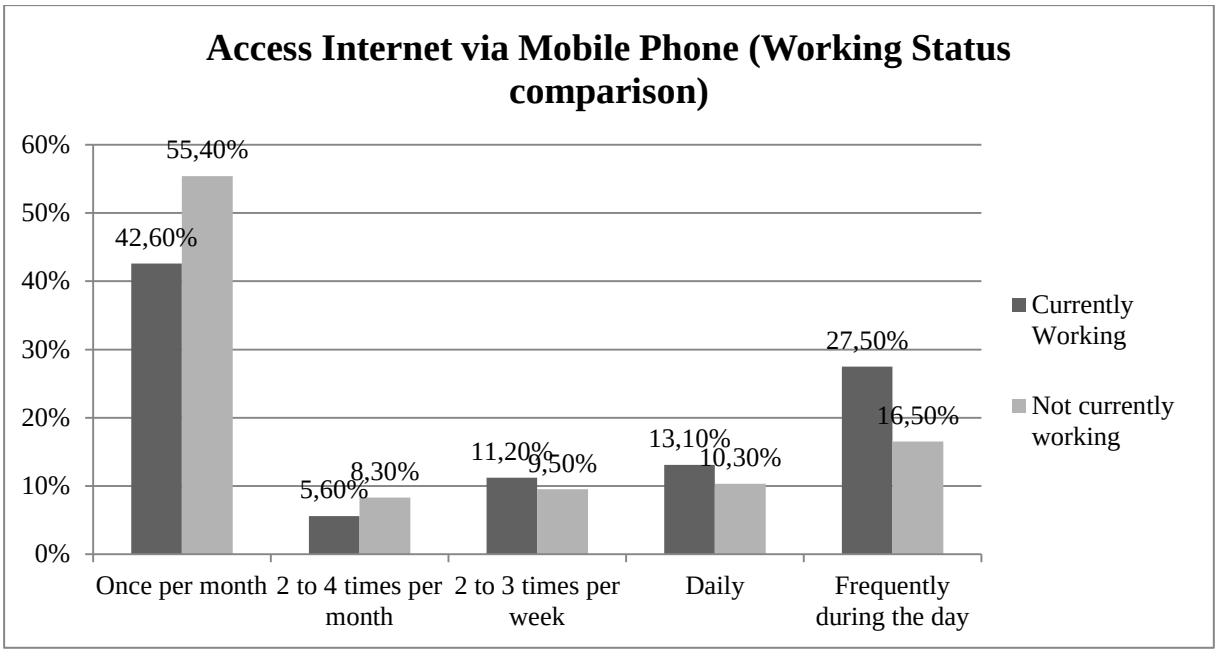



**Figure 15 - Access Internet via Mobile Phone (Working Status Comparison)**

### 4.3. Characteristics of Mobile promotions

The characteristics of Mobile promotions that were tested in this study and applied in the model were usefulness, ease-of-use and fun.

The Figure 16 shows the perception of usefulness of the promotional messages via mobile. The majority is favorable, considering them it either useful or very useful (42.5%), but only 4.5% considered them as "*very useful"*.

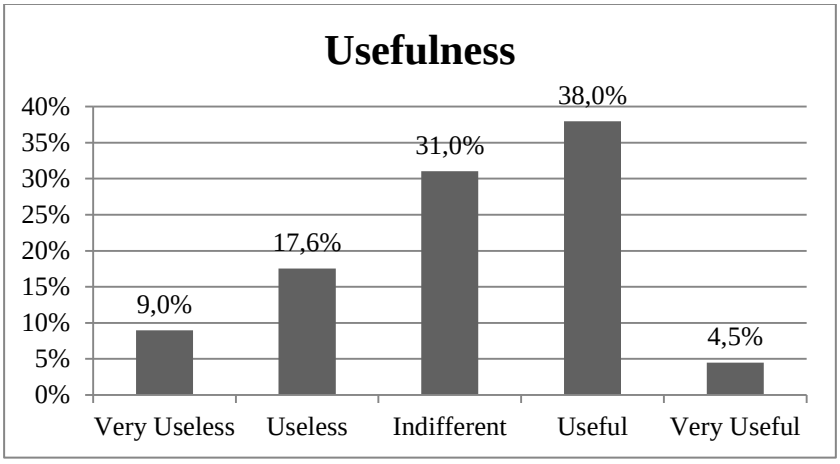



**Figure 16 - Usefulness of a mobile promotion**

The majority of the respondents (52.3%) consider that mobile promotional messages are easy to use and only 7.5% think that they are difficult or very difficult to use. (See Figure 17)

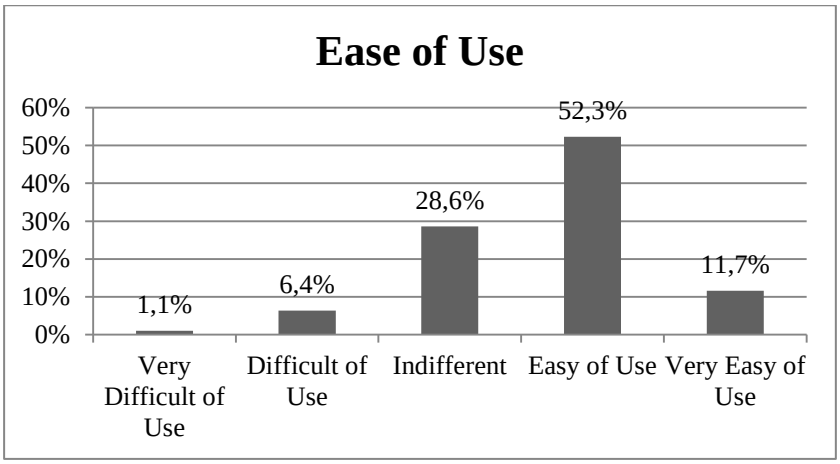



**Figure 17 - Ease of Use of a mobile promotion**

As it is possible to observe in Figure 18, most of the respondents do not have a defined opinion regarding the fun of the promotional message (53.3%). This result suggests that promotional messages should be more associated with fun because as described in the Literature Review the more fun an interaction is, the better is the consumer acceptance and interest.

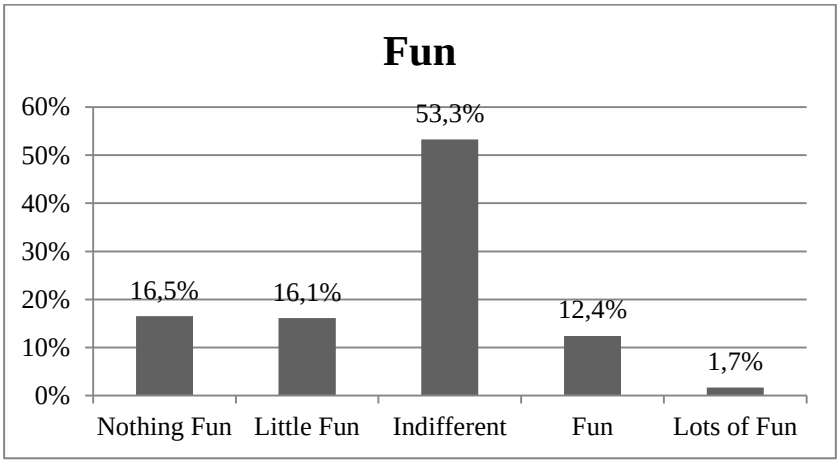



**Figure 18 - Fun of a mobile promotion**

## Gender Comparison

In order to realize if there were any differences between Women and Men it was done an Independent Samples T-Test (See Appendix 5) between Gender and Usefulness, Ease-of-Use and Fun.

The Ease-of-use has a lower sig than 0.05 (sig= 0.816), which is higher than 0.05 and therefore the H0 was accepted. This proves that there is no statistical difference between Women and Men.

However, Usefulness and Fun have the sig lower than 0.05 (Usefulness=0.000 and Fun=0.001) the H0 was rejected. This means that there is a statistical difference between the answers of Women and Men.

To understand the difference between women and men a crosstabs was done of Usefulness/Gender and Fun/Gender (See Appendix 7). From this data it was built Figure 19 and Figure 20 were built.

Through analyzing Figure 19 it is possible to see that **Women (46.6%) consider promotional messages more useful than Men (32.8%)**.

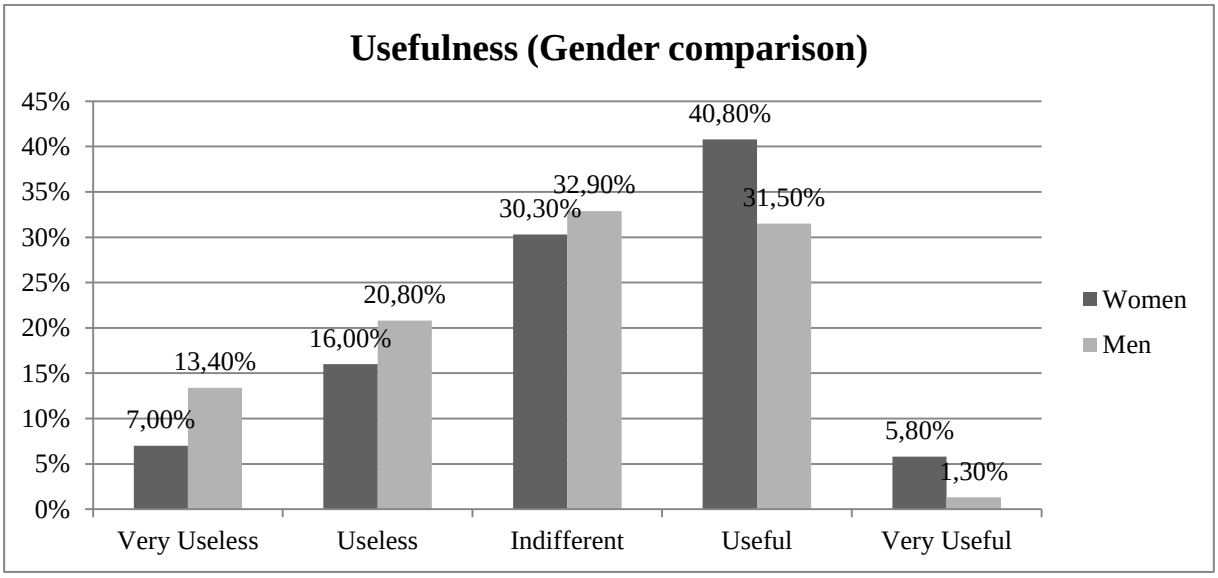



**Figure 19 - Usefulness (Gender Comparison)**

Regarding Fun (See Figure 20), the same situation occurs: **Women (16.9%) consider promotional messages more fun than Men (7.5%).**

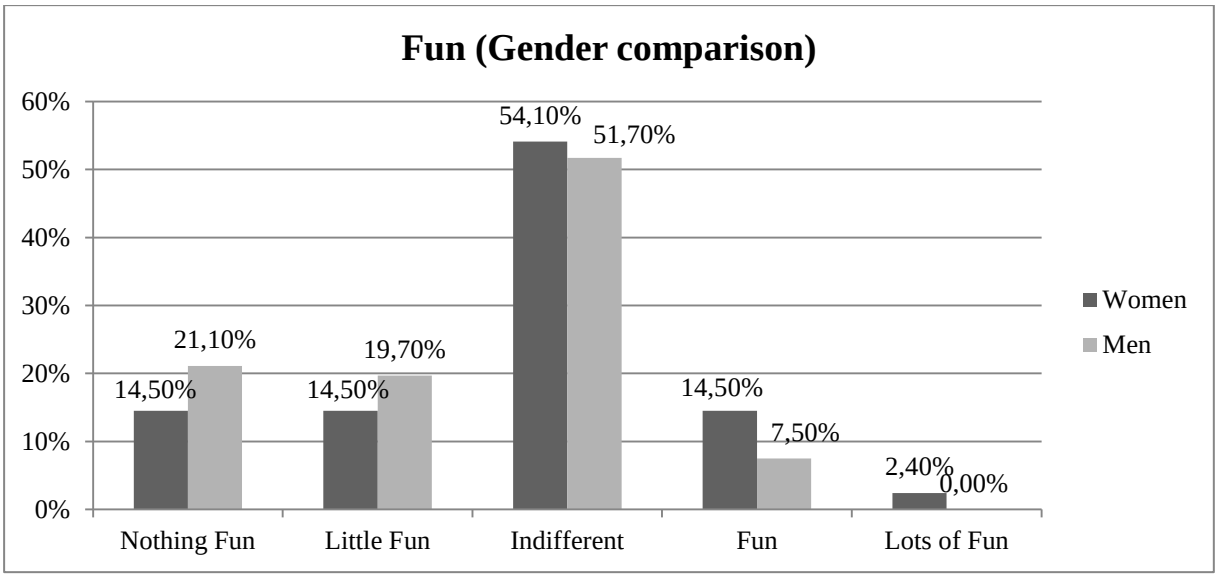



**Figure 20 - Fun (Gender Comparison)**

**Working Status Comparison**

In order to conclude whether there were any differences between people that are currently working and people that are not it was done an Independent Samples T-Test (See Appendix 6) between Working Status and Usefulness, Ease-of-Use and Fun.

As all the sig (Usefulness=0.084, Ease-of-Use=0.068 and Fun=0.244) are higher than 0.05 H0 was accepted. This proves that there is no statistical difference between people that are currently working and people that are not.

## 4.4. Past Experience with mobile promotions

In order to test the past experience with mobile promotions it was created a construct that is based on two axes: the quality of experience tested in question 11 and the quantity of interaction, expressed by the number of promotional messages that the respondent had received in the last 6 months measured in question 8. Each of these components have the same weight in the construction of this variable, which varies between 1 and 10, and results from the sum of q.11 and q.8R.

Regarding the quality of experience eight items were tested and its frequencies are in Figure 21. The need for creating a construct emerged from the non-existence of a single question that was able to describe as whole the past experience with mobile promotions as a whole.

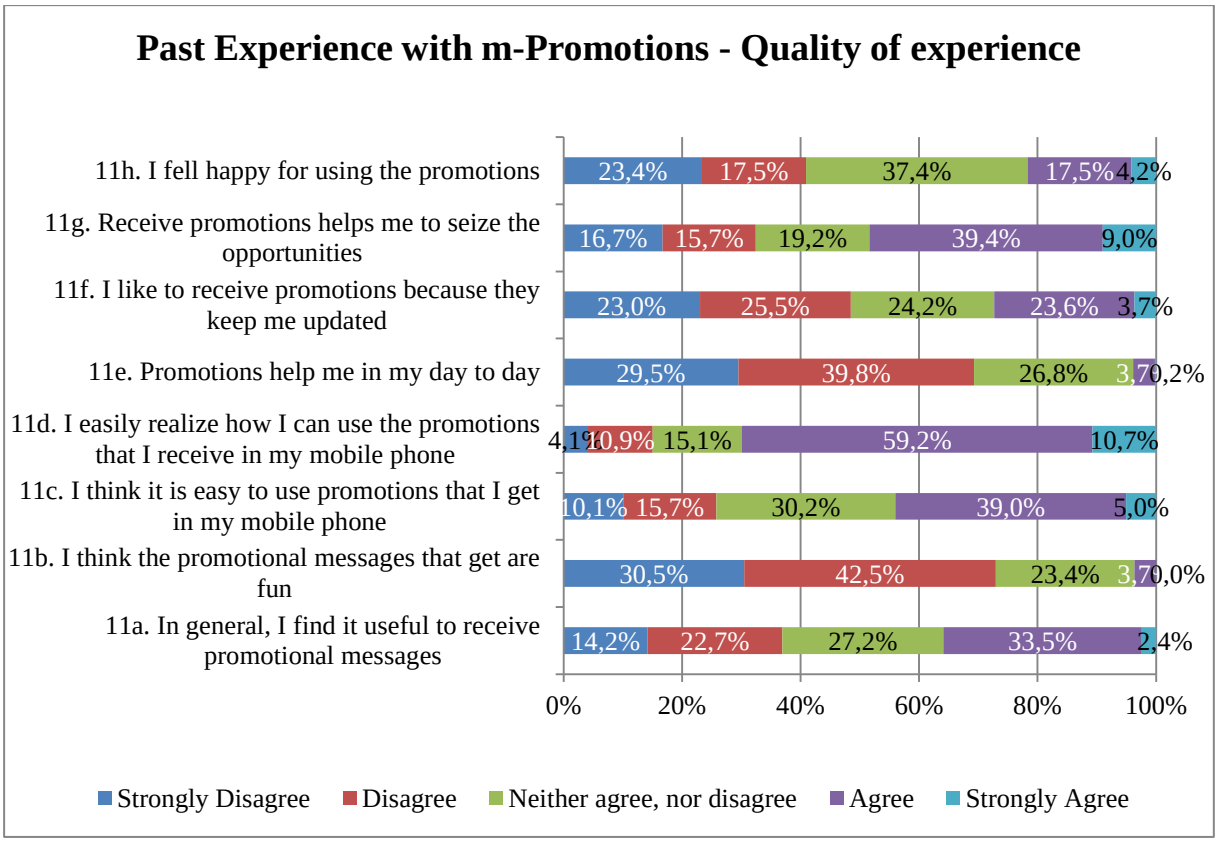



Figure 21 - Past experience with M-Promotions – Quality of Experience Frequencies (q.11)

To be certain that these sentences form a good construct a Reliability test was done that analyzes if this group of sentences had adequate internal consistence. The result is expressed by the Cronbach's Alpha that in this case was 0.869 (See Table 2) and according to Pestana & Gageiro (2008, pp. 527-528) this means that it has a "*good internal consistency*" and can be used as a construct.

**Table 2 - Reliability Test of Quality of Past Experience with M-Promotions**

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| ,869 | ,868 | 8 |

The frequencies of the quality of experience construct of the past experience with mobile promotions are presented in Figure 22. There is not a consensual response to this construct, however one quarter of the respondents considered it as good.

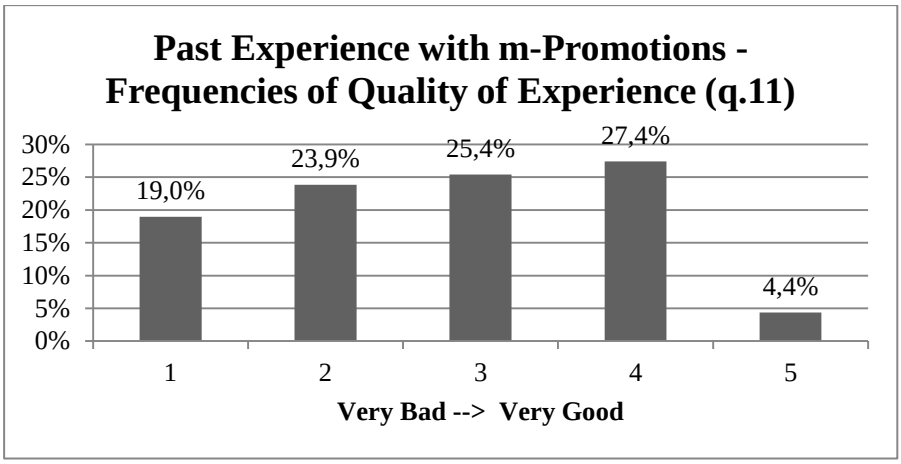



**Figure 22 - Past Experience with m-Promotions - Quality of Experience (q.11)**

The quantity of interactions was measured in question 8, which is an open question. In order to analyze it and better perform the statistical test the results were grouped in 5 ranks in the variable q8R that is an ordinal variable. Each rank has approximately 20% of the respondents and was attributed a value from 1 to 5 as it is possible to see in Figure 23. The original answers to question 8 are available in Appendix 3.

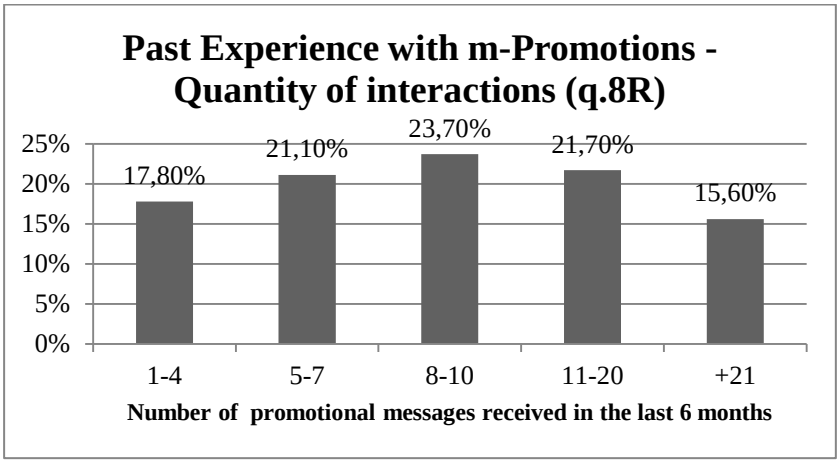



**Figure 23 - Past Experience with m-Promotions - Quantity of interactions (q.8)**

After creating this these constructs and variables, the sum of both values led to the new variable (*past_exp*). The results are in Figure 24.

From these results, it was concluded that the past experience is averagely good, but not enthusiastic for the majority of the respondents between 5 and 7 (63%).

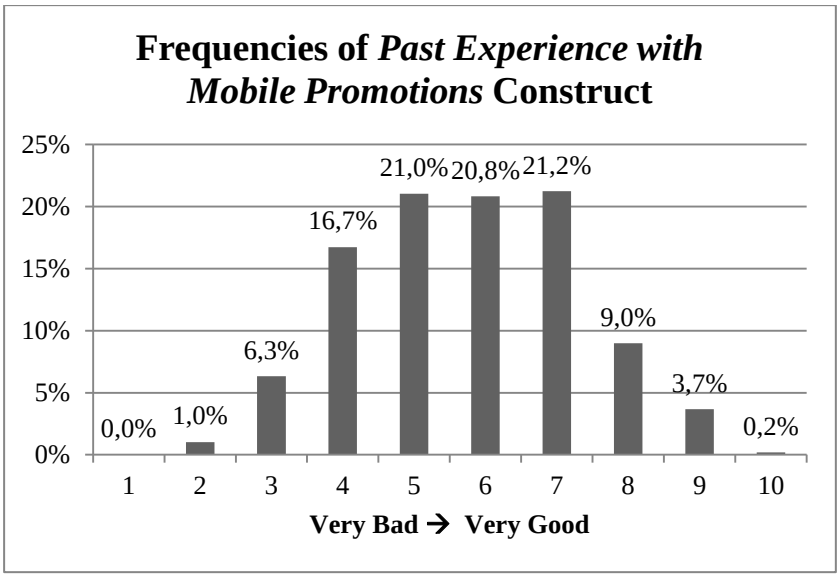



**Figure 24 – Frequencies of Past Experience with Mobile Promotions Construct**

**Gender Comparison**

In order to understand if there were any differences between Women and Men it was done an Independent Samples T-Test (See Appendix 5) between Gender and Past Experience with Mobile Promotions.

The result of the test was a sig of 0.232, which is higher than 0.05 and therefore the H0 was accepted. This proves that there is no statistical difference between Women and Men.

**Working Status Comparison**

In order to find out if there were any differences between people that are currently working and people that are not it an Independent Samples T-Test (See **Error! Reference source not found.**Appendix 6) was done between Working Status and Past Experience with mobile Promotions.

H0 was rejected because the sig (sig=0.007) was lower than 0.05. This proves that there is statistical difference between people that are currently working and people that are not.

## 4.5. Attitude towards Mobile Promotions

To measure the attitude's variable and perform the tests to evaluate whether some variables influence attitude and if attitude influences brand engagement and behavioral intention, a construct of the means of the sentences of question 12 were built. Among these sentences, 12a

and 12e had a negative meaning; therefore for the purpose of data analysis their scales were inverted.

The frequencies of this question are presented in Figure 25. From this graph it is important to highlight that 72.4% of the respondents agree or strongly agree with the sentence "*I would be better if I did not receive this type [promotional] of messages"*. Moreover, 64.6% of the respondents do not think that the promotional messages are personalized to them.

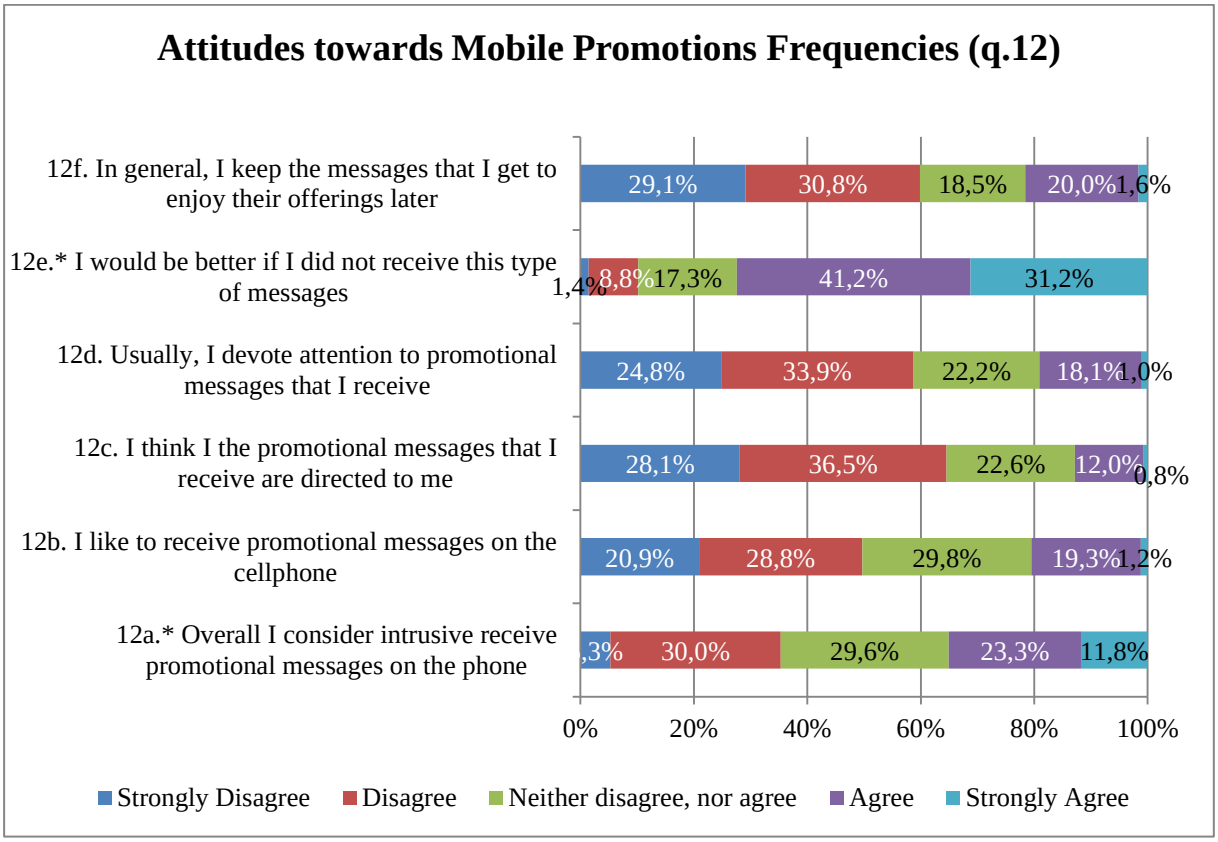



**Figure 25 - Attitudes towards Mobile Promotions Frequencies (q.12)**

*Note: The scale of the sentences that have a negative meaning were inverted for data analysis purposes

To build the construct as previously explained a Reliability test (See Table 3) was done. The result 0.831 confirms that this construct has a good internal consistency according to Pestana and Gajeiro (2008).

**Table 3 - Reliability Test of Attitudes towards Mobile Promotions Construct**

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| ,831 | 6 |

Based on this result it was possible to compute the new variable/construct that is expressed in the graph of Figure 26.

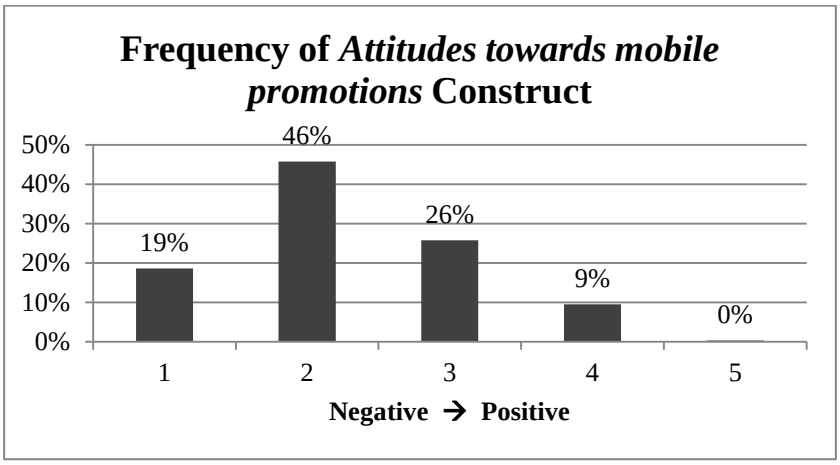



**Figure 26 – Frequency of Attitudes towards mobile promotions Construct**

**Gender Comparison**

In order to understand if there were any differences between Women and Men an Independent Samples T-Test (See**Error! Reference source not found.**) was done between Gender and Attitudes towards Mobile Promotions.

As the sig. of this test was 0.158, which is higher than 0.05, H0 was accepted. This proves that there is no statistical difference between Women and Men.

**Working Status Comparison**

In order to find out if there were any differences between people that are currently working and people that are not an Independent Samples T-Test (See **Error! Reference source not found.**) was done between Working Status and Attitude towards M-Promotions.

H0 was accepted since the sig (sig=0.525) was higher than 0.05. This proves that there is no statistical difference between people that are currently working and people that are not.

### 4.6. *Influences of Past Mobile Phone Usage, Characteristics of M-Promotions* and *Past Experience with M-Promotions* in *Attitudes towards M-Promotions*

The hypotheses H1, H2 and H3 test if *Past Mobile Phone Usage, Characteristics of M-Promotions* and *Past Experience with M-Promotions* influence positively the *Attitudes*

*towards M-Promotions*. Regarding this point there are results of the tests made to validate them. If one variable is affecting the other they must be correlated, which is verified by the correlations test. It is possible to observe graphically this relationship (See the Scatterplots graphs in Appendix 4).

## Hypothesis 1

The hypothesis 1 tests the influence of Past Mobile Phone Usage, defined in its 3 key dimensions –x, y and z, in the Attitudes regarding M-Promotions. The Table 4 shows that the Pearson correlation's results are all "*weak*" according to Pestana and Gajeiro (2008) that says that if Pearson is lower than 0.4 there is a weak or inexistent correlation between the variables. In this case Access internet via mobile phone had 0.022, receiving SMS had 0.079 and Receiving MMS was 0.078.

In conclusion, there was no correlation statistically significant and H1 was rejected

**Table 4 - Correlations table of H1**

| Correlations | | Attitude |
|---|---|---|
| 4a.frequência actual - aceder net mobile | Pearson Correlation | ,022 |
| | Sig. (1-tailed) | ,354 |
| | N | 295 |
| 4b.frequência actual - receber sms | Pearson Correlation | ,079 |
| | Sig. (1-tailed) | ,089 |
| | N | 295 |
| 4c.frequência actual - receber mms | Pearson Correlation | ,078 |
| | Sig. (1-tailed) | ,091 |
| | N | 295 |

## Hypothesis 2

The second hypothesis is also divided in three fragments: Usefulness, Ease-of-Use and Fun as Characteristics of Mobile Promotions. Unlike the previous hypotheses, the Table 5 shows that there is a moderate and positive correlation and statistically significant between the Usefulness and Attitudes towards Mobile Promotions and between Ease-of-Use and Attitudes towards Mobile Promotions. Fun can still be consider as a moderate positive correlation because if rounded the result is 0.4, which is the inferior limit for the moderate correlations.

In conclusion, H2 was validated.

**Table 5 - Correlations table of H2**

| Correlations | | Attitude |
|---|---|---|
| 14d.Usefulness | Pearson Correlation | ,648** |
| | Sig. (1-tailed) | ,000 |
| | N | 294 |
| 16d.Ease-of-Use | Pearson Correlation | ,445** |
| | Sig. (1-tailed) | ,000 |
| | N | 280 |
| 17d.Fun | Pearson Correlation | ,390** |
| | Sig. (1-tailed) | ,000 |
| | N | 289 |

## Hypothesis 3

The hypothesis 3 evaluates if the past experience with mobile promotions has influence on the attitudes towards them. The past experience with mobile promotion is a construct, as previously explained in this chapter, which varies between 1 and 10.

The Table 6 shows a positive but moderate correlation between the variables with a Pearson value of 0.434 (>0.4).

In conclusion, H3 was validated.

**Table 6 - Correlations table of H3**

| Correlations | | Attitude |
|---|---|---|
| Past experience with m-promotions | Pearson Correlation | ,434** |
| | Sig. (1-tailed) | ,000 |
| | N | 295 |

**. Correlation is significant at the 0.01 level (1-tailed).

## Regression

To confirm all the results a Multi-linear Regression Model was used.

Attitude was chosen as the dependent variable, while all the others (Frequency of Accessing the internet via mobile phone; Frequency of Receiving SMS; Frequency of receiving MMS; Usefulness of the mobile promotion; Ease-of-Use of the promotions; Fun of using the promotions and the Past experience) as independent.

In the Model Summary (see Table 7) it is possible to analyze the adjusted $R^2$, the higher this value is, the better the dependent variable can be explained by the independent variables. In this case, the 4th is the best model with an adjusted $R^2$ of 0.473. This model explains in a moderate way the attitude towards mobile promotions. It is used the adjusted $R^2$ to compensate the effect of variables number. The method used to enter the variables in this model was according to the Pearson correlations values obtained before. The higher were inserted first.

**Table 7 - Model Summary of the Multiple Regression (H1, H2 and H3)**

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,650[a] | ,423 | ,421 | ,63744 |
| 2 | ,679[b] | ,461 | ,457 | ,61681 |
| 3 | ,688[c] | ,473 | ,468 | ,61078 |
| 4 | ,693[d] | ,481 | ,473 | ,60769 |

a. Predictors: (Constant), 14d.Utilidade - telemóvel

b. Predictors: (Constant), 14d.Utilidade - telemóvel, past_exp

c. Predictors: (Constant), 14d.Utilidade - telemóvel, past_exp, 17d.Divertimento - telemóvel

d. Predictors: (Constant), 14d.Utilidade - telemóvel, past_exp, 17d.Divertimento - telemóvel, 16d.Facilidade de utilização- telemóvel

This model 4 considered as explanatory variables of the model, as it was expected from the previous correlation tests, the past experience and the characteristics of mobile promotions.
In Table 8 the ANOVA table is presented in which it is possible to verify that the sig=0.000 is lower than 00.5, which means that is statistically significant.

**Table 8 - ANOVA table of the Multiple Regression Model (H1, H2 and H3)**

**ANOVA[e]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 4 | Regression | 99,088 | 4 | 24,772 | 67,081 | ,000[d] |
| | Residual | 107,092 | 290 | ,369 | | |
| | Total | 206,179 | 294 | | | |

a. Predictors: (Constant), 14d.Utilidade – telemóvel

b. Predictors: (Constant), 14d.Utilidade - telemóvel, past_exp

c. Predictors: (Constant), 14d.Utilidade - telemóvel, past_exp, 17d.Divertimento - telemóvel

d. Predictors: (Constant), 14d.Utilidade - telemóvel, past_exp, 17d.Divertimento - telemóvel, 16d.Facilidade de utilização- telemóvel

e. Dependent Variable: attitude

The last table (See Table 9) is the Coefficients Table from which it is possible to define the equation of this Linear Regression.

*Attitude = 0.119 + 0.363 Usefulness + 0.106 Past Experience + 0.088 Fun + 0.071 EOU*

This equation expresses how the attitude is influenced by the Usefulness, Past Experience with M-Promotions, Fun and Ease-of-use. Usefulness of the mobile promotion is the factor that has a higher impact on the attitude towards mobile promotions. This means that companies should use promotional messages that are personalized and that meet the needs of their customers, since the likelihood of it being useful increases. To be able to do this, companies must have a good database and important and useful information about their clients

**Table 9 - Coefficients of the Multiple Regression Model (H1, H2 and H3)**

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 4 | (Constant) | ,119 | ,158 | | ,751 | ,453 |
| | 14d.Usefulness | ,363 | ,039 | ,488 | 9,326 | ,000 |
| | Past Experience (PE) | ,106 | ,025 | ,194 | 4,179 | ,000 |
| | 17d. Fun | ,088 | ,038 | ,108 | 2,331 | ,020 |
| | 16d.Ease-of-Use | ,071 | ,036 | ,098 | 1,994 | ,047 |

a. Dependent Variable: attitude

## 4.7. The influence of *Attitudes towards M-Promotions* in *Brand Engagement*

The brand engagement variable was created based on question number 19. The frequencies of this question are in Figure 27. From this graph it is important to underline that 53.3% of the respondents agree that brands that use this type of promotions are seen as "*updated*". Another important insight is the fact 83.3% strongly disagree or disagree with the association of deals and bad quality, this result is important because it suggests that these promotions do not affect the perception of quality of the brands.

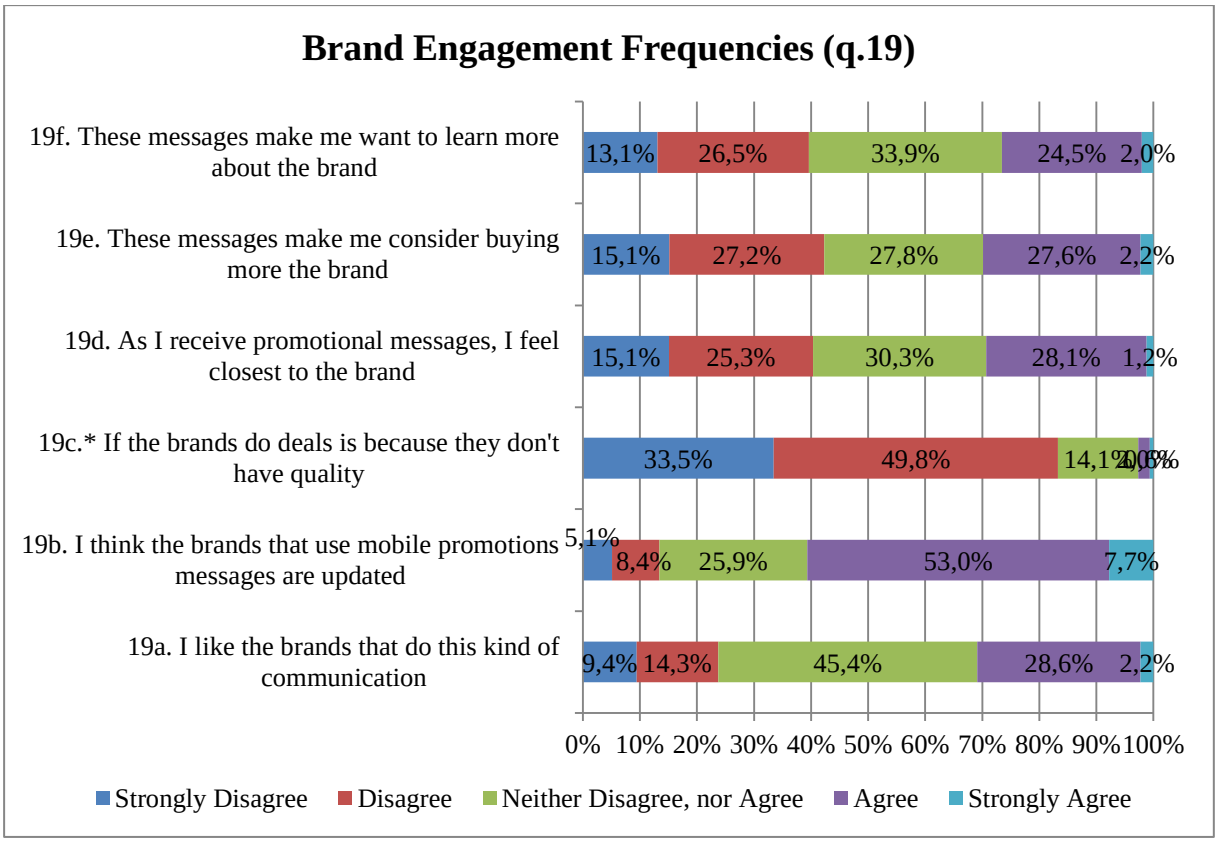



**Figure 27 - Brand Engagement Frequencies (q.19)**

*Note: The scale of the sentences that have a negative meaning were inverted for data analysis purposes

In order to use this group of items it was performed a reliability test (See Table 10). The result of the Cronbach's Alpha justified the creation of this construct since the internal consistency of this it was good ($\alpha > 0.8$).

**Table 10 - Reliability Test of Brand Engagement Construct (q.19)**

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| ,815 | 6 |

The new construct represents the means of the sentences presented before and the results are available in Figure 28. From the graph it is possible to conclude that the brand engagement is positive, since 42.8% of the respondents have a positive Brand Engagement.

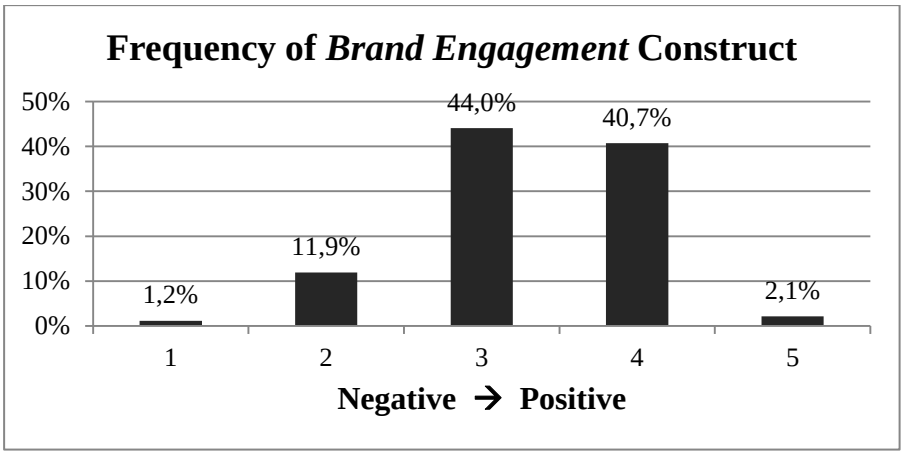



**Figure 28 – Frequency of Brand Engagement Construct**

The hypothesis 4 evaluates if the Attitude towards Mobile Promotions influences positively the Brand Engagement. According to the correlations test (See Table 11) there is a positive and moderate correlation between the variables since the Pearson value is 0.636, according to Pestana and Gajeiro (2008). It is also possible to observe graphically this relationship in Appendix 4.

**Table 11 - Correlations Table of H4**

**Correlations**

| | | Brand Engagement |
|---|---|---|
| Attitude | Pearson Correlation | ,636** |
| | Sig. (1-tailed) | ,000 |
| | N | 252 |

This means that if consumers have a positive attitude towards mobile promotions it increases the probability of engaging with the brands that use this type of promotions. Furthermore, as seen in the frequencies graph, people associate this type of promotional tools with companies that are up to date.

In conclusion, H4 was validated.

## Gender comparison

In order to find out if there were any differences between Women and Men it was done an Independent Samples T-Test (See Appendix 5) between Gender and Past Experience with Mobile Promotions.

This test revealed a sig. of 0.348, which was higher than 0.05 and therefore the H0 was accepted. This proves that there is no statistical difference between Women and Men.

**Working Status comparison**

In order to conclude whether there were any differences between people that are currently working and people that are not an Independent Samples T-Test (See Appendix 6) was done between Working Status and Brand Engagement.

The H0 was accepted because its sig (sig=0.175) was higher than 0.05. This proves that there is no statistical difference between people that are currently working and people that are not regarding the Brand Engagement

## 4.8. The influence of Attitudes towards M-Promotions in Behavioral Intention

The Behavioral Intention is also a construct from the sentences in question 13 (See Figure 29). From this graph it is possible to conclude that most of the respondents (63%) do not have a clear intention of using all the discounts that they will receive. Also worth noticing is the fact that the sentence that has a higher level of agreement is the one that refers to sharing the promotions with friends, this could indicate that the social component is important for this age group and brands can take advantage of this.

Is also important to highlight that 67% of the respondents do not have the intention to allow their phone to identify their location in order to receive promotional messages of the businesses nearby, this suggests that people are not interested in location based marketing services. Also worth mentioning is that 38.1% intend to share the promotion that they receive with their friends, emphasizing the importance of the social component. Furthermore, 50.9% think that will not save messages to use them later, this reinforces that mobile marketing must be done at the right time at the right place.

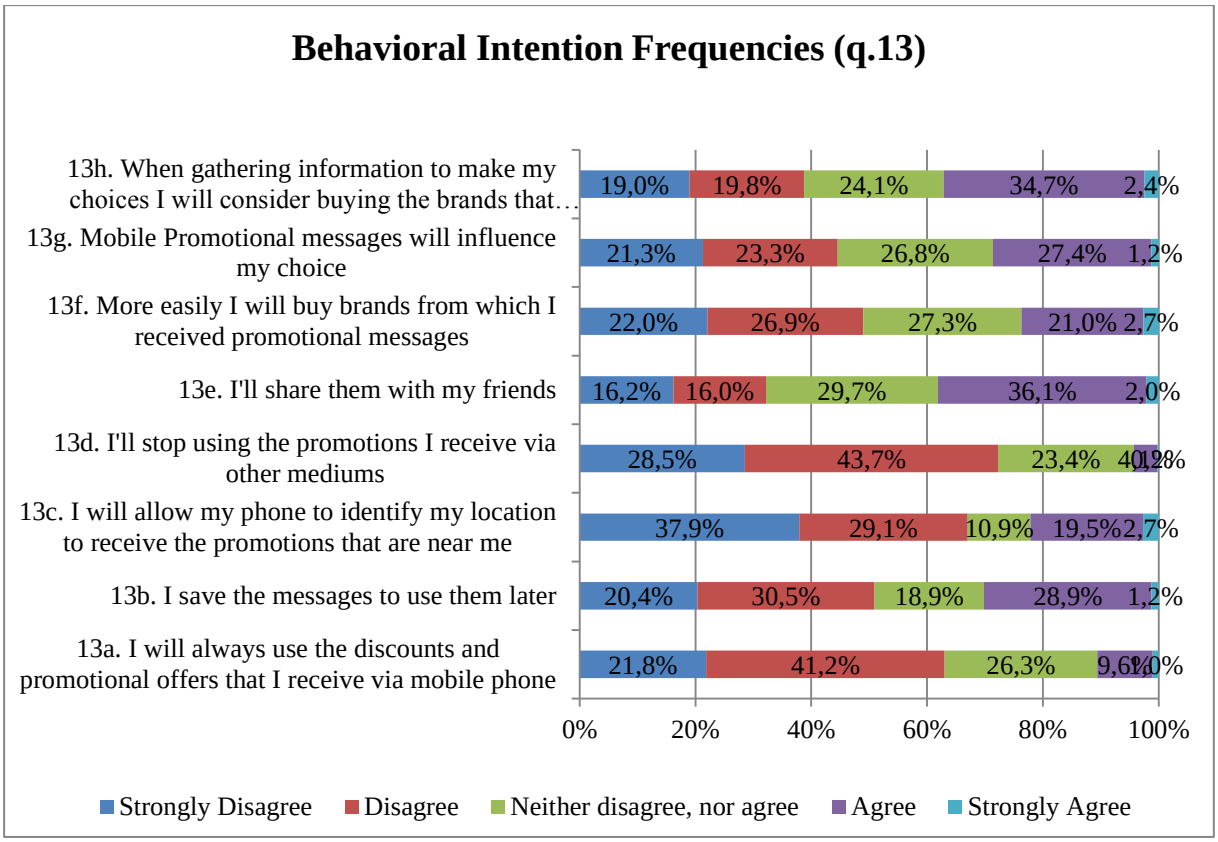



**Figure 29 - Behavioral Intention Frequencies (q.13)**

The reliability test used to verify the internal consistency of the Behavioral Intention construct revealed a Good result of 0.884. ($\alpha > 0.8$). (See Table 12).

**Table 12 - Reliability test of Behavioral Intention Construct (q.13)**

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| ,884 | 8 |

The frequencies of the Behavioral Intention Construct are in Figure 30. The results are more inclined to negative, which means that people do not intend to take action when it comes to these promotions.

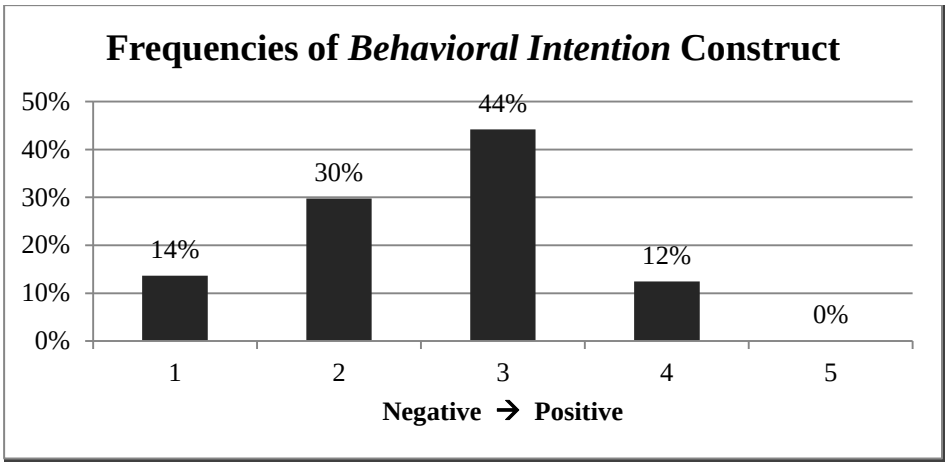



**Figure 30 – Frequencies of Behavioral Intention Construct**

The hypothesis 5 tests if the *Attitude towards Mobile Promotions* influences the *Behavioral Intention* of using it. To prove that correlation a test was made (See Table 13) and as p=0.650 the variables are moderately correlated (Pestana & Gageiro, 2008).

**Table 13 - Correlations test of H5**

**Correlations**

| | | Behavioral Intention |
|---|---|---|
| Attitude | Pearson Correlation | ,650** |
| | Sig. (1-tailed) | ,000 |
| | N | 295 |

The Behavioral intention is influenced by the attitudes that people have towards mobile promotions. This means that the more positive the attitudes are towards mobile promotions, the higher is the probability to take action and use the promotions and share them with friends. The redemption rates are partially dependable of the attitude towards this type of promotions.

In conclusion, H5 was validated.

## Gender comparison

In order to understand if there were any differences between Women and Men an Independent Samples T-Test (See Appendix 5) was done between Gender and Past Experience with Mobile Promotions.

The result of the t-test was a sig. of 0.534, which is higher than 0.05 and therefore the H0 was accepted. This proves that there is no statistical difference between Women and Men.

**Working Status comparison**

In order to find out if there were any differences between people that are currently working and people that are not an Independent Samples T-Test (See Appendix 6) was done between Working Status and Behavioral Intention.

In the t-test table was possible to see that the sig (sig=0.356) was higher than 0.05 and therefore the H0 was accepted. This proves that there is no statistical difference between people that are currently working and people that are not regarding the Behavioral Intention.

## 4.9. The influence of Mobile Users' Profile

**Profiles' Definition**

The Mobile Users' Profile sentences are based on the description of Table 1 - Mobile Users' Profile in page 8. The question 5 helps to build the Mobile User's Profile, its frequencies are in Figure 31.

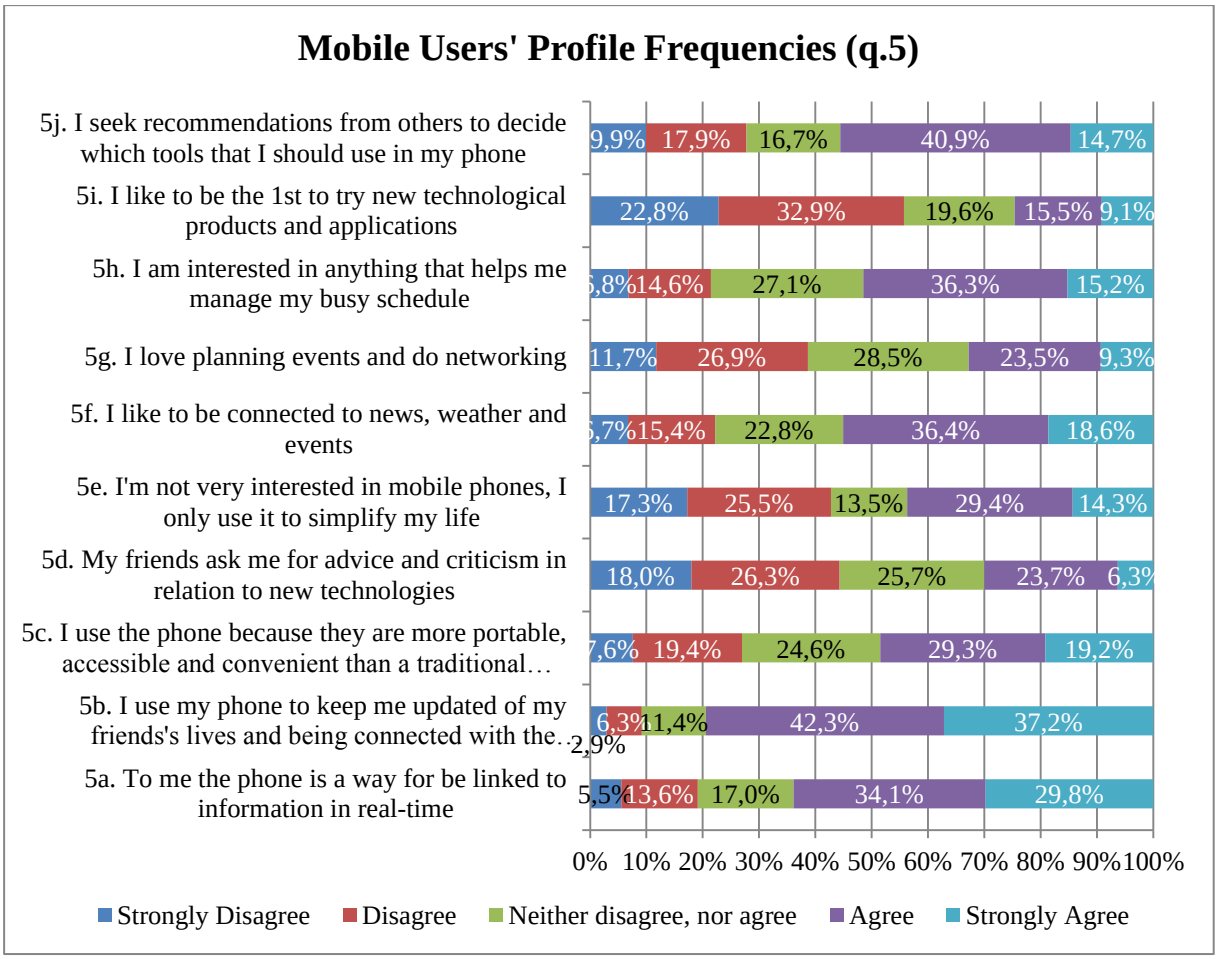



**Figure 31 - Mobile Users' Profile Frequencies (q.5)**

To simplify the interpretation it was done a factor analysis. From 10 items 3 main dimensions were obtained: 1. Busy and Productive, 2. Latest and Greatest and 3. Social and Up to date (See Table 15). In order to validate this test a KMO test (See Table 14).was done which the result 0.849 says that the sampling has a good adequacy (Pestana & Gageiro, 2008, p. 493)

**Table 14 - KMO test - Factor Analysis - Mobile Users' Profile**

**KMO and Bartlett's Test**

| | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | ,849 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1277,523 |
| | df | 45 |
| | Sig. | ,000 |

**Table 15 - Factor Analysis - Mobile Users' Profile**

**Rotated Component Matrix**

| Dimensions | Component | | |
|---|---|---|---|
| | 1 | 2 | 3 |

| | | | | |
|---|---|---|---|---|
| Busy and productive | 5h. I am interested in anything that helps me manage my busy schedule | ,808 | | |
| | 5g.. I love planning events and do networking | ,797 | | |
| | 5f. I like to be connected to news, weather and events | ,653 | | |
| | 5j. I seek recommendations from others to decide which tools that I should use in my phone | ,492 | | |
| Latest and greatest | 5d. My friends ask me for advice and criticism in relation to new technologies | | ,749 | |
| | 5i. I like to be the 1st to try new technological products and applications | | ,744 | |
| | 5e. I'm not very interested in mobile phones, I only use it to simplify my life | | -,738 | |
| Social and up to date | 5b. I use my phone to keep me updated of my friends' lives and being connected with the people that I love | | | ,808 |
| | 5a. To me the phone is a way for be linked to information in real-time | | | ,663 |
| | 5c. .I use the phone because they are more portable, accessible and convenient than a traditional computer | | | ,542 |

Then the individuals were clustered in 4 groups based on the three dimensions of the factor analysis. These results were saved in the nominal *ward method* variable. The dimension of these clusters is in Figure 32 and their profile in Figure 33.

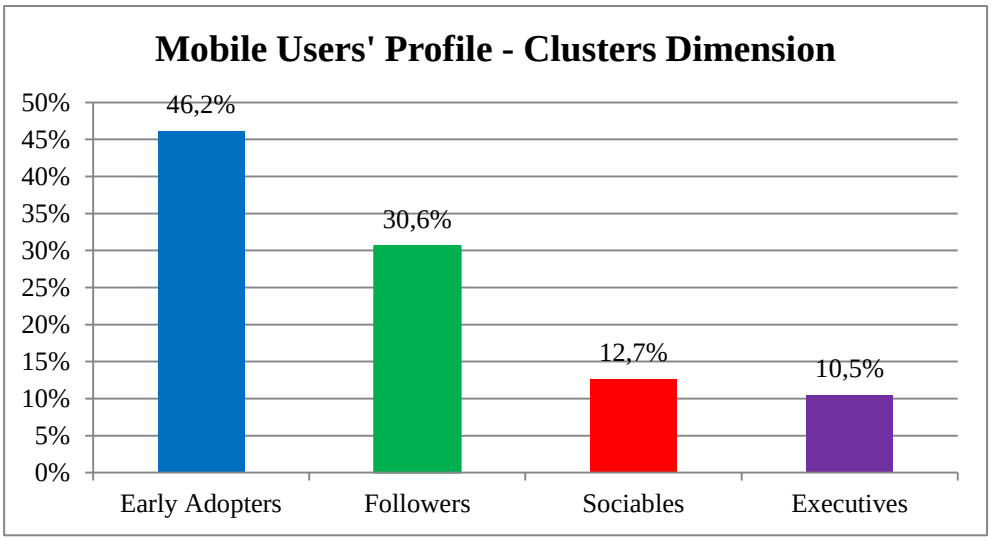



**Figure 32 - Mobile Users' Profile - Clusters Dimension**

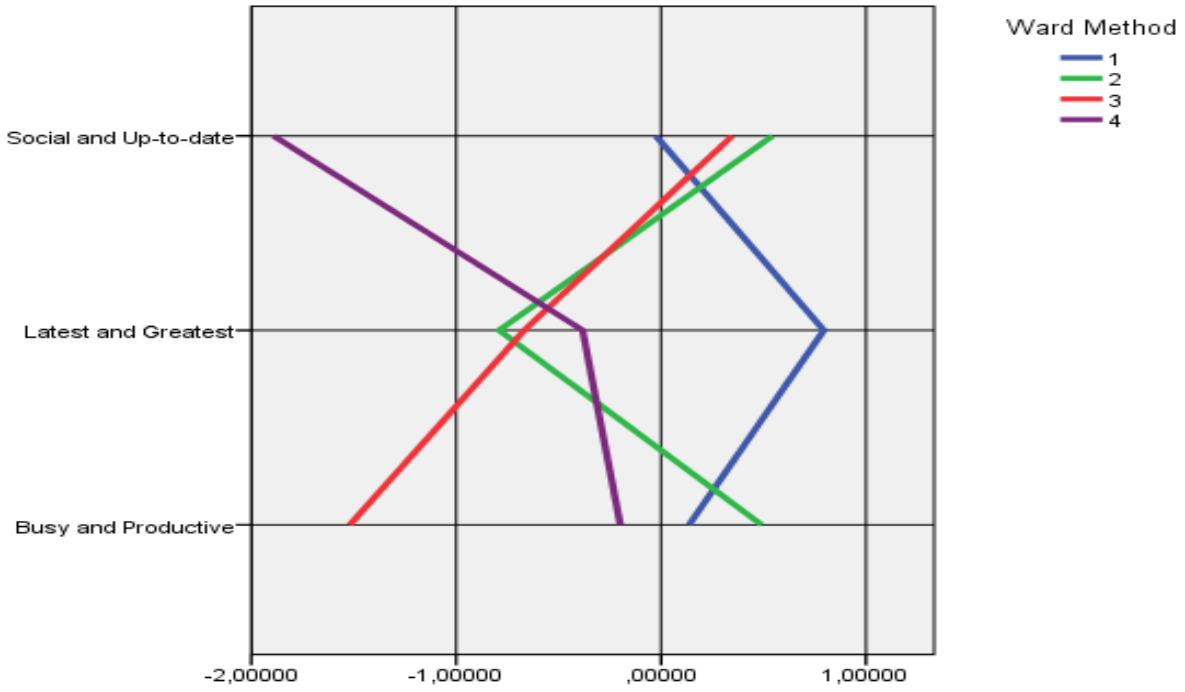



**Figure 33 - Mobile Users' Profile – Clusters Profile**

**Table 16 - Summary Table of Cluster analysis**

| Cluster | Dimension | Social & Up to date | Latest & Greatest | Busy & productive |
|---|---|---|---|---|
| **1 = Early adopter** | 46.2% | **+/–** | **+** | **+/–** |
| **2 = Follower** | 30.6% | **+** | **–** | **+** |
| **3 = Sociable** | 12.7% | **+** | **+/–** | **–** |
| **4 = Executive** | 10.5% | **–** | **+/–** | **+/–** |

The Table 16 summarizes the cluster analysis. . These dimensions might be explained by the fact that this target, 18 to 29 years old, usually has a lot of early adopters and not so many business men ( the category associated with this type of people is the executives).

The *early adopters* are the majority of the sample (46.2%) and are more "*latest and greatest"* and they also value to be *"social and up to date*" and *"busy and productive*". This cluster is represented by the color blue.

The second bigger cluster is almost the opposite of the first one. They value being *"Social & Up to date"* and "*Busy & Productive*". This cluster is the one that values being "latest and greatest" the least, therefore the name: *followers.* And they represent 30.6% of the sample. Green is the color that represents this cluster.

For the sociable group, the "*Social & Up to date*" is the most important value. They like to know what their friends are doing. Their color is red. The sociable cluster has 12.7% of the respondents.

The last cluster is the *executive*, people that value above all "*Busy & Productive*" they search for tools that help them to manage their life. Their color is purple and they represent 10.5% of the sample.

Each of these clusters can be associated with one of the Mobile Users' Profile presented by Krum (2010, p. 43) and discussed in the Literature Review (See Table 17).

**Table 17 - Clusters and Mobile Users' Profile**

| Cluster Analysis of this study | Krum (2010) |
|---|---|
| **Early Adopters** | Latest & Greatest |
| **Follower** | Up to Date |
| **Sociable** | Social & Curious |
| **Executive** | Busy & Productive |

**Test the hypothesis**

To know if the four clusters are statistically different from each other in terms of Attitude, Brand Engagement and Behavioral Intention a Scatterplot graph was done in order to visualize all the data regarding the different clusters. The three axes are Attitude, Brand Engagement and Behavioral Intention, and the colors of the dots are representing the 4 clusters. However, because the sample is very big the graphical analysis is not clear.

Consequently, the test that was performed was the one-way ANOVA test. This test has as assumptions:

- The normality of the sample, which is proved by the Central Limit Theorem since this sample is higher than 30;
- The homogeneity of variances is validated in the Levene's test (See Table 18) since all the variables have a sig higher than 0.05.
- All the dependent variables (Attitude, Behavioral Intention and Brand Engagement) must be ratio or scale;

- And the independent variable (ward method/profile) must be independent from the groups.

**Table 18 - Levene's Test - Mobile Users' Profile**

**Test of Homogeneity of Variances**

| | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| Attitude | ,662 | 3 | 291 | ,576 |
| BehavioralIntention | ,858 | 3 | 489 | ,463 |
| BrandEngagement | 3,301 | 3 | 417 | ,070 |

All the assumptions were met so it is possible to test the hypothesis and analyze the ANOVA table in Table 19. As the null hypothesis in the ANOVA test is "H0: Mean of one group is equal to the means of all of the other groups" and all the sig were lower than 0.05, these means that H0 was rejected. Therefore they were statistically different in every dimension tested.

In conclusion, H6 was validated.

**Table 19 - ANOVA table - Mobile Users' Profile**

**ANOVA**

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| attitude | Between Groups | 8,311 | 3 | 2,770 | 4,074 | ,007 |
| | Within Groups | 197,868 | 291 | ,680 | | |
| | Total | 206,179 | 294 | | | |
| Behavioral Intention | Between Groups | 18,854 | 3 | 6,285 | 9,763 | ,000 |
| | Within Groups | 314,782 | 489 | ,644 | | |
| | Total | 333,636 | 492 | | | |
| Brand Engagement | Between Groups | 11,318 | 3 | 3,773 | 8,105 | ,000 |
| | Within Groups | 194,112 | 417 | ,465 | | |
| | Total | 205,430 | 420 | | | |

## Gender and Working Status comparison

In order to know if the gender or working status were associated with the clusters two Cramer's V tests were made. The outcome for the association of gender and the clusters (See Table 20) was 0.245, which means that there is not a strong association between the variables. The Cramer's V for the relationship between Working Status and the clusters (See Table 21)

was 0.035, which is also a low result and means that there is no association between working status and the clusters (The closer to one, the greater the association between variables).

**Table 20 - Cramer's V - Gender and Clusters**

**Symmetric Measures – Gender and Clusters**

| | | Value | Approx. Sig. |
|---|---|---|---|
| Nominal by Nominal | Phi | ,245 | ,000 |
| | Cramer's V | ,245 | ,000 |
| | Contingency Coefficient | ,238 | ,000 |
| N of Valid Cases | | 493 | |

**Table 21 - Cramer's V - Working Status and Clusters**

**Symmetric Measures – Working Status and Clusters**

| | | Value | Approx. Sig. |
|---|---|---|---|
| Nominal by Nominal | Phi | ,035 | ,896 |
| | Cramer's V | ,035 | ,896 |
| | Contingency Coefficient | ,035 | ,896 |
| N of Valid Cases | | 493 | |

## 4.10. Hypotheses Validation Summary

To conclude this chapter of Results and Analysis there is a table that summarizes which hypotheses were validated and which ones were not (See Table 22).

The Usefulness of a promotional message is the variable that has a higher impact in the Attitude towards mobile promotions. This attitude influences the brand engagement and the behavioral intention.

There are differences in attitudes, brand engagement and behavioral intention between the different mobile users' profile.

**Table 22 - Summary Table of Results and Analysis' Chapter**

| Hypothesis | | |
|---|---|---|
| H1a: Frequency of mobile access to internet influences positively the Attitude towards mobile promotions | Rejected | ☒ |
| H1b: Frequency of use of text messaging influences positively the Attitude towards mobile promotions | Rejected | ☒ |
| H1c: Frequency of use of multimedia messaging influences positively the Attitude towards mobile promotions | Rejected | ☒ |
| H2a: Usefulness of the mobile promotions influences positively the Attitude towards mobile promotions | **Accepted** | ☑ |
| H2b: Ease-of-use of the mobile promotions influences positively the Attitude towards mobile promotions | **Accepted** | ☑ |
| H2c: Fun of using the mobile promotions influences positively the Attitude towards mobile promotions | **Accepted** | ☑ |
| H3: Past Experience with mobile promotions influences positively the Attitude towards mobile promotions | **Accepted** | ☑ |
| H4: Attitude towards mobile promotions influences positively the Engagement with the brand | **Accepted** | ☑ |
| H5: Attitude towards mobile promotions influences positively the Behavioral Intention | **Accepted** | ☑ |
| H6: Different Mobile User Profile have significant differences in the attitudes towards mobile promotions, behavioral intentions and engagement with the brands | **Accepted** | ☑ |

# 5. Discussion and Conclusions

This chapter presents a summary and discussion of the main conclusions that were reached through the research, evaluation of that research in terms of limitations and, especially, the implications for Marketing and Management that it brings. Finally, the contributions and potential paths for future research are also discussed.

## 5.1. Conclusions

The research framework of this study intended to test if past mobile phone usage, characteristics of the mobile promotions messages and the past experience with mobile promotions would influence the attitude towards mobile promotions. Furthermore, it was also tested if this attitude influences brand engagement and behavioral intention. Finally it was verified if different mobile users' profiles had different responses regarding attitudes, brand engagement and behavioral intention. The conclusions will follow this structure.

Firstly, this target has a strong past mobile phone usage. Comparing the frequency of usage of SMS, MMS and access to the Internet via Mobile Phone, 96.9% receive SMS at least once a day. People either do not access frequently (once per month or less) the internet via mobile devices or use it more than once per day, which happens with one third of the sample. Still regarding internet access, men tend to access it more than women and people that are currently working also use more this functionality of the phone. After the appropriate tests it was proved that the past mobile phone usage does not influence the attitude towards mobile promotions.

Secondly, the characteristics of mobile promotions influence the attitude towards it in a moderate and positive way. Usefulness is the factor that influences the attitude towards m-promotions the most. Women consider mobile promotions more useful and fun than men. The majority (64%) of the respondents consider these promotions easy to use and only 14.1% consider that they provide fun.

The study also proved that the past experience with mobile promotions has a moderate and positive influence in the attitudes towards mobile promotions. It is important to highlight that only 31.8% of the respondents considered their quality with past experience good or very good. This result might be associated with the lack of fun of the promotions.

From the attitudes towards mobile promotions it is important to point out that 72.4% of the respondents prefer not to receive the current promotional messages, and that 64.6% do not think that mobile promotions messages are personalized and answered their needs.

There is a strong association between the attitudes towards mobile promotions and brand engagement. Regarding this, 60.7% of the respondents consider that brands that use mobile promotion are up to date. Also 83.3% do not associate a mobile promotion with lack of quality.

Attitudes towards mobile promotions also have a strong influence in the behavioral intention of using it. In terms of behavioral intention some points must be highlighted: 63% of the respondents do not have a clear intention of using all the discounts received through mobile promotions; 67% do not intend to allow their phone to identify their location for receiving promotional messages from businesses nearby, this means that they are not interested in using location based marketing services; 38.1% intend to share the promotions with their friends, stressing the importance of socializing  that companies could invest in snowball promotions; 50.9% do not intent to save promotional messages to use them later, this reinforces that mobile marketing must be used at the right moment at the right place to be more effective.

Finally, there were found 4 clusters of mobile users' profile in this sample that partially matches the ones described in the literature review. They were identified as early adopters (46.2%), followers (30.6%), sociable (12.7%) and executives (10.5%). These dimensions are explained by the fact that this target, 18 to 29 years old, usually has a lot of early adopters and not so many business men (the category associated with this type of people is the executives).

## 5.2. Limitations

This research had some a priori limitations that were assumed when the methodologies and search options were defined. These limitations are a compromise between the level of feasibility and extent of treatment, without injuring the robustness of the research.

However, the methodology and sample size ensured enough empirical evidence to answer the hypothesis. Together with the soundness and appropriateness of statistical techniques used, it has a high level of confidence in the conclusions drawn about the working hypotheses and indirectly in the validation (or rejection) of the research hypotheses.

The main limitations of this research are:

- The absence of qualitative preliminary studies;
- The sample composition and recruitment, since it was not a probabilistic sample. Not only does the demographic data not match the population but also the tools used to collect and incentive the participation in the study might also skew the sample
- The attitude towards mobile promotions, brand engagement and behavioral intention might vary according to the products/brand in study. This study was very broad and does not reflect the reality of a specific type of products.

## 5.3. Implications for Marketing and Management

The main implications are:

- Companies must make a better use their CRM (Customer Relationship Management) – in order to build mobile promotions that are more useful and personalized for their clients. It is also important that they study their consumer behavior since time and location are very important, people tend to use more these promotions more if they are near the businesses and they do not usually save the messages to use them later, this emphasizes the need to promote at the right time.
- Companies should take advantage of the fact that mobile phones are with people all the time and use integrated marketing campaigns to improve the results
- Companies can also take advantage of the association that people have between the brands that use this type of promotions and the fact that people consider these brands up to date.
- Use integrated with other mediums, to strengthen contextually and / or point of sale messages of a larger campaign - working the call to action
- Decrease perceived intrusion - via more useful and fun, as well as other tools like opt-in (voluntary subscription) to get info on the brand
- Companies should have more promotions with a social component since consumers showed in this study that they were willing to share the promotions with their friends. This finding suggests that the use of “snowball” promotions might have a good impact.

## 5.4. Clues for Future Research

The research carried out primarily points out what influences the attitudes towards mobile promotions and how this attitude influences the brand engagement and behavioral intention.

The researchers potentially interested in developing and deepening research findings as a result of exposure may choose to:

- Apply the same study in a probabilistic sample
- Apply it in another country
- Extend it to other age groups
- Apply it to a specific product or brand commonly communicated via mobile promotions
- Make a study to better understand how usefulness and past experience with mobile promotions affect the attitude towards it and how this attitude influence brand engagement and behavioral intentions
- Apply to a specific type of mobile promotions
- Broaden the study to other communication tools of mobile marketing
- Use other methods, mostly qualitative like ethnographic research

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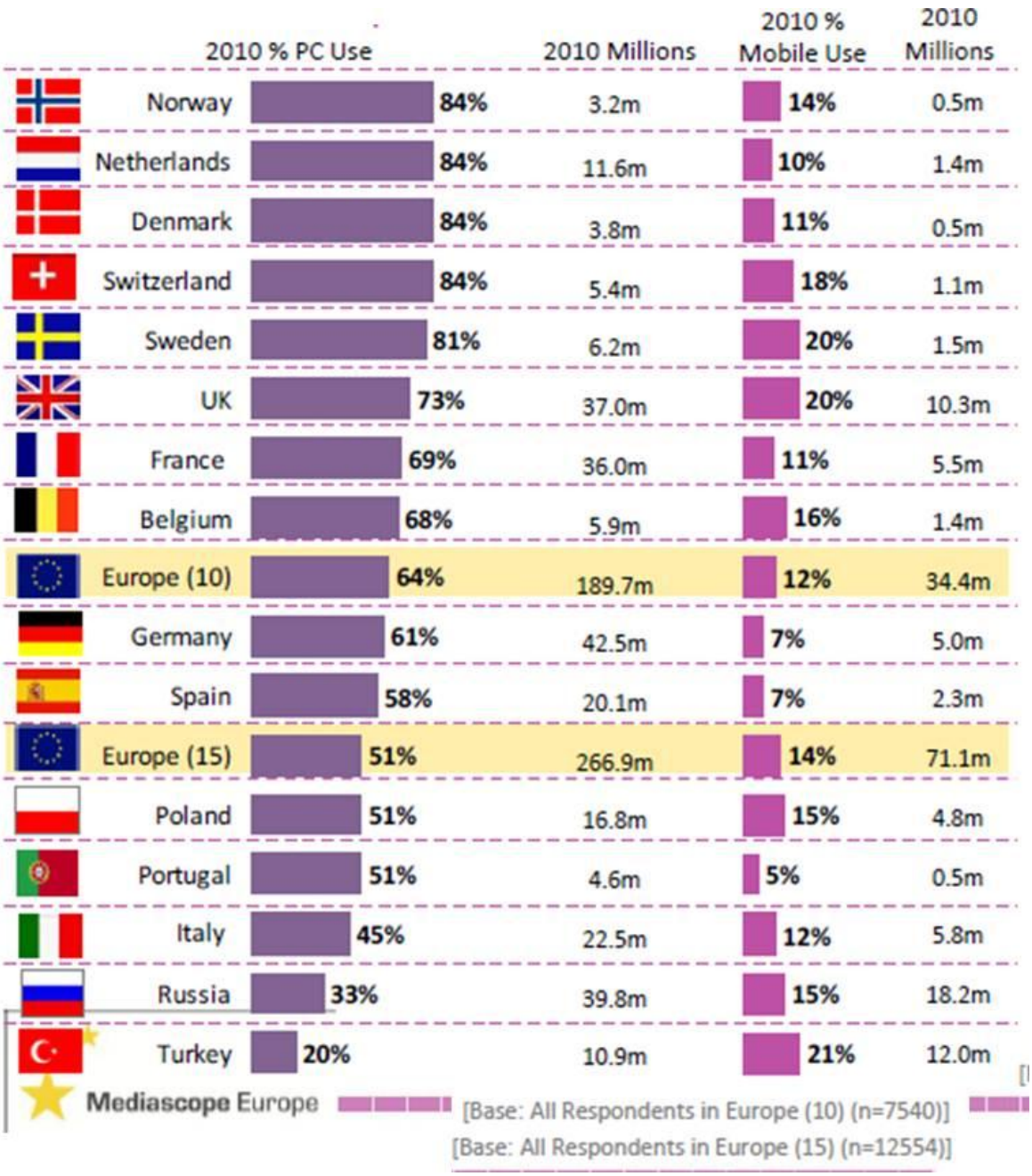
# 7. Appendixes

## List of Appendixes

## Appendix 1 - Weekly internet use – PC vs Mobile




Source: Mediascope Europe 2010 Report, p.10

(Fennah, 2010)

# Appendix 2 - Survey of the study (Portuguese version)

**QUESTIONÁRIO PARA TESE DE MESTRADO SOBRE MOBILE PROMOTIONS**

Olá! Bem vindo/Bem vinda!

Estou a realizar uma investigação sobre mensagens promocionais no telemóvel e a atitude face a estas por parte dos jovens portugueses entre os 18 e 29 anos para uma tese de mestrado no ISCTE-IUL.

Quero pedir a tua ajuda para mais rapidamente acabar a tese :) .

Basta responderes a algumas perguntas que não devem demorar mais de 10 minutos, e não te preocupes, as tuas respostas vão ser sempre anónimas e apenas utilizadas neste estudo.

Desde já agradeço a tua disponibilidade e colaboração.

Clica no botão em baixo para começarmos!

*1. Qual é o teu escalão etário?

☐ a. Até 17 anos

☐ b. Dos 18 aos 29 anos

☐ c. Mais de 29 anos

*2. Indica por favor que tipo de equipamento tens (assinala todas as respostas válidas):

☐ a. Telemóvel

☐ b. Smartphone (telemóvel com acesso à internet através de wifi ou rede 3G)

☐ c. Não tenho telemóvel nem smartphone

*3. O(s) meu(s) telemóvel(eis) permite receber… (assinalar todas as respostas válidas):

☐ a. Mensagens escritas (SMS)

☐ b. Mensagens multimédia (MMS)

☐ c. Aceder à internet via wifi

☐ d. Aceder à Internet via 3G

*4. Com que frequência realizas cada uma destas actividades com o seu telemóvel?

| | 1 vez por mês ou menos | 2 a 4 vezes por mês | 2 a 3 vezes por semana | Diariamente | Várias vezes por dia |
|---|---|---|---|---|---|
| a. Aceder à internet através do meu telemóvel | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. Receber messagens escritas (SMS) | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. Receber mensagens multimedia (MMS) | ☐ | ☐ | ☐ | ☐ | ☐ |

*5. Classifica por favor cada uma destas frases de acordo com o teu comportamento

| | Discordo totalmente | Discordo | Não concordo nem discordo | Concordo | Concordo totalmente | Não sei/ Não respondo |
|---|---|---|---|---|---|---|
| a. O telemóvel para mim é um meio de estar ligada à informação em tempo real | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. Uso o telemóvel para me manter a par da vida dos meus amigos e estar conectado às pessoas de quem gosto | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. Uso o telemóvel porque são mais portáteis, acessíveis e convenientes do que um computador tradicional | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| d. Os meus amigos pedemme conselhos e criticas em relação às novas tecnologias | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| e. Não me interesso muito por telemóveis, | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | | | | | | |
|---|---|---|---|---|---|---|
| só o uso para me simplificar a vida | | | | | | |
| f. Gosto de estar sempre conectado às noticias, ao tempo e aos eventos | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| g. Adoro planear eventos e fazer networking | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| h. Sou interessado em tudo o que me ajuda a gerir a minha agenda ocupada | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| i. Gosto de ser o 1º a experimentar novos produtos tecnológicos e aplicações | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| j. Procuro recomendações de outras pessoas para decidir quais as ferramentas que utilizo no meu telemóvel | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

Nas próximas perguntas vamos falar de mensagens promocionais que recebes no seu telemóvel, quer sejam de texto ou multimedia. Estas mensagens são enviadas pelas marcas para os seus consumidores com descontos e ofertas, e podem ser enviadas através de Bluetooth ou da rede de Operador.

*6. Já recebeste mensagens promocionais no teu telemóvel nos últimos 6 meses?

☐ a. Sim

☐ b. Não

*7. Que tipo de mensagens promocionais recebeste nos últimos 6 meses? (assinala todas as respostas válidas)

☐ a. Mensagens escritas (SMS) (mensagens de texto com uma promoção e/ou

um código promocional)

☐ b. Mensagens multimédia (MMS) (mensagens com uma imagem/som/vídeo com uma promoção ou até um cupão promocional, que pode ser guardado no telemóvel e que quando usado dará um desconto no produto/serviço)

☐ c. Outro (especifique)

*8. Quantas mensagens promocionais, independentemente do tipo e da forma como foram recebidas (pelo operador ou via Bluetooth), recebeste nos últimos 6 meses?

_____

*9. Destas ofertas promocionais, aproximadamente qual a percentagem das que utilizaste?

_____%

*10. Classifica o grau de interesse dessas mensagens:

☐ Nada interessante (1)

☐ Pouco interessante (2)

☐ Indiferente (3)

☐ Interessante (4)

☐ Muito interessante (5)

*11. Pensa agora nas promoções que costumas receber em forma de SMS e MMS no teu telemóvel e indica o teu nível de concordância com cada uma das seguintes frases:

| | Discordo totalmente | Discordo | Não concordo nem discordo | Concordo | Concordo totalmente | Não sei/ Não respondo |
|---|---|---|---|---|---|---|
| a. De forma geral, acho útil receber mensagens promocionais | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. Acho divertidas as mensagens promocionais que | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | | | | | | |
|---|---|---|---|---|---|---|
| recebo | | | | | | |
| c. Considero que é fácil utilizar as promoções que recebo pelo telemóvel | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| d. Percebo facilmente como posso usar as promoções | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| e. As promoções que recebo ajudam-me no meu dia-a-dia | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| f. Gosto de receber promoções porque me mantem actualizado | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| g. Receber promoções ajuda-me a aproveitar as oportunidades | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| h. Sinto-me feliz por usar as promoções | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

* 12. Por favor indique o seu grau de concordância com as seguintes afirmações relativas às mensagens promocionais que recebe no seu telemóvel

| | Discordo totalmente | Discordo | Não concordo nem discordo | Concordo | Concordo totalmente | Não sei/ Não respondo |
|---|---|---|---|---|---|---|
| a. De forma geral considero intrusivo receber mensagens promocionais | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. Gosto de receber mensagens promocionais no telemóvel | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. Acho que as mensagens promocionais que recebo são direccionadas para mim | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | | | | | | |
|---|---|---|---|---|---|---|
| d. Normalmente dedico atenção às mensagens promocionais que recebo | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| e. Passava bem sem receber mensagens deste tipo | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| f. De forma geral, guardo as mensagens que recebo para aproveitar as suas ofertas mais tarde | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

Imagina que, a partir de agora, irias passar a receber também no telemóvel as mensagens e promoções a que hoje acedes e recebes de outros meios, como sejam jornais, folhetos ou pelas comunicações endereçadas no seu nome que lhe chegam pelo correio.

*13. Indica a tua concordância com cada uma das seguintes frases:

| | Discordo totalmente | Discordo | Não concordo nem discordo | Concordo | Concordo totalmente | Não sei/ Não respondo |
|---|---|---|---|---|---|---|
| a. Irei utilizar sempre os descontos e ofertas promocionais que receber através do telemóvel | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. Vou guardar as mensagens para utilizar mais tarde | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. Vou autorizar que o meu telemóvel identifique a minha localização para receber as promoções que se encontram nas minhas imediações | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | | | | | | |
|---|---|---|---|---|---|---|
| d. Vou deixar de utilizar as promoções que receber através de outros meios | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| e. Vou partilhá-las com os meus amigos | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| f. Mais facilmente vou comprar marcas que mandaram mensagens promocionais | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| g. As mensagens promocionais influenciarão a minha escolha | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| h. Quando for recolher informações para fazer as minhas escolhas de compras vou considerar as marcas que me mandaram mensagens promocionais | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

Considera as promoções que recebes através de outros meios: jornais, folhetos, e correspondência das marcas endereçadas no teu nome.

Por favor, classica cada um destes meios quanto à sua utilidade, intrusividade, facilidade de utilização, divertimento e facilidade de partilha:

*14. Utilidade:

| | Nada Útil | Pouco útil | Indiferente | Útil | Muito Útil | Não sei/ Não respondo |
|---|---|---|---|---|---|---|
| a. Promoções nos JORNAIS | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. Promoções nos FOLHETOS | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. Promoções por correspondência ENDEREÇADA NO TEU NOME | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| d. Mensagens promocionais pelo TELEMÓVEL | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

*15. Intrusividade:

| | Nada Intrusivo | Pouco Intrusivo | Indiferente | Intrusivo | Muito Intrusivo | Não sei/ Não respondo |
|---|---|---|---|---|---|---|
| a. Promoções nos JORNAIS | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. Promoções nos FOLHETOS | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. Promoções por correspondência ENDEREÇADA NO TEU NOME | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| d. Mensagens promocionais pelo TELEMÓVEL | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

*16. Facilidade de utilização:

| | Muito Díficil de Utilizar | Díficil de Utilizar | Indiferente | Fácil de Utilizar | Muito Fácil de Utilizar | Não sei/ Não respondo |
|---|---|---|---|---|---|---|
| a. Promoções nos JORNAIS | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. Promoções nos FOLHETOS | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. Promoções por correspondência ENDEREÇADA NO TEU NOME | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| d. Mensagens promocionais pelo TELEMÓVEL | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

*17. Divertimento:

| | Nada Divertido | Pouco Divertido | Indiferente | Divertido | Muito Divertido | Não sei/ Não respondo |
|---|---|---|---|---|---|---|
| a. Promoções nos JORNAIS | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. Promoções nos FOLHETOS | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. Promoções por correspondência | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | | | | | | |
|---|---|---|---|---|---|---|
| ENDEREÇADA NO TEU NOME | | | | | | |
| d. Mensagens promocionais pelo TELEMÓVEL | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

*18. Facilidade de partilha com os meus amigos:

| | Muito Díficil de Partilhar | Díficil de Partilhar | Indiferente | Fácil de Partilhar | Muito Fácil de Partilhar | Não sei/ Não respondo |
|---|---|---|---|---|---|---|
| a. Promoções nos JORNAIS | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. Promoções nos FOLHETOS | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. Promoções por correspondência ENDEREÇADA NO TEU NOME | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| d. Mensagens promocionais pelo TELEMÓVEL | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

*19. Tendo em conta a recepção de mensagens promocionais no teu telemóvel indica qual a tua percepção das marcas que utilizam este tipo de comunicação:

| | Discordo totalmente | Discordo | Não concordo nem discordo | Concordo | Concordo totalmente | Não sei/ Não respondo |
|---|---|---|---|---|---|---|
| a. Gosto das marcas que fazem este tipo de comunicação | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| b. Acho que as marcas que utilizam promoções através do telemóvel estão actualizadas | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| c. Se as marcas fazem promoções é porque não tem qualidade | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| d. Como recebo mensagens promocionais sinto-me mais próximo(a) da marca | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | | | | | | |
|---|---|---|---|---|---|---|
| e. Estas mensagens fazem- me considerar comprar a marca mais vezes | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| f. Estas mensagens fazem-me querer saber mais sobre a marca | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

## CARACTERIZAÇÃO DEMOGRÁFICA

20. Sexo

☐ a. Feminino

☐ b. Masculino

21. Qual a tua idade?

_____anos

22. Está a trabalhar actualmente?

☐ a. Sim

☐ b. Não

23. Qual é o teu concelho de residência?

_____

O questionário terminou.

Obrigada pela tua colaboração e disponibilidade!

* Pergunta obrigatória

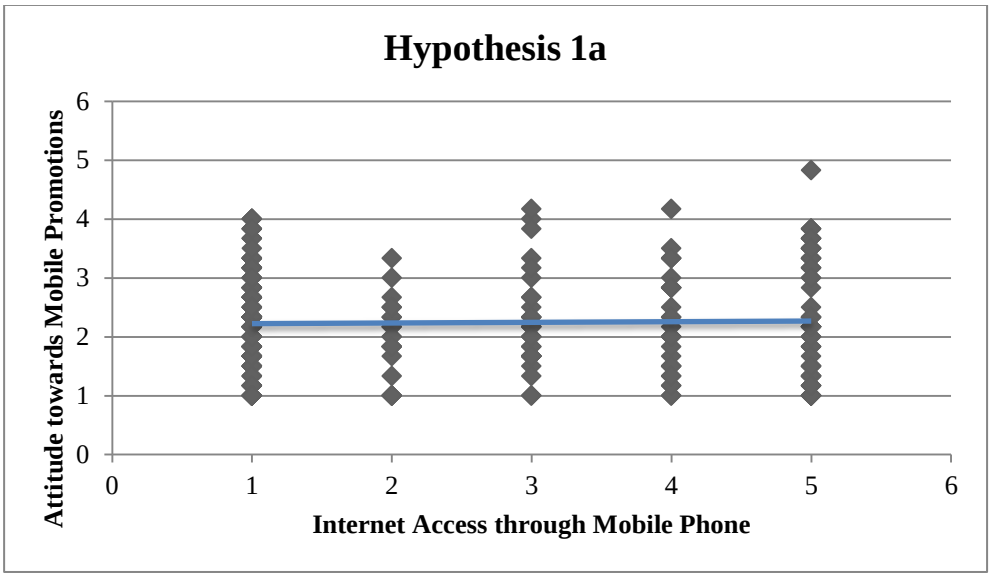
# Appendix 3 - Answers of q.8

**8. "How many promotional messages did you receive in the last 6 months?"**

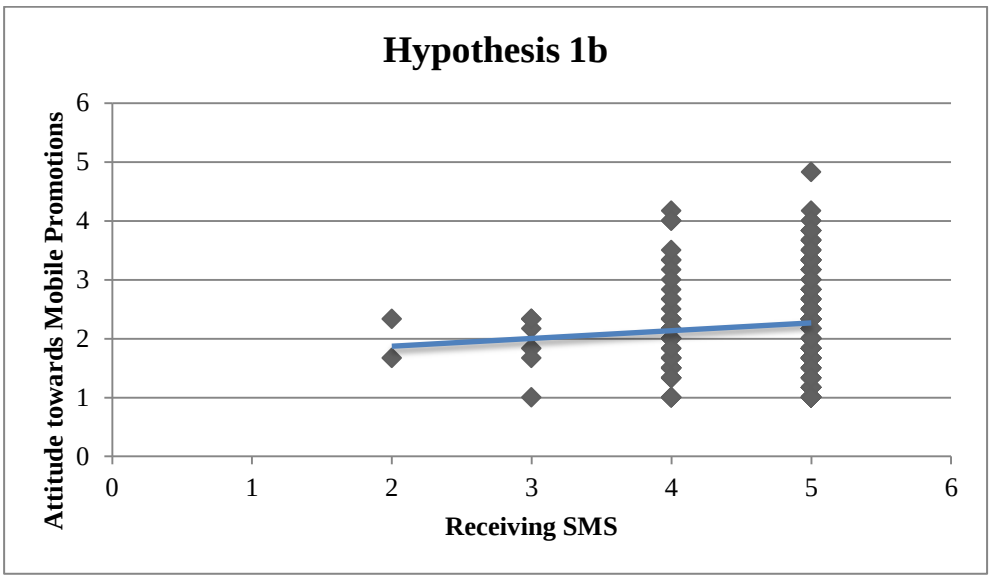
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 1 | 9 | 1,8 | 1,8 | 1,8 |
| | 2 | 21 | 4,1 | 4,3 | 6,1 |
| | 3 | 29 | 5,7 | 5,9 | 12,0 |
| | 4 | 29 | 5,7 | 5,9 | 17,8 |
| | 5 | 47 | 9,2 | 9,5 | 27,4 |
| | 6 | 49 | 9,6 | 9,9 | 37,3 |
| | 7 | 8 | 1,6 | 1,6 | 38,9 |
| | 8 | 10 | 1,9 | 2,0 | 41,0 |
| | 9 | 2 | ,4 | ,4 | 41,4 |
| | 10 | 105 | 20,5 | 21,3 | 62,7 |
| | 12 | 17 | 3,3 | 3,4 | 66,1 |
| | 14 | 2 | ,4 | ,4 | 66,5 |
| | 15 | 15 | 2,9 | 3,0 | 69,6 |
| | 18 | 1 | ,2 | ,2 | 69,8 |
| | 20 | 72 | 14,0 | 14,6 | 84,4 |
| | 24 | 5 | 1,0 | 1,0 | 85,4 |
| | 25 | 4 | ,8 | ,8 | 86,2 |
| | 30 | 33 | 6,4 | 6,7 | 92,9 |
| | 35 | 1 | ,2 | ,2 | 93,1 |
| | 40 | 6 | 1,2 | 1,2 | 94,3 |
| | 45 | 1 | ,2 | ,2 | 94,5 |
| | 48 | 1 | ,2 | ,2 | 94,7 |
| | 50 | 10 | 1,9 | 2,0 | 96,8 |
| | 52 | 1 | ,2 | ,2 | 97,0 |
| | 60 | 1 | ,2 | ,2 | 97,2 |
| | 72 | 1 | ,2 | ,2 | 97,4 |
| | 100 | 8 | 1,6 | 1,6 | 99,0 |
| | 150 | 2 | ,4 | ,4 | 99,4 |
| | 200 | 1 | ,2 | ,2 | 99,6 |
| | 250 | 1 | ,2 | ,2 | 99,8 |
| | 2000 | 1 | ,2 | ,2 | 100,0 |
| | Total | 493 | 96,1 | 100,0 | |
| Missing | System | 20 | 3,9 | | |
| Total | | 513 | 100,0 | | |

# Appendix 4 - Hypotheses' Scatterplot Graphs

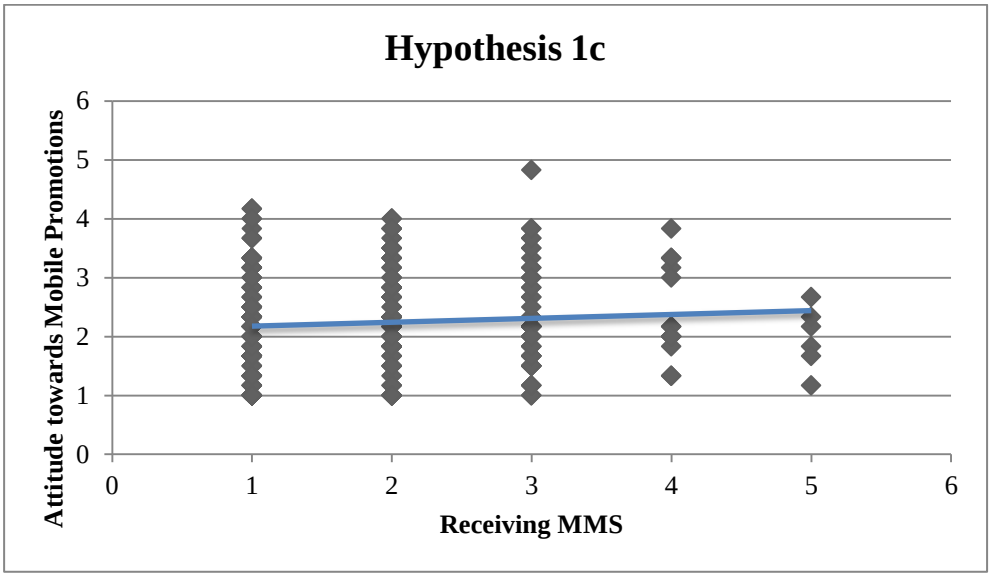
**Scatterplot graph of H1a**



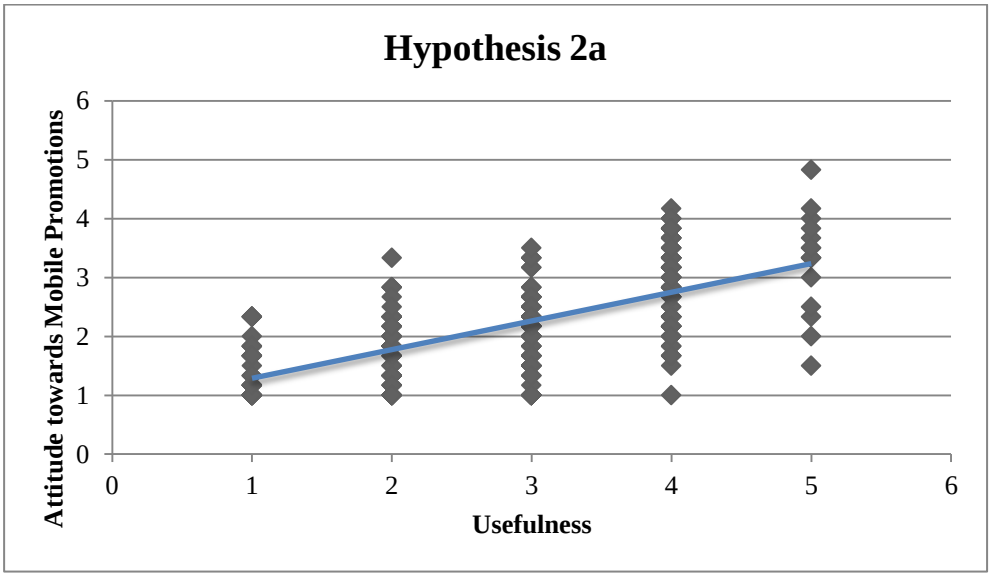

**Scatterplot graph of H1b**



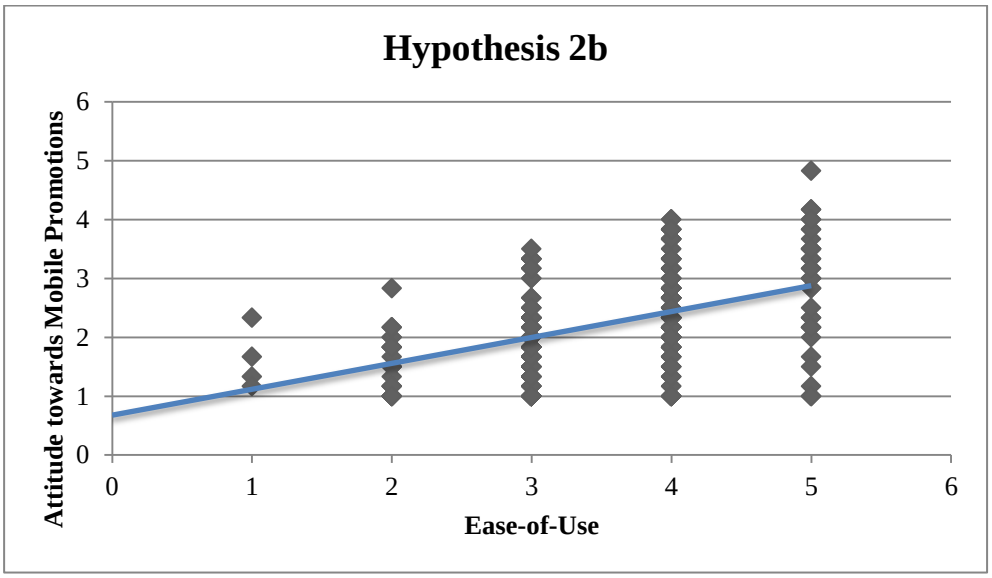
**Scatterplot graph of H1c**



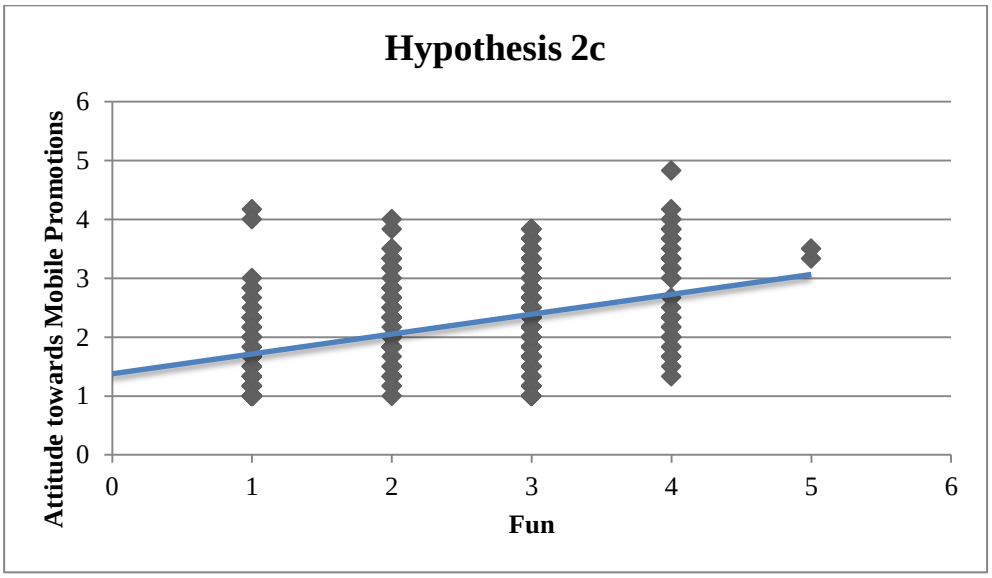

**Scatterplot graph of H2a**



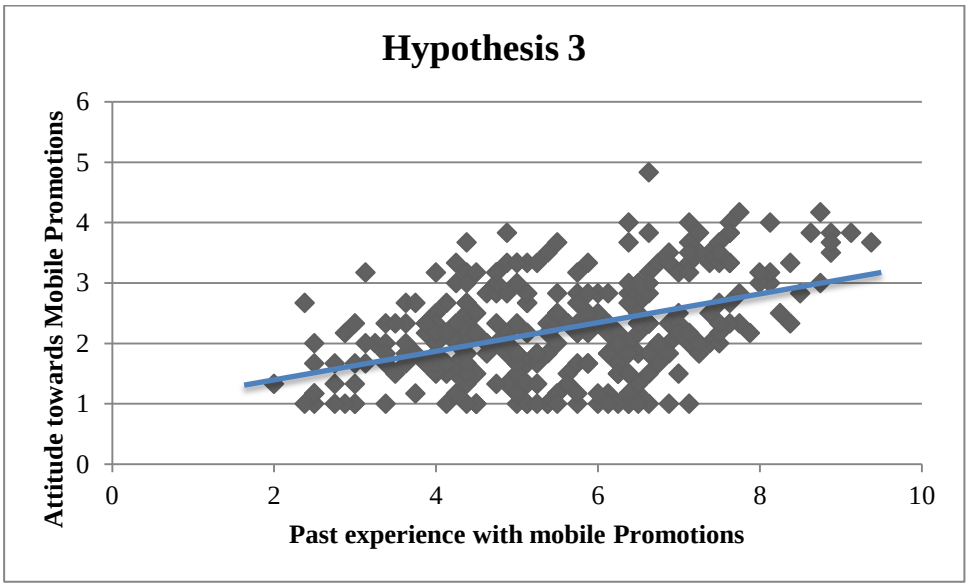
**Scatterplot graph of H2b**



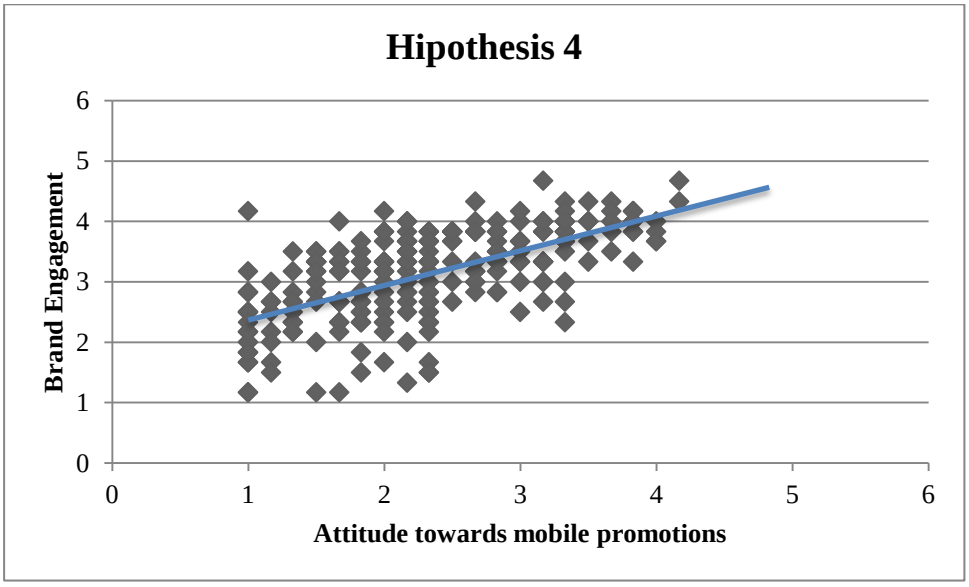

**Scatterplot graph of H2c**



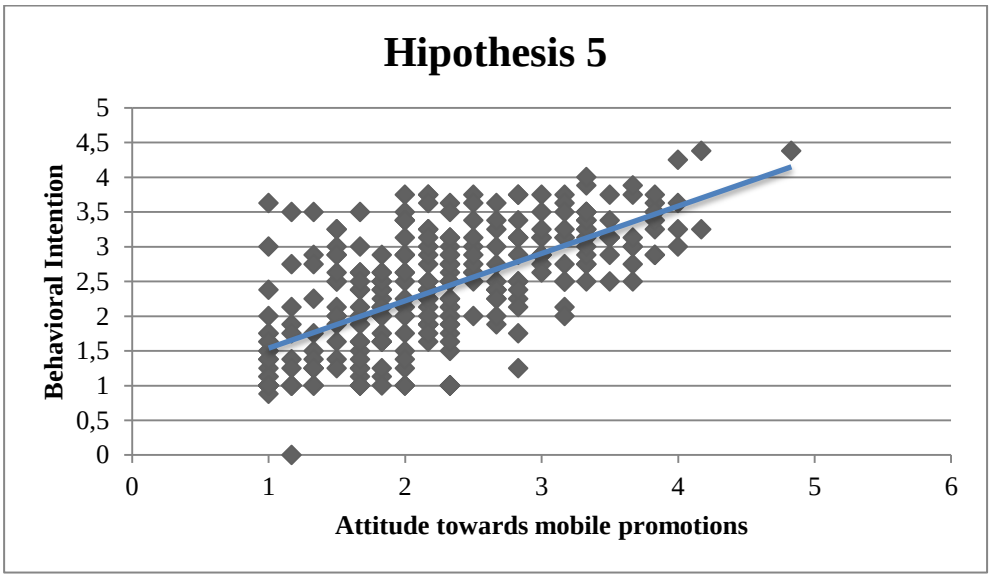
**Scatterplot graph of H3**



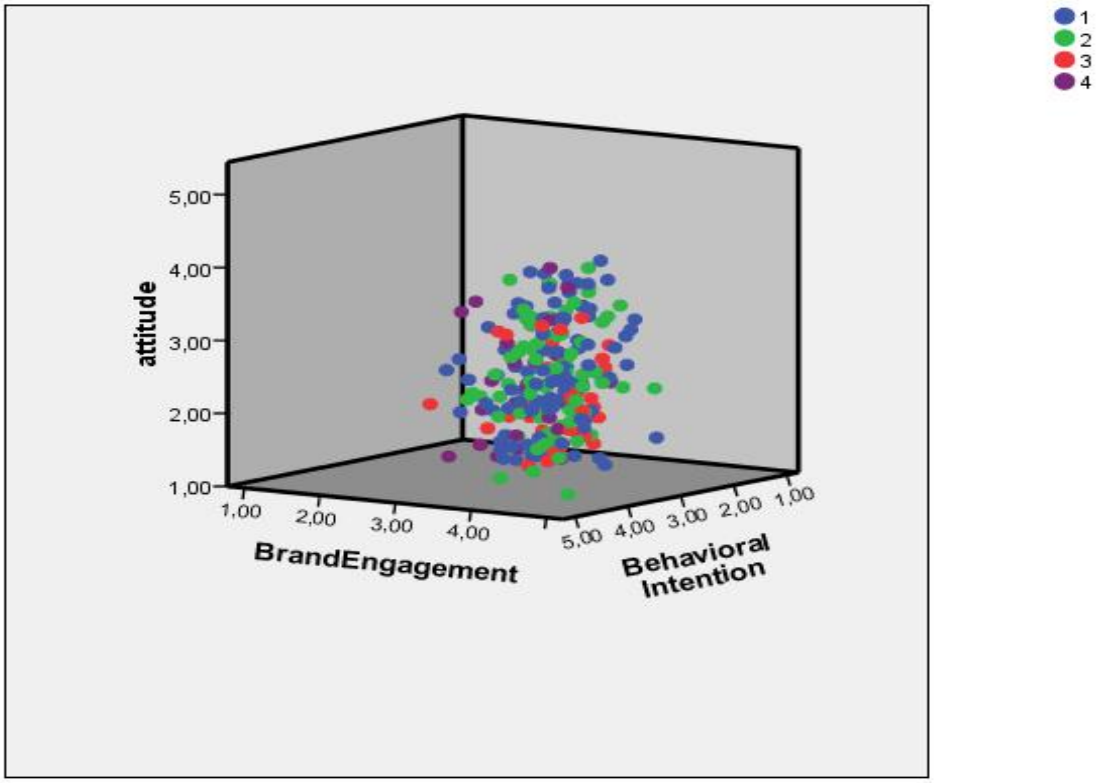

**Scatterplot graph of H4**



**Scatterplot graph of H5**




**Scatterplot graph of H6**



# Appendix 5 - Independent t-tests - Gender Comparison

**T-test - Gender and Past Mobile Phone Usage**

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| 4a. Access Internet via mobile phone | Equal variances assumed | ,016 | ,901 | -4,207 | 491 | ,000 | -,678 | ,161 | -,995 | -,362 |
| | Equal variances not assumed | | | -4,178 | 276,780 | ,000 | -,678 | ,162 | -,998 | -,359 |
| 4b. Receiving SMS | Equal variances assumed | 3,029 | ,082 | ,996 | 491 | ,320 | ,050 | ,050 | -,048 | ,147 |
| | Equal variances not assumed | | | ,963 | 260,683 | ,337 | ,050 | ,051 | -,052 | ,151 |
| 4c. Receiving MMS | Equal variances assumed | ,722 | ,396 | ,608 | 491 | ,544 | ,060 | ,098 | -,133 | ,252 |
| | Equal variances not assumed | | | ,598 | 271,717 | ,550 | ,060 | ,099 | -,136 | ,255 |

**T-test - Gender and Characteristics of M-Promotions**

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | Df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| 17d. Fun | Equal variances assumed | 1,343 | ,247 | 3,248 | 483 | ,001 | ,302 | ,093 | ,119 | ,484 |
| | Equal variances not assumed | | | 3,311 | 290,431 | ,001 | ,302 | ,091 | ,122 | ,481 |
| 16d. Ease-of-Use | Equal variances assumed | ,098 | ,755 | ,232 | 472 | ,816 | ,019 | ,081 | -,140 | ,177 |
| | Equal variances not assumed | | | ,233 | 269,733 | ,816 | ,019 | ,080 | -,139 | ,177 |
| 14d. Usefulness | Equal variances assumed | ,137 | ,712 | 3,559 | 490 | ,000 | ,359 | ,101 | ,161 | ,557 |
| | Equal variances not assumed | | | 3,514 | 273,435 | ,001 | ,359 | ,102 | ,158 | ,560 |

**T-test Gender and Past Experience with M-Promotions**

**Independent Samples Test**

| Past Experience with Mobile Promotions | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 95% Confidence Interval of the Difference | |
| | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Equal variances assumed | 2,016 | ,156 | 1,197 | 491 | ,232 | ,17915 | ,14970 | -,11497 | ,47327 |
| Equal variances not assumed | | | 1,232 | 300,841 | ,219 | ,17915 | ,14545 | -,10708 | ,46538 |

**T-test - Gender and Attitudes towards M-Promotions**

**Independent Samples Test**

| Attitude | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 95% Confidence Interval of the Difference | |
| | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Equal variances assumed | ,826 | ,364 | 1,414 | 293 | ,158 | ,14510 | ,10258 | -,05679 | ,34698 |
| Equal variances not assumed | | | 1,449 | 216,855 | ,149 | ,14510 | ,10012 | -,05224 | ,34243 |

**T-test - Gender and Brand Engagement**

**Independent Samples Test**

| Brand Engagement | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 95% Confidence Interval of the Difference | |
| | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Equal variances assumed | ,160 | ,690 | ,940 | 419 | ,348 | ,07082 | ,07533 | -,07725 | ,21889 |
| Equal variances not assumed | | | ,913 | 208,608 | ,363 | ,07082 | ,07761 | -,08217 | ,22382 |

**T-test - Gender and Behavioral Intention**

**Independent Samples Test**

| Behavioral Intention | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 95% Confidence Interval of the Difference | |
| | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Equal variances assumed | ,003 | ,958 | ,623 | 491 | ,534 | ,05034 | ,08081 | -,10844 | ,20912 |
| Equal variances not assumed | | | ,623 | 281,420 | ,534 | ,05034 | ,08079 | -,10869 | ,20936 |

# Appendix 6 - Independent t-tests - Working Status Comparison

### T-test - Working Status and Past Mobile Phone Usage

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| 4a. Access Internet via mobile phone | Equal variances assumed | 9,187 | ,003 | 3,554 | 491 | ,000 | ,529 | ,149 | ,237 | ,822 |
| | Equal variances not assumed | | | 3,560 | 489,947 | ,000 | ,529 | ,149 | ,237 | ,821 |
| 4b. Receiving SMS | Equal variances assumed | 5,936 | ,015 | -1,419 | 491 | ,157 | -,065 | ,046 | -,154 | ,025 |
| | Equal variances not assumed | | | -1,421 | 489,306 | ,156 | -,065 | ,046 | -,154 | ,025 |
| 4c. Receiving MMS | Equal variances assumed | ,547 | ,460 | ,095 | 491 | ,924 | ,009 | ,090 | -,168 | ,185 |
| | Equal variances not assumed | | | ,095 | 489,480 | ,924 | ,009 | ,090 | -,168 | ,185 |

### T-test - Working Status and Characteristics of M-Promotions

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| 14d. Usefulness | Equal variances assumed | 2,878 | ,090 | 1,732 | 490 | ,084 | ,162 | ,094 | -,022 | ,346 |
| | Equal variances not assumed | | | 1,734 | 489,900 | ,084 | ,162 | ,093 | -,022 | ,346 |
| 16d. Ease-of-Use | Equal variances assumed | ,130 | ,719 | 1,827 | 472 | ,068 | ,135 | ,074 | -,010 | ,280 |
| | Equal variances not assumed | | | 1,828 | 471,839 | ,068 | ,135 | ,074 | -,010 | ,279 |
| 17d. Fun | Equal variances assumed | ,495 | ,482 | 1,166 | 483 | ,244 | ,100 | ,086 | -,069 | ,270 |
| | Equal variances not assumed | | | 1,165 | 480,974 | ,245 | ,100 | ,086 | -,069 | ,270 |

**T-test - Working Status and Past Experience with M-Promotions**

**Independent Samples Test**

| Past Experience with Mobile Promotions | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 95% Confidence Interval of the Difference | |
| | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Equal variances assumed | ,441 | ,507 | 2,712 | 491 | ,007 | ,37065 | ,13669 | ,10208 | ,63922 |
| Equal variances not assumed | | | 2,715 | 490,547 | ,007 | ,37065 | ,13652 | ,10240 | ,63889 |

**T-test - Working Status and Attitude towards M-Promotions**

**Independent Samples Test**

| Attitude | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 95% Confidence Interval of the Difference | |
| | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Equal variances assumed | 2,814 | ,095 | ,636 | 293 | ,525 | ,06214 | ,09764 | -,13003 | ,25431 |
| Equal variances not assumed | | | ,638 | 291,047 | ,524 | ,06214 | ,09734 | -,12944 | ,25372 |

**T-test - Working Status and Brand Engagement**

**Independent Samples Test**

| Brand Engagement | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 95% Confidence Interval of the Difference | |
| | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Equal variances assumed | ,064 | ,800 | 1,358 | 419 | ,175 | ,09251 | ,06813 | -,04140 | ,22642 |
| Equal variances not assumed | | | 1,360 | 418,991 | ,175 | ,09251 | ,06804 | -,04123 | ,22625 |

**T-test - Working Status and Behavioral Intention**

**Independent Samples Test**

| Behavioral Intention | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | 95% Confidence Interval of the Difference | |
| | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Equal variances assumed | 1,294 | ,256 | ,924 | 491 | ,356 | ,06853 | ,07420 | -,07726 | ,21432 |
| Equal variances not assumed | | | ,925 | 490,788 | ,356 | ,06853 | ,07412 | -,07710 | ,21416 |

# Appendix 7 - Crosstabs– Gender Comparison

**Crosstab**

| | | | 20.Gender | | |
|---|---|---|---|---|---|
| | | | Women | Men | Total |
| 4a. Access internet via Mobile Phone | Once per month | Count | 189 | 52 | 241 |
| | | % within 4a. Access internet via Mobile Phone | 78,4% | 21,6% | 100,0% |
| | | % within 20.Gender | 54,9% | 34,9% | 48,9% |
| | 2 to 4 times per month | Count | 26 | 8 | 34 |
| | | % within 4a. Access internet via Mobile Phone | 76,5% | 23,5% | 100,0% |
| | | % within 20.Gender | 7,6% | 5,4% | 6,9% |
| | 2 to 3 times per week | Count | 30 | 21 | 51 |
| | | % within 4a. Access internet via Mobile Phone | 58,8% | 41,2% | 100,0% |
| | | % within 20.Gender | 8,7% | 14,1% | 10,3% |
| | Daily | Count | 32 | 26 | 58 |
| | | % within 4a. Access internet via Mobile Phone | 55,2% | 44,8% | 100,0% |
| | | % within 20.Gender | 9,3% | 17,4% | 11,8% |
| | Frequently during the day | Count | 67 | 42 | 109 |
| | | % within 4a. Access internet via Mobile Phone | 61,5% | 38,5% | 100,0% |
| | | % within 20.Gender | 19,5% | 28,2% | 22,1% |
| Total | | Count | 344 | 149 | 493 |
| | | % within 4a. Access internet via Mobile Phone | 69,8% | 30,2% | 100,0% |
| | | % within 20.Gender | 100,0% | 100,0% | 100,0% |

**Directional Measures**

| | | | Value |
|---|---|---|---|
| Nominal by Interval | Eta | 4a.Access Internet via Mobile Phone - Dependent | ,187 |
| | | 20.Gender Dependent | ,209 |

**Crosstab**

| | 20. Gender | Total |
|---|---|---|

| | | | Women | Men | |
|---|---|---|---|---|---|
| 14d. Usefulness | Very Useless | Count | 24 | 20 | 44 |
| | | % within 14d.Usefulness | 54,5% | 45,5% | 100,0% |
| | | % within 20.Gender | 7,0% | 13,4% | 8,9% |
| | Useless | Count | 55 | 31 | 86 |
| | | % within 14d.Usefulness | 64,0% | 36,0% | 100,0% |
| | | % within 20.Gender | 16,0% | 20,8% | 17,5% |
| | Indifferent | Count | 104 | 49 | 153 |
| | | % within 14d.Usefulness | 68,0% | 32,0% | 100,0% |
| | | % within 20.Gender | 30,3% | 32,9% | 31,1% |
| | Useful | Count | 140 | 47 | 187 |
| | | % within 14d.Usefulness | 74,9% | 25,1% | 100,0% |
| | | % within 20.Gender | 40,8% | 31,5% | 38,0% |
| | Very Useful | Count | 20 | 2 | 22 |
| | | % within 14d.Usefulness | 90,9% | 9,1% | 100,0% |
| | | % within 20.Gender | 5,8% | 1,3% | 4,5% |
| Total | | Count | 343 | 149 | 492 |
| | | % within 14d.Usefulness | 69,7% | 30,3% | 100,0% |
| | | % within 20.Gender | 100,0% | 100,0% | 100,0% |

**Directional Measures**

| | | | Value |
|---|---|---|---|
| Nominal by Interval | Eta | 16d.Ease-of-Use - Dependent | ,011 |
| | | 20.Gender - Dependent | ,088 |

**Crosstab**

| | | | 20.Gender | | |
|---|---|---|---|---|---|
| | | | Women | Men | Total |
| 17d. Fun | Nothing Fun | Count | 49 | 31 | 80 |
| | | % within Fun | 61,3% | 38,8% | 100,0% |
| | | % within 20. Gender | 14,5% | 21,1% | 16,5% |
| | Little Fun | Count | 49 | 29 | 78 |
| | | % within 17d.Divertimento - telemóvel | 62,8% | 37,2% | 100,0% |
| | | % within 20. Gender | 14,5% | 19,7% | 16,1% |
| | Indifferent | Count | 183 | 76 | 259 |
| | | % within Fun | 70,7% | 29,3% | 100,0% |
| | | % within 20. Gender | 54,1% | 51,7% | 53,4% |
| | Fun | Count | 49 | 11 | 60 |

| | | | | | |
|---|---|---|---|---|---|
| | | % within Fun | 81,7% | 18,3% | 100,0% |
| | | % within 20. Gender | 14,5% | 7,5% | 12,4% |
| | Lots of Fun | Count | 8 | 0 | 8 |
| | | % within Fun | 100,0% | ,0% | 100,0% |
| | | % within 20. Gender | 2,4% | ,0% | 1,6% |
| Total | | Count | 338 | 147 | 485 |
| | | % within Fun | 69,7% | 30,3% | 100,0% |
| | | % within 20. Gender | 100,0% | 100,0% | 100,0% |

**Directional Measures**

| | | | Value |
|---|---|---|---|
| Nominal by Interval | Eta | 17d.Fun - Dependent | ,146 |
| | | 20.Gender - Dependent | ,158 |

# Appendix 8 - Crosstabs – Working Status Comparison

**Crosstabulation**

| | | | 22.Working Status | | |
|---|---|---|---|---|---|
| | | | Currently Working | Not currently working | Total |
| 4a. Access internet via Mobile Phone | Once per month | Count | 107 | 134 | 241 |
| | | % within Access internet via Mobile Phone | 44,4% | 55,6% | 100,0% |
| | | % within 22.Working Status | 42,6% | 55,4% | 48,9% |
| | 2 to 4 times per month | Count | 14 | 20 | 34 |
| | | % within Access internet via Mobile Phone | 41,2% | 58,8% | 100,0% |
| | | % within 22.Working Status | 5,6% | 8,3% | 6,9% |
| | 2 to 3 times per week | Count | 28 | 23 | 51 |
| | | % within Access internet via Mobile Phone | 54,9% | 45,1% | 100,0% |
| | | % within 22.Working Status | 11,2% | 9,5% | 10,3% |
| | Daily | Count | 33 | 25 | 58 |
| | | % within Access internet via Mobile Phone | 56,9% | 43,1% | 100,0% |
| | | % within 22.Working Status | 13,1% | 10,3% | 11,8% |
| | Frequently during the day | Count | 69 | 40 | 109 |
| | | % within Access internet via Mobile Phone | 63,3% | 36,7% | 100,0% |
| | | % within 22.Working Status | 27,5% | 16,5% | 22,1% |
| Total | | Count | 251 | 242 | 493 |
| | | % within Access internet via Mobile Phone | 50,9% | 49,1% | 100,0% |
| | | % within 22.Working Status | 100,0% | 100,0% | 100,0% |

**Directional Measures**

| | | | Value |
|---|---|---|---|
| Nominal by Interval | Eta | 4a.frequência actual - aceder net mobile Dependent | ,158 |
| | | 22.Está a trabalhar actualmente? Dependent | ,164 |