



**Attitude towards branded mobile applications and reuse intention:
The moderating effect of Gender and prior brand involvement**

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ABSTRACT

Title: Attitude towards branded mobile applications and reuse intention: The moderating effect of Gender and prior brand involvement

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Mobile applications (apps) have created a significant interest among advertisers and marketers, mostly because of their positive impact on user's attitude and high level of engagement towards the brand. This study analyses the impact of gender-specific tendencies in the assessment of utilitarian and hedonic oriented branded mobile apps, highlighting that utilitarian content is favoured when intending to reuse mobile applications.

The thesis strives to understand customer's attitude towards branded mobile applications via pre-test and post-test survey focusing on four mobile branded applications- Google Map, Snapchat, Uber and Tinder. Pearson correlation and linear regression are used to understand the positive relationship between attitude and reuse intention and one-way Anova is used to understand gender preferences towards utilitarian and hedonic content of branded mobile apps.

Results indicate that individual's attitudes are strongly positively related with their reuse intention. Likewise, for Gender, men & women both have a higher tendency to reuse utilitarian apps, as contrary to the developed hypothesis that women mostly prefer hedonic app rather than utilitarian app. Additionally, the results conclude that the level of prior brand involvement may not necessarily moderate individual's immediate response towards branded mobile application and reuse intention.

Finally, implications associated with the findings are discussed with respect to clarifying possible outcomes obtained during result analysis and initiate solutions to improve further studies in this area.

Key Words: Branded mobile apps, utilitarian & hedonic, gender.

SUMÁRIO

Título: Atitude para aplicações móveis de marca e reuso intencional: efeito moderador do gênero e envolvimento anterior da marca

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Este estudo analisa o impacto de tendências específicas de cada gênero na avaliação das marcas de aplicações móveis utilitaristas e hedônicas, realçando que a informação de conteúdo utilitarista é preferida no que toca à reutilização de aplicações.

A tese procura compreender a atitude do cliente perante as marcas das aplicações através de questionário pré e pós-teste, focando-se em quatro aplicações: Google Map, Snapchat, Uber e Tinder. A correlação de Pearson e a regressão linear são usadas para entender a relação entre atitude e intenção de reutilização. Análise de variância é usada para perceber a preferência entre conteúdos das aplicações utilitaristas e hedônicas. Os resultados indicam que as atitudes individuais estão muito positivamente relacionadas com a intenção de reutilização. De igual modo, para gênero, homens e mulheres têm ambos uma grande tendência para reutilizar aplicações utilitaristas, contrariamente com a hipótese desenvolvida que as mulheres preferem aplicações hedônicas. Além disso, os resultados concluem que o nível de envolvimento anterior da marca pode não necessariamente moderar a resposta imediata do indivíduo em relação à aplicação móvel e à intenção de reutilização da marca.

Finalmente, as implicações associadas com as conclusões são discutidas de forma a clarificar resultados possivelmente obtidos durante a análise dos dados e iniciar soluções para melhorar estudo adicionais nesta área.

Palavras Chave: aplicações móveis de marca, valor utilitário & hedónico, gênero.

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GLOSSARY

Brand

Branding

It is a development and creation of a specific identity for a company, community, product, group, or person” 9Davis & Chicago, 2003, p.3).

Brand from Consumer Perspective

A brand is a lens through which the actions and words of a company, its environment, and the competitors in general are transformed to thoughts, images, feelings, perceptions, beliefs and attitudes etc, about a product or family or products (Keller & Lehmann, 2006,p.751).

Brand from Organisation Perspective

Brand from organisation perspective suggests a long-term engagement, commitment or crusade to a unique set of values, services and behaviours, embedded into products which creates the company or product or person stand apart or stand out (Kapferer, 2012a, p.12).

Mobile Marketing

M-marketing refers to the usage of interactive wireless media to provide customers with personalized information that promote goods, time and locations, ideas and services, thereby generation value for all the stakeholders (Dickinger, Haghirian, Murphy, & Scharl, 2004).

Mobile Technology

Mobile technology is a platform that has the potential to complete or change the customer’s overall brand experience and is often considered to be a major part of an integrated marketing strategy (Pkonkwo, 2010, p.284).

Mobile Application

Mobile application (mobile apps) is a software that runs on a mobile phone/cell phone and performs a specific task for the user. It provides rapid and rich user experience which makes it unique from a mobile web. Some applications are downloadable and some are pre-installed for a little amount of money or free (Mobile marketing Association, 2008).

Utilitarian value

Utilitarian value is a value that consumer receives based on a rational consumption behavior or a task-related (Babin et al. 1994). It's a normative ethical theory that focuses on the locus of wrong and right solely based on the consequences (outcomes) of choosing one policy/action over the other policies/actions. It moves beyond the scope of one's interests and take into account the others interest as well.

Hedonic value

Hedonic value is a value that consumer derives by consuming goods for luxury purposes, which are desirable objects that allow the customer to feel pleasure, enjoyment and fun from buying the product. They are different from utilitarian value goods, as they are purchased for the practical uses and are solely based on the consumer's needs.

CHAPTER 1: INTRODUCTION

1.1 Background and problem statement

With the ongoing diffusion of handheld devices (i.e, smartphone), mobile apps have become an important interface with advanced user experience and highly visual interface as compared to traditional telephone and messaging (MMQ, 2009). Moreover, enhanced user interfaces, for eg. Touchscreens has facilitated the way user interacts with a wide range of distinct content (Kim, Lin, and Dung, 2013). According to Sullivan (2010), apps contribute in many ways, for instance, in solving daily problems or simply entertaining the consumers thereby driving either utilitarian or hedonic values (Davies et al. 2011). Since both apps and smartphones have been found to use with high levels of engagement, marketers and advertisers are using this opportunity to promote their brands via this channel and create a novel tool of brand communication (Hutton and Rodnick, 2009).

Branded mobile apps primarily represent a complimentary service as that they combine mobile technology with branding. Branded apps, which mainly represent pull-based services, are different from other mobile advertising units which are usually push-based services with well-established patterns such as SMS and MMS (MMA 2011). For example, Bellman et al. (2011) measured branded app effectiveness by examining consumers' purchase intention and brand attitude towards the mobile applications. Other contributions are dedicated to grouping the content of branded apps by clarifying the extent to which they engage users (Kim, Lin, and Sung 2013). To enrich the recent body of knowledge and to optimize branded app potentials, the main purpose of this research is to identify whether branded apps that derive utilitarian value differ from apps that provide hedonic value in terms of effectiveness and gender. In doing so, intend is to deepen the findings of Bellman et al. (2011) that indicate informational apps (utilitarian) to be more effective at shifting purchase intention than experiential branded apps (hedonic). On the one hand, these results are not in harmony with the fact that to date the majority of branded apps are designed to be experiential (hedonic) rather than informational (utilitarian) (Kim, Lin, and Sung 2013). On the other hand, Bellman and colleagues miss to integrate immediate responses to branded apps such as reuse intention to explain individual's brand purchase intention which can be considered as more profound. Furthermore, with reference to the *Uses- and- Gratification Approach*, it is supposed that the effectiveness of specific branded app content depends on individual's requirements and needs. To this extent, knowledge about gender-specific preferences is crucial for marketers in order to produce effective outcomes (Darley and Smith 1995) because gender is one of the most

important patterns of individual's self-concept through which many experiences, impressions, and evaluations are filtered (Spence 1985). To sum up, this research sheds light on the question: how do men and women assess hedonic and utilitarian oriented branded apps?

1.2 Problem Statement

This thesis strives to understand whether branded apps that derive utilitarian (informational) value differ from apps that provide hedonic (experiential) value in terms of effectiveness and gender. The main purpose is to indicate that informational apps (utilitarian) are more effective in shifting reuse intention than experiential branded apps (hedonic). Therefore, the following questions are formulated:

RQ1: Does men and women attitude towards branded app has a positive relationship with their reuse intention?

H1: Individuals' (men and women) attitudes towards the branded app are positively related to reuse intention.

RQ2: Does Gender plays a role in preferences towards utilitarian and hedonic content and reuse intention?

H2a: Men prefer branded apps that derive utilitarian value to apps that derive hedonic value. Hence, they exhibit stronger reuse intention for utilitarian-oriented branded apps.

H2b: Women prefer branded apps that derive hedonic value to apps that derive utilitarian value. Hence, they exhibit stronger reuse intention for hedonic-oriented branded apps.

RQ3: Does prior brand evaluation leads to changed response towards branded apps?

H3: The level of prior brand evaluations moderates' individuals' immediate response towards branded apps.

1.3 Relevance

According to Ha & Park (2010), consumers have started using mobile digital technology in a considerable way, drawing further research from academics, owing to its ubiquitous and cost-effective nature. It has further enabled marketers to use mobile digital technology as a perfect base for marketing segmentation and communication strategies, so as to say, direct marketing (for e.g., in insurance industry, Mort & Drennan 2002).

At the same time a huge increase in mobile marketing has led to a rapid increase in the use of mobile phone (around 5 billion users in 2010 alone) and mobile broadband subscribers, which are believed to be at 1 billion in 2010, conversely changing the way consumers interact with media (Entner, 2010). As reports suggested by CBS NEWS 2016, Europe has consequently seen an increase amount of smartphone usage with significant 105% increased contribution in comparison to 2015.

According to Gao, Pagani, Rohm & Sultan (2012). With the fast development of wireless communication network and digital technology, mobile services as well mobile marketing have become a wide spread and an important tool of communication to reach out to consumers globally. Consequently, branded mobile applications have also developed as a large market itself with constant growth (Mobile Marketing Association, 2008). Branded mobile apps have a greater impact on consumers in terms of its popularity and are actually considered better than website search (Walsh, 2012), as it is predicted to be downloaded in 40 billion from App store (Mobile Marketing Association, 2017).

It contributes to marketing and brand management by providing a much deeper understanding of the interrelationship between brand image and brand identity in a mobile mediated environment. It contributes to marketing by exploring the role of mobile application as a communication tool between the consumers and brands by categorizing mobile branded mobile applications. Additionally, it adds to experiential marketing by investigating influence of branded mobile applications over consumer experiences.

Branded mobile applications are considered to be an important communication tool to understand the relationship between consumers and brands by further exploring the relationship a consumer have in regards to image and identity towards the brand in a mobile

mediated environment. Additionally, it also helps marketers and advertisers to recognize the significant contribution of branded mobile apps on customers' diverse experiences.

It is assumed that this research will provide a significant contribution to understand the benefits and drawbacks arising out of the scope of using branded mobile apps by consumers and will further help marketers and advertisers to better target their audiences with appropriate marketing strategies based on the outcomes from mobile apps usage. Furthermore, these mobile applications enhance consumers in app-experience, customer's image towards the brand and finally, their in-app experience with brand identity itself. On a broader understanding, the intended research could also provide information on best practices in order to make trustworthy marketing promotional decisions not only limited to established brands but also to all other brands who are desired to perform better in this increasingly digitalized mobile branding environment.

1.4 Dissertation outline

This dissertation is composed of seven chapters with extensive research program investigating the research questions proposed in problem statement (section 1.2). A detailed summary is followed hereby:

Chapter 1 introduces the research outline for the thesis. Basically it provides a justification and background to the research with clearly defined research problem and questions as well as a brief overview of the research methodology. Additionally, this chapter summarizes contributions to practice and theory.

Chapter 2 summarizes the literature review in accordance to developed hypothesis and research topic. It will describe how relevant each of the variables is on the use of branded mobile applications. Research questions are constructed and the gaps are identified with an approved conceptual model so as to investigate forbye.

Chapter 3 provides a comprehensive research methodology overview in regards to the dissertation. The chapter discusses the research methods and design for surveys and provides a proper justification from the philosophical point of view. In addition to this, data collection, data analysis, sample, validity and reliability etc. methods are addressed with ethical consideration taken into account. This chapter also details the construct applied for each questionnaire and the procedure on which statistical test will be applied later on.

Chapter 4 outlines the findings and results (both in-depth and general) obtained through two surveys conducted vice-versa. Based on these results, in the next chapter specific considerations effective to the meaning of such results are described briefly.

Chapter 5 details the contribution of research findings to the theory and practice of marketing and management. Accordingly, recommendations and limitations are represented. A further implication for the future research is demonstrated ending with a brief conclusion.

CHAPTER 2: LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1. Mobile Marketing

Mobile marketing can be defined as use of marketing strategies in a mobile mediated environment with characteristics such as location-specific context and frequent World Wide Web interaction leading to faster communication of intended message (Mort and Drennan (2002), page no. 10)). According to Haghirian, Madlberger and Tuskova (2005); not only has it had a major influence on today's organizations but is also regarded as the most important too of branding and communication. (Dickinger, Haghirian, Murphy & Scharl 2004). Mobile or smartphones, owing to its portability are considered as a perfect medium to use as an electronic wallet to make the fast product purchase (Mort and Drennan 2002, Bennison and Davidson 2010) and could most potentially is also used as a cost-effective marketing tool in communicating tailored personalized information /services to the customers anytime and anywhere.

According to Nielsen, 2013 report around 53 percent of people in United States and 61 percent in United Kingdom use smartphones. According to WARC (2011a), in United States around 70% of the young consumers enjoy smartphone usage with primary 40% of them owing Apple's iPhone brand. Whereas France has 27 percent of the smartphone market holding iPhone which is far in its numbers compared to Samsung, Nokia, Blackberry and other mobile brands (WARC, 2011b). Australia by far is seeing the greatest growth with approximately 36% increased mobile usage every year (eMarketer 2013) with 75% of Australian population above age 16 owning mobile phones; higher female gender inclination below age 44, according to Nielsen, 2013 reports spends an average monthly fee of 50% on mobile phone usage. Meanwhile mobile penetration rate is expected to rise by 90% with 6.5 billion connections globally in 2018 (Rohm et al., 2012). As well as the investment on mobile advertising that is predicted to reach \$37 billion (eMarketer, 2013) by 2020.

2.2. Mobile Applications

According to Bellman et al (2011), mobile apps are regarded as a dynamic source of mobile advertising when used to develop effective branding promotional strategies (Rohm et al., 2012). Mobile applications usually known as mobile apps, is a software running on smartphone or mobile phones intending to perform particular tasks for the mobile phone users (Mobile Marketing Association 2008). In this thesis, we have used "apps" sometimes as an abbreviated version for mobile application. These apps are considered as very useful for the

consumers as they help them in their regular day activities in assisting for shopping or either finding a location according to the Google mobile app and may other tasks (Kim, Lin, & Sung 2013). Thereby, according to Rohm et al 2012 & Rohm and Sultan 2008, these applications are usually focused towards users between 12 to 24 years old called as “Generation M”.

More recently, mobile apps have become a very engaging platform for marketers and advertisers for brand communication and promotional strategies (Kim al 2013). According to Nielsen report 2013, 50% of entire population uses mobile apps primarily for game purposes and social networking related activities. Mobile applications are not intrusive as opposed to other forms of marketing which includes promotion through coupons, text or MMS. Consumer perceive apps as a mobile service (Chen et 2005; Lurn & Lin, Wang 2006), using pull marketing, mobile applications thus could be a very powerful source to educate consumers about brands and new product categories (Bellman e al., 2011).

2.3.Branded Apps

Mobile technology could provide significant opportunities for companies to work with mobile manufacturers in developing single branded or co-branded smartphones which could further be used to launch major branded mobile apps. These apps would be very useful for marketers to promote their brands on a much wider scale with broad audience. According to Bellman et al., (2011, p.191), branded mobile application is a software downloadable on smartphone which displays a brand identity, via a brand logo or icon or name of the app, the entire time consumer is using the app. Few popular examples are Rolls Royce, Louis Vuitton and Hilton.

Additionally, branded mobile applications also provide services such as screen saver, click-to-call function, store locator using the logo of the brand, and augmented reality. For example, Colgate’s ‘MaxWhite Photo Recharger’ photo editor that allows user to brighten their teeth in photos with a virtual Colgate toothbrush. The user then can share his/her pictures on different social media platforms with his friends and family (Exicon 2011). Another example could be Mini’s “Mini Getaway Stockholm, developed for users who can play multiplayer reality games by driving a virtual Mini throughout the virtual streets of Stockholm. Apart from fun, the mobile application provides user a great incentive of winning a new Mini Countryman after the completing the game (Exicon 2010). Branded applications provide consumers with unique experiences associating with their brands and thus are able to use these apps too engage with consumers more effectively. However, according to Okonkwo, 2010; these apps should focus more on incorporating features that are accessible on the internet and possess an

additional value to the consumers, in order to be more successful among broader audiences. Mobile branded application are said to have major impact on the consumers mindset and their perception towards the brands both in a positive and negative way owing to its strong engagement benefit and relevance to consumers usage activities (Bellman et al., 2011). Mobile branding could be a highly effective strategy to change consumers purchase intention and brand attitude positively (Bellman et al., 2011).

According to the research conducted by Pedersen, Nyssveen & Thorbjørnsen (2005); there are two types of mobile branded apps-. experiential (ex, game) & goal-oriented (ex, payment). Later, goal oriented apps are also known as apps with a goal to inform consumer and experiential apps also called as entertainment apps owing to their distinct characteristic of providing entertainment to the consumers. Informational or goal oriented apps are used for perceived usefulness and on utilitarian benefits (e.g. reward) however entertainment or experiential related mobile apps are mainly used for the purpose of pleasurable experience or enjoyment and thus, are called as hedonic oriented based benefits. Most recently, most elaborative and suffice research conducted by, Bellman and colleagues (2011) categorize branded mobile application in two types: informational (problem solving) and experiential (i.e. game), where informational apps are more effective to influence the consumers purchasing intentions. Although both the authors agree on experiential mobile application, they also believe that informational app could be further dub grouped as goal oriented app and therefore using informational apps could have similar benefit and motivation to goal oriented mobile branded apps.

Branded apps are simply another form of interactive marketing and advertising communications more engaging than the traditional Web format (Bellman et al. 2011). However, marketers are very well aware of the effect this engaging experience can have on the consumers and responses towards the brand messages. Such experiences are because of the high attention usually mobile user gives to smartphones. Hutton and Rodnick (2009) suggests that people's acceptance for the brand related messages are generally affected by how focused they are on using their smartphones. Also, the mobile apps and associated interactive features with the smartphones allow marketers to provide a unique experience that is not possible through traditional Web experiences (Moceri et al. 2011). Nowadays, consumer uses mobile apps not only to encounter with brands but also to actively interact with them.

Mobile apps are not perceived as an ad interrupting experience for the consumers (Hutton and Rodnick 2009), instead they are welcomed as a useful medium to help users make consumption decisions and at the same time providing valuable information via entertaining experiences.

The thesis intends to use mobile applications usually used on apple devices, iPhone, rather than any other mobile devices because of its huge popularity among younger and old generation. According to Bennison and Davidson, page no. 18 (2010); Apple brand is considered as the market leader with incoming 50 percent mobile data traffic and 17 percent of the entire global market share belonging to this innovative device. Furthermore, as Bellman al (2011), suggested there are more than 100,000 of mobile apps available on the apple store, from cosmetics to games to shopping etc. Also, as Entner (2010) said, not only its own device, Apple has the capability to allow its users to use mobile applications on every other device which helps the company to retain its customer base and at the same time increase significant revenues and growth. According to Mills (2013), a new Apple operating system, iOS7, will provide consumers with superior experiencing features from powerful microphones to high quality camera, long lasting battery life, processor and speakers which consequently lead them at the front innovative brand in the world. Significantly that has also transformed the mobile marketers and innovators way of doing businesses by providing them with a much stronger competition competing for advanced platforms rather than mobile devices (Bellman, 2011). Further, providing enhanced brand experience with a more personalized experience to their consumers (Doran 2011 and Entner 2010).

2.4. Reuse Intention

Individuals decide themselves and independently when and with which branded mobile applications they want to interact (Yang, Kim, and Yoo 2013). Hence, marketers have already bridged up the gap of capturing the consumer's interest as soon as they open up the app. However, the companies still don't know how smartphone users feel about using these branded apps. Thus, this thesis focuses on a new approach to understand the attitude towards branded apps and reuse intention as kind of an immediate response with gender effect differences. As reference to the Attitude-Towards-The-Ad Model (Mackenzie, Lutz, and belch 1986), attitude represents evaluative judgement regarding objects.

According to Fishbein & Ajzen (1975), consumer's attitude towards mobile applications can be defined as the extent to which consumers hold a feeling of approval about using and

reusing the services with the possibility of meeting new potential partners online and to create relationships.

Attitude directly influences intention, and in this case reuse intention (Ajzen and Fishbein, 1977). In the context of branded mobile apps, reuse intention seems to be important to predict behavioral outcomes (i.e, reuse) assuming that frequent use strengthens the brand relationship by enhancing brand attitudes (Berger and Mitchell, 1989). Generally, reuse intention refers to the intention arised by consumers to maintain regular contact with the same branded mobile app (e.g., Cronin, Brady; and Hult 2000). However, analysing the respondent's actual behaviour is difficult; therefore this thesis will use the conceptual model designed to observe the intention construct instead, by Ajzen (1991) who argues that intention represents the strongest determinant of behaviour. Both attitude and reuse intention are supposed to be measured on two stages, before and after experience the mobile apps through downloads. Considering the past research which concluded intention as a direct determinant of attitude, the following hypothesis is proposed:

H1: Individuals' attitudes towards the branded app are positively related to reuse intention.

2.5. Hedonic and Utilitarian Values

According to Babin, Darden, and Griffin (1994); Dhar and Wertenbroch (2000), consumer choices are usually driven by utilitarian and hedonic considerations deriving feelings in both the dimension to varying degrees when final product is consumed (Batr and Ahtola, 1991). Utilitarian benefit relates to qualities of usefulness (Batra and Ahtola, 1991) and hedonic considerations are related to feelings, fantasy and fun (Hirschman and Holbrook, 1982). It is argued that the perceived degree of hedonic and utilitarian value of the product influences the origins of involvement with a product and its purchase. Others (e.g., Babin, darden, and Griffin, 1994), have argued that the focus should be on the product dimensions because they form a basic underlying phenomenon of attitude and consumption of products. According to Bruner and Kumar (2005) hedonic factors of fun and emotion significantly affects the attitude towards using handheld devices. In case of mobile phones, it is said that perception both highly useful and highly pleasurable will significantly affect, jointly and separately, the involvement with the product itself and the purchase of a product for personal use.

Among other criteria, branded apps differ in terms of content. Branded mobile apps provide different level of utilitarian and hedonic values (Davies et al. 2011) in order to fulfil users' specific needs even though the content varies depending upon the promoted brand. According

to Crowley, Spangenberg, and Hughes (1992), utilitarian values refer to functionality, goal-orientation and information while hedonic value is related to entertainment, pleasure and enjoyment. Hedonic value results from experiential based branded app content whereas utilitarian value is derived from informational branded app content (Kim, Lin, and Sung 2013). The findings of Li, Dong, and Chen (2012), in mobile marketing context, suggests that consumers adoption of both utilitarian and hedonic values influences their usage intention of mobile services. Different creative execution styles, mainly informational and experiential, leads to distinct mental experiences with regard to external focus of attention, users are forced to deal with the sensory cues of a game focusing their attention on mobile technologies, whereas utilitarian mobile apps are aimed at solving consumer problems. The present thesis assumes that people uses branded mobile apps not only to achieve specific goals or to solve their problems but also for entertainment and leisure. Therefore, hedonic and utilitarian values, both are proposed as factors that impact users' attitude regarding app usage.

Oliver (1993) suggested that perceived value should be measured and conceptualized as a cognitive construct, while customer satisfaction is conceptualized as an affective construct. Lin and Wang (2006) have found that perceived value in mobile commerce contexts should have a significant effect on satisfaction, while Kuo et al. (2009) showed that added value services related to mobile have had positive effect on user's satisfaction. Also, when consumers see target behaviour as online shopping being more valuable (e.g. cost effective and convenient), they automatically develop a positive attitude towards that behaviour. For example, Overby and Lee (2006) verified through their research that preference or positive attitude in context of online shopping do influence by hedonic and utilitarian factors. Moreover, in viewpoint of motivational factors, past studies have identified a positive relationship between hedonic motivation and attitude as well as between utilitarian motivation and attitude (Davis et al., 1992; Childers et al., 2001; Monsuwe et al., 2004).

Men and women differ in the activities they find interesting and the activities they prefer to engage in. These differences can be very much evidently observed in their daily way of life. For example, it has been reported that infants ranging between from 3 to 8 months shows greater gender differences in visual interest or playing of sex-linked toys (Alexander, Wilcox, and Woods, 2009). These gender differences in playing and preferences towards toys remain same throughout their childhood and adolescence (Trainor, Delfabbro, Anderson & Winefield, 2010) with boys spending much more time on playing physical games such as skating, bowling and riding scooters. On the other hand, girls spending time more on reading,

writing and listening to music. However, both boys and girls express same positive beliefs for these activities (Eccles, Wigfield, Harold, & Blumenfeld, 1993). According to Lippa (2010), these gender differences are considered to be prevalent during adulthood, stable across cultures and over time with men generally more interested in “things” and women more interested in “people”.

One would think that these differences in leisure activities and interest would also translate into consumer behaviour. Indeed, this is true, as men and women many times have been found to shown an interest in and talk about different products (Slama & Williams, 1990). Gender- in addition to income, marital status, education, and age- is one of the most important variables often used in marketing segmentation especially in clothing, cosmetics and magazines with gender segmentation being applied for many years in marketing (Kotler & Keller, 2006; Nysveen, Pedersen, & Thorbjomsen, 2005). Thus, an understanding of gender based differences in the processing of branded mobile apps is important to marketers, since it will enable them to communicate (or access) effectively to different market segments with excellent promotion schemes for each segment. Earlier research by Wolin (2003) has suggested that there are infact gender differences in the information processing of ads and messages within mobile applications. For example, women process information more elaborately than men and the continuous exposure to advertisement leads to significant exposure for women’s rather than a single advertisement exposure.

According to Frey (1986), *Selective Exposure Theory* assumes that individuals prefer information appropriate to their prior beliefs and views. Hence, men are thought to seek utilitarian values because of their goal-oriented behaviour, whereas women are sought to use mobile services that derive hedonic values because of their sensitivity traits (Christie 1997). Yang and Lee in (2010), found the same results when they supported the fact that women hold less favourable attitude towards utilitarian mobile services and prefer services with dominance of utilitarian values. Thus, it is proposed that:

H2a: Men prefer branded apps that derive utilitarian value to apps that derive hedonic value. Hence, they exhibit stronger reuse intention for utilitarian-oriented branded apps.

H2b: Women prefer branded apps that derive hedonic value to apps that derive utilitarian value. Hence, they exhibit stronger reuse intention for hedonic-oriented branded apps.

2.6. Prior Brand Involvement

Overall perception of an involvement with an interactive app depends upon the intensity and number of experiences a user can have with that mobile application. Although according to Calder, Malthouse, and Schaelder (2009), there can be as many as eight different kinds of experiences that consumer can derive by usage of mobile services; for our research sake, we will concentrate on just two of these, intrinsic enjoyment/ entertainment (experiential) experiences and utilitarian/informational gathering (information) experiences, as clearly defined by different type of interactive web content (Hoffman and Novak, 1996, 2009). As described before in the chapter “Hedonic and Utilitarian values”; examples like online magazines and chat rooms initially supports a hedonic experience because of its experiential or entertaining content, however like shopping or banking facilities generates more utilitarian experience because of its informational content.

However, and importantly, according to Darley and Smith’s (1995), most of the studies conducted on mobile applications does not take into consideration about the possible influence of *subject* related to the message or product, which in turn highly affects the consumer’s evaluation and purchase behaviour (Laroche et al., 2000). The advertisements used in Darley and Smith’s (1995) included “female’ products such as electric blankets and weighing scales, possibly causing men to feel less interested- which in turn may have led them to process information less comprehensively. Even in Laroche et al. (2000) study it was observed that, shopping is still an activity predominant by females” (p. 504), showing that men may use heuristic cues while shopping for gifts or clothes because they might themselves are not interested in shopping. It may be that the differences are a part of gender difference in interests rather than gender difference in information processing.

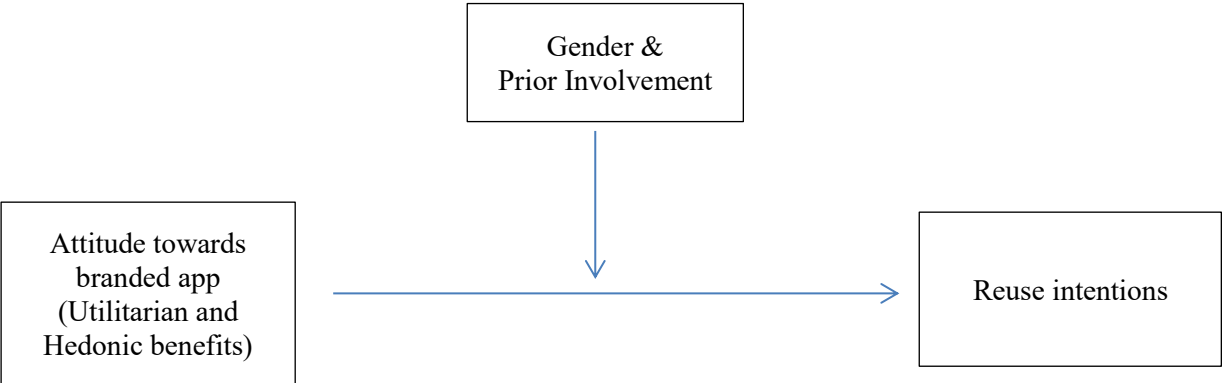
In consumer psychology literature, interests is commonly referred to as involvement, and thus in the remainder of the paper product interest shall also be referred as product involvement. Indeed, research has shown that with the increasing involvement, advertisement information processing also increases comprehensively, with low involvement leading to heuristic processing (Petty & Cacioppo, 1979). It is therefore said that when people have low involvement with the product they process information less comprehensively or more likely they rely on evaluative arguments, involving assessment of the qualities of the product and heuristic processing. Conversely, when the individual is highly involved with the product, he/she process information more comprehensively, and factual arguments will be relied on judgement.

Witmer & Singer 1998 (p.227) defines involvement as a psychological state experienced as a result of emphasizing one's attention and energy on a meaningful activities and events or a particular set of stimuli. Consumers feel satisfied and fulfilled (O'Cass, 2000) especially when the product/goods are good enough to serve their psychological needs, which further strengthens their level of involvement with the object or desired advertising message (Zaichkowsky, 1986). According to Bednall, Kanuk, O'Cass, Paladino, Schiffman & Ward, (2008), consumer's high involvement with services and products leads to self-engagement with the advertisement message; however, their low involvement raises negative attitude and self-separation (Nicovich, 2005). Addition to that, high involvement will also lead to more positive attitude towards advertisement and the advertised brand (Lee, Hu, & Tou, 2000). As such, according to Chattopadhyay and Basu (1990) advertisements of positive evaluated brands are seen more favourable than those which are negatively assessed. Since branded apps promote a specific brand, it is expected that with reference to Cacioppo and Petty (1979), prior involvement with the brand affects object related evaluations, which, in turn may result into the following hypothesis:

H3: The level of prior brand involvement moderate's individuals' immediate response towards branded apps.

2.7. Conceptual Model

Fig.1 Central route processing through Attitude towards branded app to Reuse intentions with Gender involvement as moderator



CHAPTER 3: METHODOLOGY

In this section, the methodology will be presented and the data collection process illustrated. In addition, data collection procedures, the used measures and the sample characteristics are presented.

3.1. Procedure:

This research uses both the primary and secondary data. Secondary data is used to better formulate the research hypothesis and research questions. It provided insights on the types of branded mobile applications, consumers' user intent towards mobile applications, utilitarian and hedonic values for mobile apps and gender role in between the mobile apps usage. Secondary data was collected through, academic articles, scientific paper, industry journals and internet web pages. Primary data was collected via two quantitative surveys as administered online and then sent to participants by email, thus eliminating interview biasness.

However, especially when it comes to topics such as men and women's assessment of branded mobile apps, it could be said that participants may feel reluctant to disclose their true opinions and feelings, thus administering self-questionnaire seems to be more anonymous, so that their answers are more likely to be true. This also makes sense because of the unique characteristics of the target population for the research. As mobile application is an online service that require access to the internet as well as a device through which consumers access it, all potential mobile application consumers are most likely able to answer the online survey. Moreover, this method ensured a fast data collection and made it easier to access the desired population. Consequently, this data collection method facilitated data reliability.

Moreover, all the respondents were assured of confidentiality and informed that the information would be used for research purposes only. The closed-ended questionnaire was structured in different parts, according to the distinct variables subject of the study. Existing scales drawn from academic literature have been used as a primary instrument to study the variables. In the next paragraph, the measurements will be presented. (The survey guideline can be found in appendix 1).

3.2. Sampling

To collect the quantitative data, the sampling technique used was convenience and snowball (where the elements of the sample recruited from the network of researchers and other respondents). These are both non-probability sampling techniques that allow for obtaining information quickly and inexpensively, which are major limitations appointed for this

research. With these methods, the data collected came from a sample of 162 respondents for the first Pre-survey and around 92 respondents from the second Post-Test survey.

The sample population for this study are consumers with mobile phone as the literature shows they are heavy app users. A convenience sample is drawn at random at CATOLICA University in Lisbon, Portugal. A questionnaire is developed to measure: 1) consumer's mobile app usage, 2) attitude towards brands after using branded apps, 3) the influence of branded mobile apps on reuse intentions, 4) demographic characteristics. To measure consumer's mobile app usage five questions are developed that are categorical in nature. As smart phone owners, respondents are asked to use apps downloaded, navigate it and complete the survey. Afterwards, they are asked to download four apps, navigate it and complete the survey.

3.3. Design:

The study is divided into pre-test survey and post-test survey with a focus on branded mobile application content as the independent variable. An online survey is conducted via Qualtrics to measure both pre-test and post questionnaire. After a pre-test survey to understand the respondent's basic mobile applications usage behaviour, respondents are asked to download four branded mobile application- Google Map, Snapchat, Uber and Tinder and use it/browse for the next 7 days. Respondents are then informed to receive an automatic email after a week for the post-test survey to be filled, asking them about their reuse intention towards mobile applications.

To remove this self-selection effect that happens when the respondents need to interact optionally, respondents were requested to use all four apps during the entire survey. However, there was no time limitation put down on the respondents and they were asked to use the apps in different unique and random order.

To eliminate the self-selection effects that occur when interaction is optional, each participant is asked to interact with all four test apps during the survey. Although interaction is required, however the amount of time spent with each application is upto the participant using the four applications in a uniquely different random order. The four apps varied according to a 2 (creative informational vs. experiential) x 2 (App: Brand 1 vs. Brand 2) within subjects design. Overall design is therefore 2x2x2 with dominant three subjects: Time, Execution style and Applications.

Table 2: Assumption and classification of utilitarian and hedonic apps

Execution Style	Informational/Utilitarian	Experiential/Hedonic
First app	Google Maps	Snapchat
Second app	Uber	Tinder

3.4. Stimuli:

The chosen four branded mobile applications (stimuli) are downloaded from iTunes store. The apps were chosen based on their execution and creative style: information and experiential style. However, the styles are selected according to the target audience, two apps for men and two apps for women. According to Hoffman and Novak (2009), and the existed literature which might give us an idea of the content being utilitarian or hedonic, the four branded mobile applications were selected as “typical” applications, also based on the rating they have acquired on iTunes Apple applications store and their popularity. The chosen applications have been described briefly in a table attached in the Appendix list.

3.5. Scales

Participants were asked to answer the survey on a pre-test and post-test basis whereby they were questioned about their mobile applications usage and consequently reuse intentions. Surveys were sent out online via Qualtrics. As a between-subject design, in the pre-test survey, men & women were asked to download and respond to all the four branded mobile applications. Afterwards, respondents were presented with a second, post-test survey, post 7 days interval to assess their re-use intentions and prior brand involvement. The questionnaire was based on existing and tested measures (e.g., Sweeney and Soutar 2001). The measuring scale for pre-test and post-test survey with product category involvement and reuse intention was adopted from Mittal (1995). Additionally, the respondents attitude towards mobile application branded content, is measured by five 7-point semantic differential scale such as unpleasure-pleasure, favourable-unfavorable, good-bad, appealing-unappealing etc. However, the surveys, pre-test and post-test, with apps and product categories were presented in a randomized order to the participants so as the order for multiple-scale items. Attitude towards branded apps are measured by adapting the scales from Shimp and kavas (2001) and Bellman et al.’s (2011). Reuse intention regarding branded apps measures are adapted from Cronin, Brady, and Hult (2000) and Pihlstrom and Brush (2008). As prior research indicated, it is controlled for prior brand evaluation (Chattopadhyay and Basu 1990).

Post-test survey used the same criteria from pre-test survey, in the beginning questions related to product category involvement and attitude towards the mobile application brands were asked, following with their reuse intention towards the four tested apps using same multiple-item scale order as of pre-test survey. This survey concluded by participant's response with their demographic details such as age, gender, qualification, occupation, income and nationality.

3.6. Measures:

First, all multidimensional measures are checked in terms of reliability and validity using IBM SPSS. To test the quality of reflective measures, exploratory factor analysis is conducted using IBM SPSS AMOS (Kline 1998). Second, to test our hypotheses, Pearson correlation coefficients and two linear regressions were conducted (H_1). Third, to test H_{2a} and H_{2b} , one-way ANOVAS are run on the dependent variables. Regarding the aim of this paper separate calculations for each sex are performed. Finally, to test H_3 , ANCOVAS are computed.

CHAPTER 4: RESULTS AND DISCUSSION

This chapter provides a presentation of the findings reported from the survey; this will be followed by the analysis of the data. Same as with all other tests in the thesis, 5% significance level was used for acceptance decisions.

4.1. Analysis

The collected data has been statistically analyzed and processed using the software package SPSS. First, descriptive statistics have been used to summarize the main characteristics of the sample, including frequency distributions about the control variables. Then, correlations and regression analysis were also tested to understand the strength of the relationships among the variables. Finally, the relationships and interactions were tested using ANOVAS. The main findings are presented below in the next paragraphs.

4.2. Results:

Since the questionnaire is divided into Pre-Test and Post-Test survey, it is recommended to make findings from both the perspective.

4.2.1. Sample characterization

The main focus of pre-test survey was to understand the respondent's product category usage and attitude towards four specific branded mobile applications- Google Map, Snapchat, Uber & Tinder, whereas, Post-test survey was done to understand respondents reuse intention. After an online questionnaire was administered, a total of 162 responses were recorded from Pre-test survey and 92 responses from Post-Test survey. Those participants who did not complete the entire survey or had a substantial amount of missing responses was excluded from further analyses, and respondents with very few missing responses were replaced by series mean in order to find the adequate responses. The majority (51.2%) of individuals involved in the study were female, while overall age ranged from under 21 years old to 50, with majority split amongst one major group from 21 up to 30 years old. Further, 92.8% of participants reported a level of education equal or higher than bachelor degree and 31.5% of them have monthly income more than 2,999 Euro. The data was collected throughout the month of April 2017.

Initially respondents were asked if they own a mobile phone or not and by no surprise, all the respondents from 162 records fully owned a smartphone. However, that was pre-intended as the primary requirement to fill this survey was to be between the ages of 18 to 50. Majority of

the respondents owns mobile phone with 4G (72.2%) while only 26.5% of them own mobile phone with 3G and 2.5% with neither of them.

According to the findings, most of the respondents use mobile quite often in their daily life mainly for making phone calls, using mobile apps, or surfing on internet. However, surprisingly most of the respondents do not like to download songs or playing games on mobile phone. However, concerning the major participants population for this research deriving from University students studying in the countries with high speed internet availability, it could be said that this population rather intend to stream on phone than to download. Unavailability of storage space could also be a reason to focus on streaming videos over phone.

To assess the quality of the measures, we considered whole sample (Pre-Test n=162 & Post-Test n=92), instead of checking the quality achievements of each treatment group. Indicators demonstrated that all dependent measures were deemed to be reliable. The model calculated based on the maximum likelihood method showed good fit criteria. The discriminant validity of the considered measures was also anticipated. Furthermore, the Cronbach alpha for each construct for four mobile applications (Google map, Snapchat, Uber & Tinder) in both samples was over 0.80, significantly exceeding the 0.70 level advocated by Nunnally (1978) and supporting the unidimensionality of the measures (see Table 2). Again, we observed satisfactory criteria in terms of reliability and validity. Thus, the extended model also showed a good fit.

Table 2: KMO and Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,874
Bartlett's Test of Approx. Chi-Square		9171,840
Sphericity	df	780
	Sig.	,000

The test is significant at the rate of .000 (value less than .001) and the KMO is higher than 0.5 so it's very good.

4.2.2. Hypothesis 1 Testing:

H1: Individuals' (men and women) attitudes towards the branded app are positively related to reuse intention.

In order to verify the link between attitude and behavioral intentions, the Pearson correlation suggested a significant positive strong correlation between attitudes towards the branded app and reuse intention ($r_{GM}=.27$, $r_{SP}=.600$, $r_{UB}=.59$, $r_{TR}=-.267$, $p<0.05$) Further, to explore whether attitude can predict behavioral intentions, the results of two linear regressions showed that, and attitude is a strong predictor of reuse intention- Google Map ($R^2=.073$, $F(1,90)=7.137$, $p<0.05$), Snapchat ($R^2=.360$, $F(1,90)=50.573$, $p<0.05$), Uber ($R^2=.350$, $F(1,90)=48.495$, $p<0.05$) and Tinder ($R^2=.071$, $F(1,90)=6.908$, $p<0.05$). Since attitude and behavioral intentions are positively related, we accept H1. In accordance with the attitude-behavior discrepancy phenomenon (Ajzen and Fishbein 1977), participants might have a positive attitude towards the branded app, but largely do not intend to reuse it or spread positive information about it. Positive attitudes can suggest a desired behavior when taken in isolation, but the decision to behave in a certain way may incorporate supplementary factors or motivations.

Table 3: Pearson Correlation between individuals attitude and reuse intention of branded apps

Attitude/Reuse intention	Google Map	Snapchat	Uber	Tinder
Pearson Correlation	.271	.600	.592	-.267
Sig (2-tailed)	.009	.000	.000	.010
N	92	92	92	92

Table 4: Linear regression between individuals attitude and reuse intention of branded apps

Attitude/Reuse intention	R	R ²	Adjusted R ²	Anova Sig	B
GM	.271	.073	.063	.009	.009
SP	.600	.360	.353	.000	.000
UB	.592	.350	.343	.000	.000
TD	.267	.071	.061	.010	.010

4.2.3. Hypothesis 2 Testing:

H2a: Men prefer branded apps that derive utilitarian value to apps that derive hedonic value. Hence, they exhibit stronger reuse intention for utilitarian-oriented branded apps.

H2b: Women prefer branded apps that derive hedonic value to apps that derive utilitarian value. Hence, they exhibit stronger reuse intention for hedonic-oriented branded apps.

With regard to H2, the one-way ANOVAs showed that men have a more favourable attitude towards utilitarian-oriented apps ($M=5.19$) compared with hedonic-oriented apps ($M=4.5$; $F(1,90)=1.318$, $p>.05$), which is exactly to our theory. However, p-value suggests that there is no significant relationship between two variables. According to Chen Davies, and Elliott (2002), our results may refer to the fact that an online environment, and especially the personal mobile environment, provides greater freedom, which, in turn might lead to unexpected outcomes and to an escape from culturally triggered expectations. In harmony with these interpretations, men rather intend to reuse utilitarian ($M=5.02$) than hedonic-related branded app content ($M=4.11$, $F(1,90)=.487$, $p>0.05$), however, once again, it is not statistically significant. When it comes to behaviour-related patterns, men switch to their expected sex role. Moreover, men's preference for app that derive hedonic value may stem from the fact that they process information more impulsively and engage in detailed processing less readily than women (Meyers-Levy 1989).

Among women, the same differences in behavioural intentions were noted ($M_{UT}=5.13$; $M_{HED}=4.29$; $F(1,90)=1.318$, $p>0.05$), which is contradictory to our theory. In harmony with their intentions, women expressed a high, but insignificant preference for utilitarian apps ($M=5.07$) to hedonic apps ($M=4.00$, $F(1,90) =.487$, $p>0.05$). Both men and women were indifferent about recommending utilitarian-oriented apps rather than hedonic-oriented apps. To sum up, H2 is partially accepted.

Table 5: One-Way Anova analysis between gender and their usage preference for Utilitarian & hedonic apps

Reuse _{UT/HD} /Gender	Utilitarian	Hedonic
Male	5.02	4.11
Female	5.07	4.00
F(1,90)	.175	.487
Sig.	.677	.487

Attitude _{UT/HD} /Gender	Utilitarian	Hedonic
Male	5.19	4.50
Female	5.13	4.28
F (1,90)	.130	1.318
Sig.	.720	.254

4.2.4. Hypothesis 3 Testing:

H3: The level of prior brand evaluations moderate's individuals' immediate response towards branded apps.

The results of the multivariate tests highlighted the impact of individual's prior brand evaluations on the dependent variables supported by an insignificant and indifferent main effect among men (Pillai's trace=1.47, $F(1,90) = .841, p < .05$) and women (Pillai's trace=1.46, $F(1,90) = .841, p < .05$). To this end, considering prior brand evaluation as a covariate led to a reduction in errors. After controlling for the covariate, the unexplained term is reduced regarding all dependent variables in both cases. The reduction is not notably high in terms of attitude towards the branded app (amount=4.8, amount=4.7). Subsequently, H3 is not supported by your dataset.

CHAPTER 5: CONCLUSIONS AND LIMITATIONS

5.1. Implications:

Our results have a number of implications. First, only few academic researches till now have investigated this topic even though a huge increase in the utilization of these apps as a new communication tool. Thus, this research is a kind of first to understand the effects of brand experience of branded mobile application with empirical data. Moreover, this research helps marketing and managers or companies who are concerned about branded apps as a new communication tool. It is suggested that if a company wants to increase its brand loyalty through branded apps, it must not stimulate sensory experience rather focus on stimulating affective and relational experience. Second, we examined the effects of reuse intention and prior brand involvement of branded apps by gender. Segmenting market by gender is a common strategy and because, targeting through communication messages could involve such segmentation, marketers have the opportunity to approach consumers more accurately (Wolin & Korgaonkar, 2005). Furthermore, our results regarding gender differences in utilitarian or hedonic content experience types of branded mobile application can provide a very useful criteria for developing marketing strategies. On the basis of above results, organizations can make an effective call to emphasize the dimension of content experience, considering target segments gender in designing branded mobile application. For example, in case of a women's cosmetics brand, it would be much wiser to emphasize on the hedonic experience when providing a brand experience through branded mobile applications.

Moreover, branded mobile applications offer the distinctive benefits of mobile marketing communication, able to update consumers with the latest localized deals and information, following wherever they go (Blasubramanina and Shankar 2009), however, the consumers also don't want to be annoyed by constant frequent messages or notifications, rather they want marketers to be more focused on "pull" marketing strategy to "push" marketing strategies.

5.2. Recommendations:

In harmony with our results, we propose marketers and managers to focus more on encouraging consumers to reuse and recommend their branded mobile applications. One of the way to achieve this is by incorporating the branded mobile app as a kind of push-based services in their cross-border media campaign and advertisements. Further, the result shows that men and women irrespective of their gender has the positive attitude towards hedonic and

utilitarian oriented apps but men rather intend to reuse utilitarian branded apps. Therefore, we suggest advertisers and marketers to focus on both the values of utilitarian and hedonic experience while aiming to promote positive attitude towards the branded mobile application among men and women in the long turn. This maybe relevant for apps like “Coca-Cola My Beat Maker” which was designed in 2012 for Olympic Games in London. To achieve long-term goals such as to strengthen brand relationship and build customer loyalty, we rather recommend marketers to develop both utilitarian and hedonic oriented branded mobile application, particularly in view of the fact that majority of the branded mobile applications are meant to be experiential (Kim, Lin, and Sung 2013). This could be a challenge to marketers and managers if they want to create an app that derives utilitarian value as it requires a deeper understanding of what individual user needs (Bellman et al. 2011). Perhaps, it would be necessary to allow personalization of the functionalities of branded mobile application with utilitarian-oriented content. Finally, our results indicate that individual’s prior brand evaluations have a little influence on the attitude towards branded mobile apps. Hence, marketers and advertisers should aim to address those customers who evaluate their brands positively, for example on a social media fan page.

5.3.Limitations and Further Research

Despite above findings, this research was not without limitations. First, we used branded mobile applications commonly utilized by consumers, regardless of the characteristics or type of the apps. In future, it would be beneficial to understand how the relationship differs based on the type of application. Second, we used convenience sampling of students; thus, proper care has to be taken while interpreting the study results. More recently, mobile phones have become widely available to all age groups (Marketing Charts, 2016); therefore, samples consisting of various professions or age group must be analysed in future. Third, as branded mobile applications can provide distinct experiences by developing and combining new technologies, different experiences through branded mobile apps and their relationships with brands should be explored further in future research. Additionally, although our research included respondents from all over the world, due to limited accessibility most of our responses came from three major countries- Portugal, India & Germany, therefore, future research should consider sample from diverse range of countries to make the results of this study more generalized. Also, there was a forced use of exposure to apps online, suggesting that the results could be misleading. It couldn’t be confirmed if the respondents have actually used the tested four apps or not, rather a filed survey would be much more appropriate for this particular case than the adopted online survey form.

The data obtained from the participants could not be considered reliable enough as there might be a case that most of them were actually not interested in using any of the four mobile branded apps, which points out one major opportunity to test these findings on actual field surveys. Fourth, as a researcher we faced one major issue whether the time given to respondents to download and interact with the four test apps should be controlled between pre-test and post-test survey of 7 days, or should be left alone on the respondents to decide how much time they want to take (self-directed). Regarding the dilemma, we choose former approach to actually control the time given to the participants, because, first otherwise it will lead to an unwanted variance on the part of the respondents with their psychological data as well as the self-directed report. Second, it is much easier to copy the participant's experience of using tested apps immediately after they have downloaded it with proper interaction. This could be a further opportunity for the future researchers to test the comparison between time interactions across diverse subjects.

Our measures of pre-post shift include data from people who might not have been interested in using any of the tested branded mobile apps. This limitation highlights the need to replicate. Since this study was conducted among University students, we can say that, however, it may not be a true representative of the broader range of modern consumers. Variables like income and social class could be another factor to have an impact on apps preferences and evaluations. Therefore, it is important that this study deals with real consumer and preferable customers from diverse ethnicities and cultures.

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APPENDICES

Appendix I: Study Questionnaire (Pre-Test)

Dear Participant,

I would like to invite you to participate in my research. You can participate if you are in a possession of a mobile phone. The research is a part of my master's thesis at CATOLICA LISBON School of Business & Economics.

Q1. Do you own a mobile phone?

Yes

No

Q2. Which of these mobile phones you own? (Please mark all that apply)

Mobile phone with 4G

Mobile phone with 3G

Mobile phone not 3G or 4G

None of these

Q3. How often do you use your mobile device to do the following activities?

	Never	Rarely	Sometimes	Often	Always
Take photos					
Send Text/SMS					
Visit websites					
Listen to music					
Play games					
Download songs					
Download new "apps"					
Use mobile apps					
Watch video					
Make phone calls					
Send email					

Q4. Product category attitudes:

Now I am interested in your opinions of different types of products and services...

I would like to know how you feel about WEB MAPPING SERVICES

Web mapping is the process of using maps delivered by geographic information systems (GIS). A web map on the World Wide Web is both served and consumed, thus web mapping is more than just web cartography, it is a service by which consumers may choose what the map will show.

	Not at all	Neutral	Very much
Important to me	<hr/>		
Mean something to me	<hr/>		
Significant	<hr/>		
Of concern to me	<hr/>		
Matter to me	<hr/>		

Q5. Consider Google Map mobile app:

Have you ever used this application before today?

Yes

No

Don't know

Q6. If you were going to use Web Mapping Service, what is the probability that you would use GOOGLE MAPS APP (assuming it was available)?

Never

All the time

Q7. What is your attitude towards Google Maps as a Web Mapping Service app?

Pleasant

Unpleasant

Appealing

Unappealing

Favorable

Unfavorable

Good

Bad

Likeable

Unlikeable

Q8. Now I would like to know how you feel about IMAGE and MULTIMEDIA MESAAGING SERVICE

Image sharing, or photo sharing, is the publishing or transfer of a user's digital photos online. Image sharing websites offer services such as uploading, hosting, managing and sharing of photos (publicly or privately). [1] This function is provided through both websites and applications that facilitate the upload and display of images.

Not at all	Neutral	Very much
Important to me	<hr/>	
Mean something to me	<hr/>	
Significant	<hr/>	
Of concern to me	<hr/>	
Matter to me	<hr/>	

**Q9. Consider Snapchat mobile app:
Have you ever used this application before today?**

- Yes
- No
- Don't know

Q10. If you were going to use Image and Multimedia Messaging Service, what is the probability that you would use SNAPCHAT APP (assuming it was available)?

Never	All the time
<hr/>	

Q11. What is your attitude towards SNAPCHAT as an Image and Multimedia Messaging Service app?

- | | |
|-----------|-------------|
| Pleasant | Unpleasant |
| Appealing | Unappealing |
| Favorable | Unfavorable |
| Good | Bad |
| Likeable | Unlikeable |

Q12. Now I would like to know how you feel about Transportation Network Services

A transportation network service connects pairing passengers with driver, via websites and mobile apps, who provide such services to passengers on their non-commercial vehicles.

Not at all	Neutral	Very much
Important to me		
Mean something to me		
Significant		
Of concern to me		
Matter to me		

Q12. Consider Uber mobile app:

Have you ever used this application before today?

- Yes
- No
- Don't know

Q14. If you were going to use Transportation Network Services, what is the probability that you would use UBER APP (assuming it was available)?

Never	All the time

Q15. What is your attitude towards UBER as a Transportation Network Services app?

- | | |
|-----------|-------------|
| Pleasant | Unpleasant |
| Appealing | Unappealing |
| Favorable | Unfavorable |
| Good | Bad |
| Likeable | Unlikeable |

Q16. Now I would like to know how you feel about ONLINE DATING SERVICE

An **online dating service** is a company that provides specific mechanisms (generally websites or applications) for online dating through the use of Internet-connected personal computers or mobile devices. Such companies offer a wide variety of unmoderated matchmaking services, most of which are profile-based.

Not at all	Neutral	Very much
Important to me	<hr/>	
Mean something to me	<hr/>	
Significant	<hr/>	
Of concern to me	<hr/>	
Matter to me	<hr/>	

Q17. Consider Tinder mobile app:

Have you ever used this application before today?

Yes

No

Don't know

Q18. If you were going to use ONLINE DATING SERVICES, what is the probability that you would use Tinder app (assuming it was available)?

Never

All the time

Q19. What is your attitude towards TINDER as an Online Dating Service app?

Pleasant

Unpleasant

Appealing

Unappealing

Favorable

Unfavorable

Good

Bad

Likeable

Unlikeable

Q20. Gender

Male

Female

Q21. Age

Under 20

21-30

31-40

41-50

50+

Q22. Marital status

Single

Married

Q23. Level of education

High school

Bachelor's degree

Master degree

PhD

Q24. Monthly household income

Less than 299

300-599

600-899

900-1999

2000+

Q25. Nationality:

Now I would advise you to download the above four mobile apps: Google map, Snapchat, Uber & Tinder and try them for one week.

I will contact you again after three days (via E-mail) as a follow up with a new survey to understand your usage behavior towards mobile apps. Be assured that the email provided by you, will be kept completely confidential and anonymous!

Therefore, I kindly request you to provide me your email id in the text below...

Email:

Survey complete

Appendix II: Study Questionnaire (Post-Test)

Dear Respondent,

I appreciate you taking your time to participate in today’s survey. I am going to ask you about certain types of mobile technology that you may use, as well as your opinions about certain brands.

The whole experience should take no more than 2 minutes.

Please read the questions carefully and answer as honestly as possible. There are no right or wrong answers, only your valuable opinions.

Q1. Google Map Mobile Block...

Please take a look at or remember the Google map app you may or may not used in the last three days:

Q2. Did you used the Google map mobile app in the last three days?

Yes

No

Q3. After using it for a while, what are your feelings toward the app?

Not at all	Neutral	Extremely
How excited did the app make you feel		<hr/>
How negative did the app Make you feel		<hr/>
How positive did the app make you feel		<hr/>

Q4. Think about the Google Map app you used?

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
<ul style="list-style-type: none"> • If I owned this app I would look forward to using it • I was uncomfortable using this app • I am glad I had a chance to use it • I found this app easy to use • I would like to use it again 							

Q5. This app was

- | | |
|---------------|-------------|
| Uninformative | Informative |
| Boring | Interesting |
| Unexciting | Exciting |
| Unappealing | Appealing |
| Uninvolving | Involving |

Q6. Snapchat Mobile Block...

Please take a look at or remember the Snapchat app you may or may not used in the last three days:

Q7. Did you used the Snapchat mobile app in the last three days?

- Yes
- No

Q8. After using it for a while, what are your feelings toward the app?

Not at all Neutral Extremely

How excited did the app
make you feel

How negative did the app

Make you feel

How positive did the app
make you feel

Q9. Think about the Snapchat app you used?

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
<ul style="list-style-type: none"> • If I owned this app I would look forward to using it • I was uncomfortable using this app • I am glad I had a chance to use it • I found this app easy to use • I would like to use it again 							

Q10. This app was

Uninformative

Informative

Boring

Interesting

Unexciting

Exciting

Unappealing

Appealing

Uninvolving

Involving

Uber Mobile Block...

Please take a look at or remember the Uber app you may or may not used in the last three days:

Q11. Did you used the Uber mobile app in the last three days?

Yes

No

Q12. After using it for a while, what are your feelings toward the app?

Not at all

Neutral

Extremely

How excited did the app
make you feel

How negative did the app

Make you feel

How positive did the app
make you feel

Q13. Think about the Uber app you used?

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
<ul style="list-style-type: none"> • If I owned this app I would look forward to using it • I was uncomfortable using this app • I am glad I had a chance to use it • I found this app easy to use <p>I would like to use it again</p>							

Q14. This app was

- | | |
|---------------|-------------|
| Uninformative | Informative |
| Boring | Interesting |
| Unexciting | Exciting |
| Unappealing | Appealing |
| Uninvolving | Involving |

Tinder Mobile Block...

Please take a look at or remember the Tinder app you may or may not used in the last three days:

Q15. Did you used the Tinder mobile app in the last three days?

- Yes
- No

Q16. After using it for a while, what are your feelings toward the app?

Not at all	Neutral	Extremely
How excited did the app make you feel		
How negative did the app Make you feel		
How positive did the app make you feel		

Q17. Think about the Tinder app you used?

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
<ul style="list-style-type: none"> • If I owned this app I would look forward to using it • I was uncomfortable using this app • I am glad I had a chance to use it • I found this app easy to use • I would like to use it again 							

Q18. This app was

- | | |
|---------------|-------------|
| Uninformative | Informative |
| Boring | Interesting |
| Unexciting | Exciting |
| Unappealing | Appealing |
| Uninvolving | Involving |

Q19. Gender

- Male
- Female

Q20. Are you:

- A student
- Employed
- Self-employed
- Unemployed
- Retired

Nationality:

Thank You & Exit

Mobile Phone Application Study

Survey complete

Thank you for completing this questionnaire.

Appendix III: Result Analysis

1. Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	79	48,8	48,8	48,8
Female	83	51,2	51,2	100,0
Total	162	100,0	100,0	

2. Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 21-30	144	88,9	88,9	88,9
31-40	10	6,2	6,2	95,1
41-50	8	4,9	4,9	100,0
Total	162	100,0	100,0	

3. Marital Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Single	151	93,2	93,2	93,2
Married	11	6,8	6,8	100,0
Total	162	100,0	100,0	

4. Level of education

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid High school	10	6,2	6,2	6,2
Bachelor's degree	51	31,5	31,5	37,7
Master degree	101	62,3	62,3	100,0
Total	162	100,0	100,0	

5. Monthly Household Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than €299	25	15,4	15,4	15,4
	€300 - €599	24	14,8	14,8	30,2
	€600 - €899	25	15,4	15,4	45,7
	€900 - €1999	37	22,8	22,8	68,5
	€2000+	51	31,5	31,5	100,0
	Total	162	100,0	100,0	

6. Nationality

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid AT - Austria	1	,6	,6	,6
BE - Belgium	2	1,2	1,2	1,9
DE - Germany	19	11,7	11,7	13,6
DK - Denmark	1	,6	,6	14,2
ES - Spain	1	,6	,6	14,8
FR - France	3	1,9	1,9	16,7
GB - United Kingdom	1	,6	,6	17,3
GR - Greece	2	1,2	1,2	18,5
IN - India	56	34,6	34,6	53,1
IT - Italy	8	4,9	4,9	58,0
KZ - Kazakhstan	1	,6	,6	58,6
NE - Niger	1	,6	,6	59,3
NL - Netherlands	2	1,2	1,2	60,5
NO - Norway	1	,6	,6	61,1
PL - Poland	1	,6	,6	61,7
PT - Portugal	56	34,6	34,6	96,3
RO - Romania	1	,6	,6	96,9
RU - Russia	1	,6	,6	97,5
SI - Slovenia	1	,6	,6	98,1
SV - El Salvador	1	,6	,6	98,8
UA - Ukraine	1	,6	,6	99,4
US - United States	1	,6	,6	100,0
Total	162	100,0	100,0	

7. (i) Mobile phone with 4G

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Mobile phone with 4G	117	72,2	100,0	100,0
Missing System	45	27,8		
Total	162	100,0		

(ii) Mobile phone with 3G

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Mobile phone with 3G	43	26,5	100,0	100,0
Missing System	119	73,5		
Total	162	100,0		

(iii) Mobile phone not 3G or 4G

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Mobile phone not 3G or 4G	4	2,5	100,0	100,0
Missing System	158	97,5		
Total	162	100,0		

(iv) None of these

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid None of these	3	1,9	100,0	100,0
Missing System	159	98,1		
Total	162	100,0		

8. (i) Send Text/SMS

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Never	5	3,1	3,1	3,1
Rarely	22	13,6	13,6	16,7
Sometimes	23	14,2	14,2	30,9
Often	39	24,1	24,1	54,9
Always	73	45,1	45,1	100,0
Total	162	100,0	100,0	

(ii) Visit websites

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Never	2	1,2	1,2	1,2
Rarely	5	3,1	3,1	4,3
Sometimes	20	12,3	12,3	16,7
Often	65	40,1	40,1	56,8
Always	70	43,2	43,2	100,0
Total	162	100,0	100,0	

(iii) Listen to music

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Never	8	4,9	4,9	4,9
Rarely	12	7,4	7,4	12,3
Sometimes	20	12,3	12,3	24,7
Often	51	31,5	31,5	56,2
Always	71	43,8	43,8	100,0
Total	162	100,0	100,0	

(iv) Play games

	Frequency	Percent	Valid Percent	Cumulative Percent
--	-----------	---------	---------------	--------------------

Valid	Never	47	29,0	29,0	29,0
	Rarely	49	30,2	30,2	59,3
	Sometimes	25	15,4	15,4	74,7
	Often	18	11,1	11,1	85,8
	Always	23	14,2	14,2	100,0
	Total	162	100,0	100,0	

(v) Download songs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	65	40,1	40,1	40,1
	Rarely	37	22,8	22,8	63,0
	Sometimes	26	16,0	16,0	79,0
	Often	19	11,7	11,7	90,7
	Always	15	9,3	9,3	100,0
	Total	162	100,0	100,0	

(vi) Send email

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	5	3,1	3,1	3,1
	Rarely	12	7,4	7,4	10,5
	Sometimes	49	30,2	30,2	40,7
	Often	57	35,2	35,2	75,9
	Always	39	24,1	24,1	100,0
	Total	162	100,0	100,0	

(vii) Watch video

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Never	5	3,1	3,1	3,1
Rarely	13	8,0	8,0	11,1
Sometimes	41	25,3	25,3	36,4
Often	65	40,1	40,1	76,5
Always	38	23,5	23,5	100,0
Total	162	100,0	100,0	

(viii) Make phone calls

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Never	2	1,2	1,2	1,2
Rarely	2	1,2	1,2	2,5
Sometimes	14	8,6	8,6	11,1
Often	42	25,9	25,9	37,0
Always	102	63,0	63,0	100,0
Total	162	100,0	100,0	

(ix) Take photos

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Never	2	1,2	1,2	1,2
Rarely	7	4,3	4,3	5,6
Sometimes	30	18,5	18,5	24,1
Often	61	37,7	37,7	61,7
Always	62	38,3	38,3	100,0
Total	162	100,0	100,0	

(x) Use mobile apps

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Never	3	1,9	1,9	1,9
Rarely	9	5,6	5,6	7,4
Sometimes	35	21,6	21,6	29,0
Often	41	25,3	25,3	54,3
Always	74	45,7	45,7	100,0
Total	162	100,0	100,0	

Product category attributes:

9. (i) WM(Q5WM_1) Important to me

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid ,00	4	2,5	2,5	2,5
10,00	7	4,3	4,3	6,8
20,00	2	1,2	1,2	8,0
30,00	4	2,5	2,5	10,5
40,00	4	2,5	2,5	13,0
50,00	25	15,4	15,4	28,4
60,00	16	9,9	9,9	38,3
65,62	9	5,6	5,6	43,8
70,00	31	19,1	19,1	63,0
80,00	29	17,9	17,9	80,9
90,00	15	9,3	9,3	90,1
100,00	16	9,9	9,9	100,0
Total	162	100,0	100,0	

(ii) WM(Q4_2) Mean something to me

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid ,00	6	3,7	3,7	3,7
10,00	9	5,6	5,6	9,3
20,00	4	2,5	2,5	11,7
30,00	2	1,2	1,2	13,0
40,00	11	6,8	6,8	19,8
50,00	28	17,3	17,3	37,0
58,95	9	5,6	5,6	42,6
60,00	24	14,8	14,8	57,4
70,00	31	19,1	19,1	76,5
80,00	18	11,1	11,1	87,7
90,00	10	6,2	6,2	93,8
100,00	10	6,2	6,2	100,0
Total	162	100,0	100,0	

(iii) WM(Q4_3) Significant

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid ,00	7	4,3	4,3	4,3
10,00	6	3,7	3,7	8,0
20,00	3	1,9	1,9	9,9
30,00	6	3,7	3,7	13,6
40,00	8	4,9	4,9	18,5
50,00	18	11,1	11,1	29,6
60,00	20	12,3	12,3	42,0
62,94	9	5,6	5,6	47,5
70,00	34	21,0	21,0	68,5
80,00	20	12,3	12,3	80,9
90,00	17	10,5	10,5	91,4
100,00	14	8,6	8,6	100,0
Total	162	100,0	100,0	

(iv) WM(Q4_4) Of concern to me

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid ,00	5	3,1	3,1	3,1
10,00	6	3,7	3,7	6,8
20,00	9	5,6	5,6	12,3
30,00	8	4,9	4,9	17,3
40,00	6	3,7	3,7	21,0
50,00	30	18,5	18,5	39,5
58,37	9	5,6	5,6	45,1
60,00	20	12,3	12,3	57,4
70,00	34	21,0	21,0	78,4
80,00	14	8,6	8,6	87,0
90,00	9	5,6	5,6	92,6
100,00	12	7,4	7,4	100,0
Total	162	100,0	100,0	

(v) WM(Q4_5) Matter to me

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid ,00	4	2,5	2,5	2,5
10,00	7	4,3	4,3	6,8
20,00	5	3,1	3,1	9,9
30,00	6	3,7	3,7	13,6
40,00	12	7,4	7,4	21,0
50,00	22	13,6	13,6	34,6
60,00	19	11,7	11,7	46,3
60,92	9	5,6	5,6	51,9
70,00	34	21,0	21,0	72,8
80,00	21	13,0	13,0	85,8
90,00	11	6,8	6,8	92,6
100,00	12	7,4	7,4	100,0
Total	162	100,0	100,0	

Cronbach Alpha's: Product category attribute:

- (i) WEB MAPPING SERVICE

10. Case Processing Summary

		N	%
Cases	Valid	162	100,0
	Excluded ^a	0	,0
	Total	162	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,946	,946	5

- (ii) IMAGE AND MULTIMEDIA SERVICE

Case Processing Summary

		N	%
Cases	Valid	162	100,0
	Excluded ^a	0	,0
	Total	162	100,0

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,969	,969	5

(iii) TRANSPORTATION SERVICE

Case Processing Summary

		N	%
Cases	Valid	162	100,0
	Excluded ^a	0	,0
	Total	162	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,973	,973	5

(iv) ONLINE DATING

Case Processing Summary

		N	%
Cases	Valid	162	100,0
	Excluded ^a	0	,0
	Total	162	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,969	5

Mobile applications:

(v) GOOGLE MAP

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,967	,967	5

Case Processing Summary

	N	%
Cases Valid	162	100,0
Excluded ^a	0	,0
Total	162	100,0

a. Listwise deletion based on all variables in the procedure.

(vi) SNAPCHAT

Case Processing Summary

	N	%
Cases Valid	162	100,0
Excluded ^a	0	,0
Total	162	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,817	5

(vii) UBER

Case Processing Summary

		N	%
Cases	Valid	162	100,0
	Excluded ^a	0	,0
	Total	162	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,982	5

(viii) TINDER

Case Processing Summary

		N	%
Cases	Valid	162	100,0
	Excluded ^a	0	,0
	Total	162	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,976	5

Hypothesis 1:

Pearson correlation between attitude and reuse intention in the post-survey

Correlations

		GMattnew variable	GMRenew variable
GMattnew variable	Pearson Correlation	1	,271**
	Sig. (2-tailed)		,009
	N	92	92
GMRenew variable	Pearson Correlation	,271**	1
	Sig. (2-tailed)	,009	
	N	92	92

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		SPatnew variable	SPrenew variable
SPatnew variable	Pearson Correlation	1	,600**
	Sig. (2-tailed)		,000
	N	92	92
SPrenew variable	Pearson Correlation	,600**	1
	Sig. (2-tailed)	,000	
	N	92	92

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

	UBatnew variable	UBrenew variable
UBatnew variable Pearson Correlation	1	,592**
Sig. (2-tailed)		,000
N	92	92
UBrenew variable Pearson Correlation	,592**	1
Sig. (2-tailed)	,000	
N	92	92

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

	TRatnew variable	TRrenew variable
TRatnew variable Pearson Correlation	1	-,267*
Sig. (2-tailed)		,010
N	92	92
TRrenew variable Pearson Correlation	-,267*	1
Sig. (2-tailed)	,010	
N	92	92

*. Correlation is significant at the 0.05 level (2-tailed).

Linear regression between attitude (independent variable) and reuse intention (dependent variable)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,271 ^a	,073	,063	,57885

a. Predictors: (Constant), GMatnew variable

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2,392	1	2,392	7,137	,009 ^b
	Residual	30,156	90	,335		
	Total	32,547	91			

a. Dependent Variable: GMrenew variable

b. Predictors: (Constant), GMatnew variable

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,106	,368		11,149	,000
	GMatnew variable	,183	,069	,271	2,672	,009

a. Dependent Variable: GMrenew variable

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,600 ^a	,360	,353	,81366

a. Predictors: (Constant), SPatnew variable

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33,481	1	33,481	50,573	,000 ^b
	Residual	59,583	90	,662		
	Total	93,064	91			

a. Dependent Variable: SPrenew variable

b. Predictors: (Constant), SPatnew variable

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,458	,352		4,141	,000
	SPatnew variable	,561	,079	,600	7,111	,000

a. Dependent Variable: SPrenew variable

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,592 ^a	,350	,343	,71686

a. Predictors: (Constant), UBatnew variable

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24,916	1	24,916	48,485	,000 ^b
	Residual	46,250	90	,514		
	Total	71,167	91			

a. Dependent Variable: UBrenew variable

b. Predictors: (Constant), UBatnew variable

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,323	,396		5,873	,000
	UBatnew variable	,540	,078	,592	6,963	,000

a. Dependent Variable: UBrenew variable

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,267 ^a	,071	,061	,96636

a. Predictors: (Constant), TRatnew variable

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6,451	1	6,451	6,908	,010 ^b
	Residual	84,047	90	,934		
	Total	90,497	91			

a. Dependent Variable: TRrenew variable

b. Predictors: (Constant), TRatnew variable

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,230	,395		13,237	,000
	TRatnew variable	-,226	,086	-,267	-2,628	,010

a. Dependent Variable: TRrenew variable

Hypothesis 2:

Test of Homogeneity of Variances

Utilitarian apps (including attitude and feelings)

Levene Statistic	df1	df2	Sig.
,112	1	90	,738

ANOVA

Utilitarian apps (including attitude and feelings)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,074	1	,074	,130	,720
Within Groups	51,565	90	,573		
Total	51,639	91			

Robust Tests of Equality of Means

Utilitarian apps (including attitude and feelings)

	Statistic ^a	df1	df2	Sig.
Welch	,131	1	88,825	,719
Brown-Forsythe	,131	1	88,825	,719

a. Asymptotically F distributed.

Test of Homogeneity of Variances

Hedonic apps (including attitude and feelings)

Levene Statistic	df1	df2	Sig.
,029	1	90	,866

ANOVA

Hedonic apps (including attitude and feelings)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1,052	1	1,052	1,318	,254
Within Groups	71,846	90	,798		
Total	72,898	91			

Robust Tests of Equality of Means

Hedonic apps (including attitude and feelings)

	Statistic ^a	df1	df2	Sig.
Welch	1,319	1	89,983	,254
Brown-Forsythe	1,319	1	89,983	,254

a. Asymptotically F distributed.

Test of Homogeneity of Variances

Utilitarian apps(reuse)

Levene Statistic	df1	df2	Sig.
1,149	1	90	,287

ANOVA

Utilitarian apps(reuse)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,068	1	,068	,175	,677
Within Groups	34,882	90	,388		
Total	34,950	91			

Robust Tests of Equality of Means

Utilitarian apps(reuse)

	Statistic ^a	df1	df2	Sig.
Welch	,175	1	89,891	,676
Brown-Forsythe	,175	1	89,891	,676

a. Asymptotically F distributed.

Test of Homogeneity of Variances

Hedonic (reuse)

Levene Statistic	df1	df2	Sig.
2,116	1	90	,149

ANOVA

Hedonic (reuse)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,262	1	,262	,487	,487
Within Groups	48,504	90	,539		
Total	48,766	91			

Robust Tests of Equality of Means

Hedonic (reuse)

	Statistic ^a	df1	df2	Sig.
Welch	,482	1	84,162	,489
Brown-Forsythe	,482	1	84,162	,489

a. Asymptotically F distributed.

Hypothesis 3:

Univariate Analysis of Variance

Descriptive Statistics

Dependent Variable: Prior brand evaluation

Gender	Mean	Std. Deviation	N
Male	1,4709	,23369	45
Female	1,4603	,27068	47
Total	1,4655	,25193	92

General Linear Model

Descriptive Statistics

	Gender	Mean	Std. Deviation	N
Prior brand evaluation	Male	1,4709	,23369	45
	Female	1,4603	,27068	47
	Total	1,4655	,25193	92
Attitude towards app	Male	4,8400	,60880	45
	Female	4,7032	,68353	47
	Total	4,7701	,64816	92

Levene's Test of Equality of Error Variances^a

	F	df1	df2	Sig.
Prior brand evaluation	1,542	1	90	,218
Attitude towards app	,076	1	90	,783

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Q48

Appendix IV: Description for four chosen branded mobile applications

Brand	Description
Google Maps	A web mapping service designed by Google, offering street map, satellite imagery, real-time traffic conditions, 360 panoramic views of streets, and route planning related services.
Zomato	A restaurant search and discovery service website with information on reviews on restaurants, including images of menus and non-location services.
Snapchat	A multimedia mobile and image messaging application to allow uses to share their pictures/images which are explicitly self-deleting and short-lived.
Tinder	A location-based social search mobile application that allow mutually interested users to communicate with each other, with match making expectations.