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TITOLO TESI

**THE UBIQUITOUS ROLE OF NEW SOCIAL MEDIA CHANNELS  
AND INNOVATIVE MOBILE SERVICES:ARE CONSUMERS  
READY?**

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## **DEDICATIONS**

*I would like to dedicate this thesis to my family, especially to my lovely mother and father, who always believed in their children, and to my husband and daughter, with love and deepest appreciations.*

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## **DECLARATION**

I declare that the ideas, results, analysis, findings and conclusions reported in this thesis are entirely my own efforts, except where otherwise acknowledged. I also declare that this work is original and has not been previously submitted for any degree award.

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## **CHAPTER I**

### **Introduction**

#### **I. Introduction**

Over the past decade, the world of social media is evolving at warp speed. In light of this rapid evolution, investigating social media users behaviour is top of the agenda for many managers and marketing researchers today (Kaplan and Haenlein, 2010). Indeed, still there are several areas in which we believe social media channels such as social networking, e-commerce, s-commerce, and blogs will make the most trivial evolution in years to come. Indeed, the mobile information and communication technology has recognized an industry-changing shift where the traditional use of a mobile device as voice service is considered now a simple feature of the device. However, it has become a platform upon which many complementary and innovative mobile services, such as mobile location-based services, mobile advertising, and mobile location based social networking, have been created (Ballon, and Hawkins, 2008).

The number of handset subscribers worldwide exceeded 5 billion by the end of 2010. Among these handset subscribers, 18.2 million subscribers subscribed to Internet access service (Tsai and Chung, 2011). Again, these statistics confirm what we argued before that mobile devices not only serve as personal communication devices (mobile traditional functionality), however have also become important Internet access devices. As different types of social media tools and technologies have different applications and purposes, a large number of “connection platforms” have therefore emerged. Indeed, with the emergence of these newly intended social media mobile technology platforms, it is crucial to consider that “technology alone, even good technology alone is not sufficient to create social or economic value” (Rob Kling, 2007). For that reason, in addition to the improvement of social media technological aspects, it is important to address the social media platforms research from other perspective that are

crucial for understanding users behaviour face the rapid growth of these innovative technologies.

Face to this widespread use of mobile devices connected to the social media network, we should gain new insights into the impact of the social media mobility transformation on the way people lead their lives is crucial to fuel the mobile platforms industry growth.

Furthermore, this impressive expansion of social media phenomenon has shaped the interactions of people through different social media platforms (Colliander and Dahlén, 2011; Cho et al., 2014). Notably, in the global social media environment, information and knowledge could be shared online between social media platforms users who belong to different virtual communities (Curras-Perez et al., 2014). Nowadays, social media platforms also offer a new set of business models that challenge traditional business processes and operations (Hanna et al., 2011). Indeed, social media phenomenon has revolutionized the traditional marketing tools and strategies.

Moreover, social media channels allow for a tighter integration of virtual and real life in different contexts (e.g. social, commercial). From a pure social perspective, for instance, with status updates on Facebook, Twitter, Facebook Places and Foursquare check-in social media users can know what their friends are doing at any time and everywhere and actually join them in their activities. From a commercial perspective, social media users through s-commerce and social media mobile advertising can have different shopping experience.

Despite this growth, the existent research (Junglas and Watson, 2008; Kaasinen, 2003) has focused mainly on technology improvement and on the single effect of privacy concerns on the user behaviour and has seldom other important effect such social influence, cultural dimensions effects, gender differentiation and consumer psychological distance perspective. Further, most studies to date have examined general consumer activities on social media, such as, uploading photos on Flickr (Zeng and Wei, 2013), sharing content on Twitter (Stieglitz and Dang-Xuan, 2013; Toubia and Stephen, 2013), and sharing of videos on YouTube (Lange, 2007), however, they have not specifically investigated the effect of social media on consumers behaviour engage in.

Moreover, findings from previous studies (Shiue et al., 2010; Wang and Lin, 2011) on motivations to use and participate in social media mainly have focussed on understanding various social behavioural aspects, such as social influence, social interaction, social ties, and social identity and argued that social motives are the main factor behind social media use, which is an obvious thinking. However, motivation behind the use of social media platforms could be based on other factors such as, cultural, psychological dimensions and also based on

gender differentiation. Thereby, it is possible that motivations behind social media channels differ for use and participation.

## **II. What is Social Media?**

Since the social media is in a continuous evolution, there is an occasional confusion regarding the terminology use of social media. Indeed, the term “social media” is commonly used interchangeably with social computing, social networking, Web 2.0, and virtual social worlds (Haenlein and Kaplan, 2009).

Several definitions of social media for various applications and purposes have been provided by different studies. Strauss and Frost (2011) defined social media as “a term used to describe the type of media that is based on conversation and interaction between people online”. Further, the authors argued that the main difference with traditional media is that, on social media the content is not generated as a corporate monologue, but it is seen as a conversation where participants can upload content, discuss, edit but also rate each other’s content (Strauss and Frost, 2011). In line with the Strauss and Frost’ definition, Kaplan and Haenlein (2010) defined social media as “internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of user-generated content”. Further, Henderson and Bowley (2010) considered social media as “a collaborative online applications and technologies that enable participation, connectivity user-generated content, sharing of information, and collaboration amongst a community of users”. Moreover, previous studies argued that social media has also a role to play in business contexts. Indeed, Parker (2011) considered social media as “ways to spread the word about your brand or product on the Web using tools and websites that allow a conversation to take place between you and your target market”.

## **III. Social Media Taxonomy**

To arrive at a taxonomy for social media types, this section follows previous research classifications of social media platforms. A thorough literature analysis reveals in essence the following three related social media taxonomy:

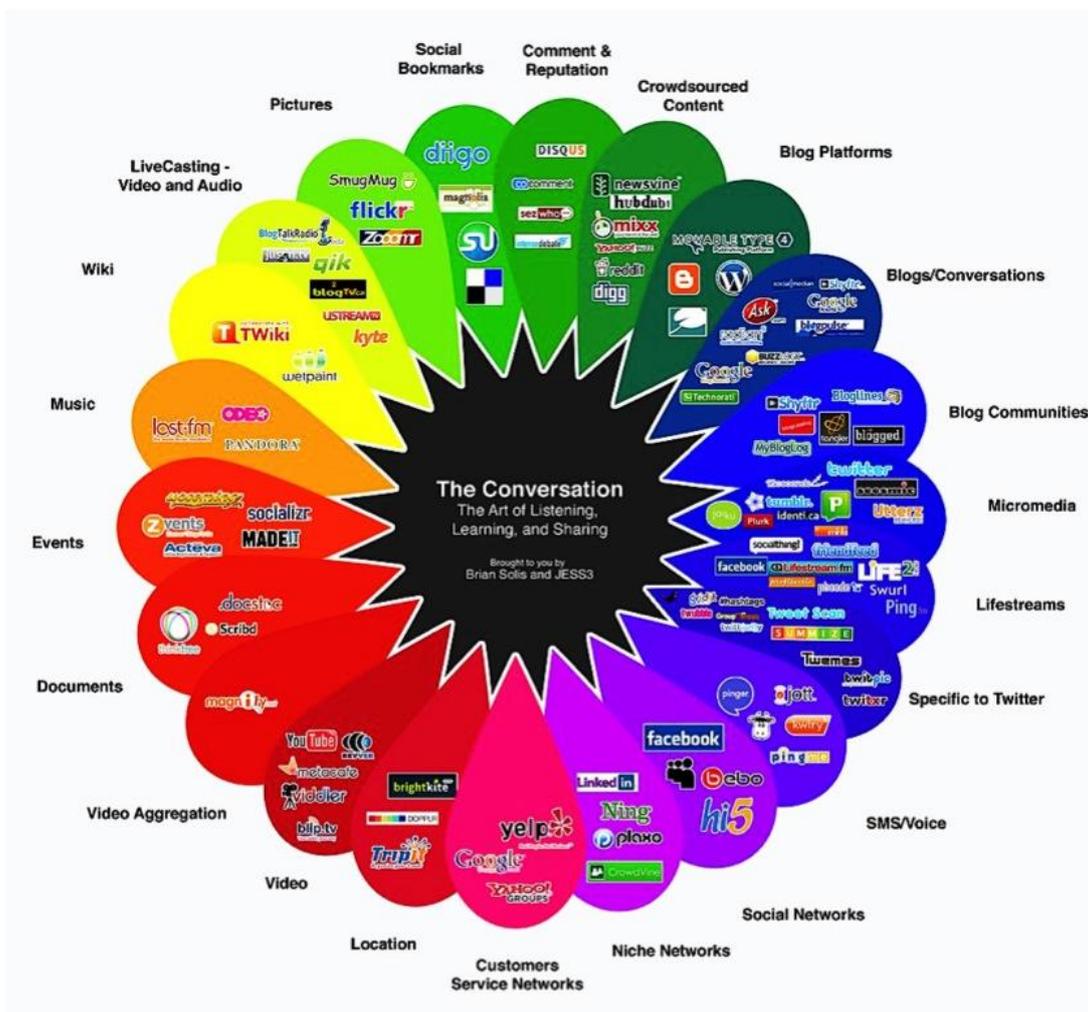
Firstly, the social media classification by Parker (2011) segmented social media into 8 different categories:

- Blogging (e.g. TypePad, WordPress, Blogger...)
- Microblogging (e.g. Twitter, FriendFeed),
- Social networking (e.g. Facebook, LinkedIn, Orkut, Plaxo, Ning, MySpace...),

- Social bookmarking (e.g. Digg, StumbleUpon, Delicious...),
- Multimedia sharing (e.g. YouTube, Flickr),
- Reviews and opinions (e.g. Epinions, TripAdvisor, eHow...),
- Wikis (e.g. Wikipedia)
- Forums

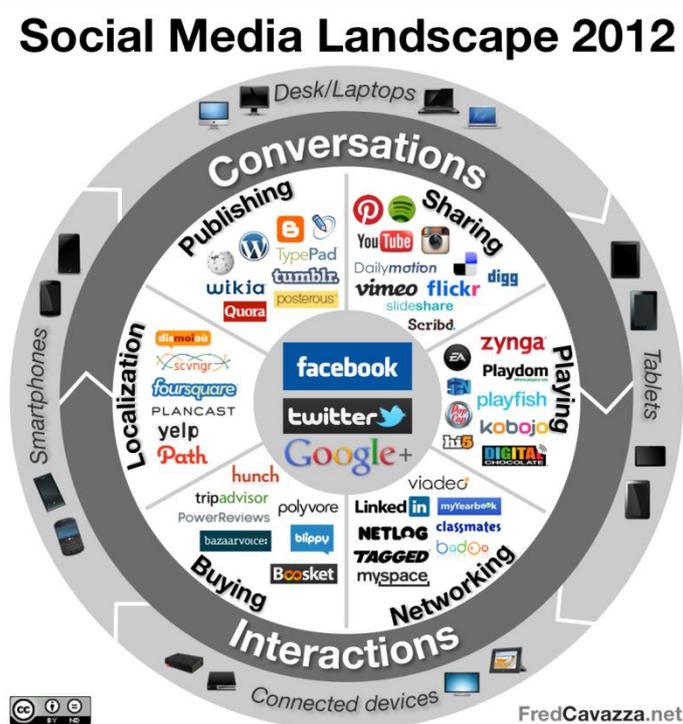
Secondly, Solis and Thomas (2012) created a map for the Social Landscape classifying social media platforms and tools in a lot more categories (Figure 1).

**Figure 1.**The Conversation Prism, Brian Solis and Jesse Thomas (2012)



Finally, Cavazza (2012) argued that there are many types of social media channels available to people to connect to each other and form communities. Indeed, these social media types allow people to publish, share, play, build network, buy and localize. These social media are available on different types of devices, allowing thus people to connect from everywhere (Figure 2).

**Figure 2.** Cavazza’s Social Media Landscape (2012)



This list cannot be considered as exhaustive taxonomy of social media types since social media platforms are in continuous evolution following the technology growth. Now days, consumers are in front of various types of social media platforms and can be influenced in their purchase decision-making process by social media virtual communities. Given that, it can be complicated to underline what is the exact effect exerted by these social medial platform types in this decision-making process. Consequently, it is difficult to precisely specify one definitive taxonomy of social media. However, in the current research, we think that the Cavazza (2012) Social Media Landscape classification described better the social media platforms usage.

#### **IV. Research topics in the ubiquitous use of social media platforms technologies**

Given the background provided about social media platforms adoption and strategic usage, there are some interesting and relevant topics that are particularly relevant in research on consumer behaviour towards these geo-information platforms and await further empirical exploration. More specifically, we stated our interest in the following research topics:

- **Cross-cultural comparison between Arabic and Western countries in Location-Based Social Networking (LBSN) usage on mobile phones: The case of Facebook,**

- **The moderating effect of gender on Tunisian purchase decision in S-commerce environment: An empirical investigation,**
- **The ubiquitous role of social media mobile advertising in mediating consumers shopping experience: Experimental analysis.**

Before we introduce our specific research questions covered in the empirical chapters, a more general description of these topics will be provided.

Firstly, considering the cross-cultural aspects in studying the LBSN adoption on mobile phones, in a relationship social context, is a key driver of the growth and success of mobile LBSN and is even crucial to telecommunication operators to implement these services. Therefore, enhanced functionality and greater levels of LBSN on mobile phones necessitate an in-depth understanding of consumer perceptions and behaviour towards these ubiquitous services.

Secondly, recently s-commerce is considered as a new form of social media that has arisen which due to its social features seem to have a great power of influence on consumers' purchasing decision-making process. Today, more and more consumers use social media channels to communicate together (e.g. Facebook) but also to communicate with brands (e.g. F-commerce). This new interaction is of interests for marketing professionals. Thereby, this recent emergence of social media phenomenon has significantly changed the traditional marketing strategies. In contrast with traditional media, social media have greatly changed relationships between consumers and companies by allowing a two-way communication (Hoyer, and MacInnis, 2010). The marketing area has thus evolved from a time where marketers had the power of influence to today where consumers have a greater power of influence on their peers (Jaffe, 2010). Indeed, s-commerce sites enable consumers to share contents and ideas together, write recommendations, reported their past experience with product and services (Brown and Hayes, 2008). Therefore, with this new phenomenon of s-commerce, digitally empowered s-commerce users have access to a wide range of new tools to find and research products with the opportunity to consult with peers and experts before making their purchase (Wheat and Dodd, 2009).

Finally, with the advent of 4G mobile devices and the mobile location based advertising, consumers' preferences can be pre-identified and advertising content can therefore be delivered to consumers at the right time and at the right place with the right message (Chen and Hsieh, 2012). Therefore, it becomes necessary and reasonable to enhance our

understanding about the role of mobile advertising in mediating consumers shopping experience, since we begin to find ourselves bringing our mobile devices (PDAs and smart phones) everywhere we go. In other words, an important part of our context increasingly reflects our motivation of mobile advertising acceptance. In this sense, understanding the potential for integrating mobile shopping services and applications whit objects and places in the physical world and analysing the consumer behaviour in the presence of these opportunities for handheld and ubiquitous mobile technologies and services that support the shopping experience is needed.

## V. Research Outline

This research critically reviews studies in the field of behavioural use in the context of social media platforms, and is based upon three empirical studies presented in Chapter II, III and IV. Each chapter differs in terms of approach, theory, method, and data. Table 1 provides an overview of these chapters in terms of key concepts, main research questions, research context, and research methodology.

**Table 1. Chapters Overview**

	<b>Chapter II</b>	<b>Chapter III</b>	<b>Chapter IV</b>
<b>Key Concepts</b>	Location Based Social Networking (LBSN), Mobile Phones, Cross-Cultural Comparison, Triandis's Model, Facebook.	Social Media, Web 0.2., Social Commerce, Utilitarian and Hedonic Gratifications, Gender Perspective.	Social Media Mobile Advertising, Shopping Experience, Spatial Distance, Advertising Content, Construal Level Theory.

<p><b>Main Research Questions</b></p>	<p><b>RQ1.</b> What past literature did investigate and what did they left in the area of LBSN? <b>RQ2.</b> Does culture play a significant role on the adoption and usage of LBSN on mobile phones across different cultural contexts (Arabic and Western cultures)? If so, <b>RQ3.</b> To what extend do Hofstede’s cultural dimensions impact the LBSN adoption across these cultures? Finally, <b>RQ4.</b> How and Why people use LBSN on their mobile phones?</p>	<p><b>RQ1.</b> What past literature did investigate and what did they left in the area of social commerce environment? <b>RQ2.</b> What are the determinants of consumers’ purchasing behaviour in the social commerce environment? And how they influence the consumers’ decisions? <b>RQ3.</b> Does gender play a significant role in influencing consumers purchasing behaviour? If so, <b>RQ4.</b> To what extend do gender differentiation impact the purchase behaviour on the social media sites?</p>	<p><b>RQ1.</b>Why does geographical mobile advertising targeting matter? <b>RQ2.</b> Why dose contextual mobile advertising targeting matter? <b>RQ3.</b>Does the interaction of different levels of spatial distance (near vs. far) and different mobile advertising contents ( pictorial vs. verbal) affect consumers patronage intention? <b>RQ4.</b> If so, how these different levels of spatial distance (near vs. far) and different social media mobile advertising contents (pictorial vs. verbal) alter</p>
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			consumers patronage intention?
<b>Research Context</b>	The research setting we would like to investigate is the relationship social context of LBSN usage on mobile phones across-cultures (Arabic vs. Western).	In this study, we focused on the purchasing decision behaviour of Tunisian who belong to virtual communities in social media (such as Facebook, Twitter, Instagrame, Youtube, etc.) and to understand their perceptions during a shopping experience on these communities virtual pages.	The research setting is the shopping experience context in the presence of Mobile advertising content.

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## **CHAPTER II**

### **CROSS-CULTURAL COMPARISON BETWEEN ARABIC AND WESTERN COUNTRIES IN LOCATION-BASED SOCIAL NETWORKING (LBSN) USAGE ON MOBILE PHONES: THE CASE OF FACEBOOK**

#### **ABSTRACT**

Day after day, location based social networking (LBSN) services are becoming increasingly more popular and rapidly adopted on a global scale by attracting millions of users. Many of LBSN users have integrated these services into their daily practices. Furthermore, mobile LBSN adoption and usage differs greatly across national contexts and the impact of cultural factors on the LBSN usage is considered as an interesting issue to be addressed. Therefore, this research proposes a new concept model for mobile LBSN usage. This model transcends national boundaries and takes into consideration cross-cultural effects. Therefore, a cross-cultural approach is both necessary and justified. Given the potential use of LBSN on mobile phones, the current study examines the role of cultural effect on LBSN usage across countries that belong to different cultures. In order to determine the relationship between the national cultural effect and the usage of LBSN on mobile phones, the primary objective of this research is to propose and investigate the proposed research model, which was formulated by modifying Triandis's Model and combining some constructs such as attitude from the Technology Acceptance Model (TAM) and finally integrating a crucial construct in the IT usage and adoption which is "Social Trust" based on the results of previous studies. This proposed research model explores the structural relationships among mobile LBSN actual usage on mobile phones and the LBSN enablers: perceived enjoyment, social trust, and social factors. Further, the relationships between the proposed research model's constructs are moderated by Hofstede's cultural dimensions. It also discusses how this research model will be tested across two different cultures (Western vs. Non Western) in different nations (Tunisia, Kuwait, and Italy). It is expected that this comparative study will contribute to

efforts of identifying the role of contextual cultural factors in macro-level LBSN adoption and diffusion on mobile phones and will have potential benefits to advance research and practice of social networking services (SNSs) and LBS.

**Keywords:** Location Based Social Networking (LBSN), Mobile Phones, Cross-Cultural Comparison, Triandis's Model, Facebook.

## **ABBREVIATIONS**

<b>LBSN</b>	Location Based Social Networking
<b>SNSs</b>	Social Networking Sites
<b>OSN</b>	Online Social Networking
<b>LBS</b>	Location Based Services
<b>IT</b>	Information Technology
<b>IS</b>	Information System
<b>ICT</b>	Information Communication Technology
<b>TRA</b>	Theory of Reasoned Action
<b>TAM</b>	Technology Acceptance Model
<b>UTAUT</b>	Unified Theory of Acceptance and Use of Technology
<b>TPB</b>	Theory of Planned Behaviour
<b>TIB</b>	Theory of Interpersonal Behaviour
<b>LTO</b>	Long-Term Orientation
<b>AMOS</b>	Analysis of Moment Structures
<b>SPSS</b>	Statistical Package for Social Sciences
<b>SEM</b>	Structural Equation Modelling
<b>CFA</b>	Confirmatory Factor Analysis
<b>EFA</b>	Exploratory Factor Analysis

## I. INTRODUCTION

Location based social networking (LBSN) has a crucial role as part of networks, and as a result, these services cannot be used isolated from other potential patterns of use. Kraemer et al. (2006) argued that variations in innovation outcomes in different countries are even greater if the innovation is a consumer technology. Thus, it can be assumed that LBSN adoption and usage differs greatly across national contexts and the effect of cultural factors on the LBSN usage is considered as an interesting issue to be addressed. In other words, since the ubiquitous nature of the Internet is facilitating LBSN activities on mobile phones across nations, thus, a cross-cultural approach to research on attitudes and adoption of LBSN is both justified and necessary. Indeed, these activities demand a new conceptualization of LBSN users behaviour that transcends national boundaries and takes into consideration cross-cultural effects. Furthermore, Kim et al. (2004) provided a concise summary of the extant literature, and found evidence for significant variations between countries in adoption rates and usage patterns of IT applications.

To better understand what drives LBSN usage across cultures, this paper aims, first, to outline national differences in LBSN usage patterns and second, to add validation to technology acceptance theories and models from a cultural perspective to capture behavioural adoption and usage of LBSN on mobile phones in different dissimilar countries: Kuwait, Tunisia and Italy. In order to enhance our understanding on the cultural effect, we draw upon the work of Hofstede (1980) and use his measures of cultural dimensions to examine the link between cultural context and LBSN usage on mobile phones. This link is examined on the dimensions of (1) individualism vs. collectivism, (2) high vs. low power distance, (3) long vs. short-term orientation, and finally (4) masculinity vs. femininity. Indeed, these distinct cultural dimensions, as we mentioned before, are proposed to moderate our proposed research model.

Despite this breadth of research on attitude to use LBSN, larger scale research is still needed to reach significant results in area of evaluating cross-cultural issues in social networking services across the world (Vitkauskaite, 2010). Accordingly, the question of how culture might moderate LBSN' users behaviour remains largely unanswered. Therefore, technology acceptance theories and models need additional validation from a cultural perspective.

In order to address these gaps in the literature, we aim to answer the following issues:

**RQ1.** What past literature did investigate and what did previous studies left in the area of LBSN? **RQ2.** Does culture play a significant role on the adoption and usage of LBSN on mobile phones across different cultural contexts (Arabic and Western cultures)? If so, **RQ3.** To what extend do Hofstede's cultural dimensions impact the LBSN adoption across these cultures? Finally, **RQ4.** How and Why people use LBSN on their mobile phones?

## **II. RESEARCH BACKGROUND AND THEORETICAL FRAMEWORK**

This section describes the main literature streams that are relevant for this study. First, we reviewed the literature related to the theoretical models of technology acceptance and adoption. Second, we examined the effect of cultural dimensions on the innovative technology usage, in particular the LBSN on mobile phone. Finally, we analysed the users behaviour toward the ubiquitous nature of LBSN.

### **1. Theoretical models of technology acceptance and adoption**

Many competing theoretical models co-exist in the technology acceptance and adoption literature, each with different focus and tested in different contexts (e.g. E-commerce, E-learning, Social Networking, Internet Usage, etc.).

Previous research on technology acceptance highlights that the lack of user acceptance of technology can lead to lose money and resources (Lee et al., 2003). In the past, many different theoretical approaches have been applied and designed to explain, predict and increase user acceptance of information technology (IT), for instance, Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), Theory of Planned Behaviour (TBP), and Theory of Interpersonal Behaviour (TIB). Further, most of these models try to build theories to explain how and why innovative technologies are adopted and predict the level of acceptance and usage in a certain context.

For the purposes of this study, we focused on previous results based on the technology acceptance model (TAM) and the Triandis's model in the innovative technology context.

***Technology Acceptance Model (TAM).*** The TAM suggests that users formulate a positive attitude toward the technology when they perceive it to be useful and easy to use. Furthermore, user adoption and usage of a new information system can also be determined by the beliefs and attitudes toward the information systems (Davis et al., 1989). In this sense,

prior researches (Hossain and De Silva, 2009; Kaba and Osei-Bryson, 2013) used TAM to investigate the acceptance and the intention to use of Information Technology (IT).

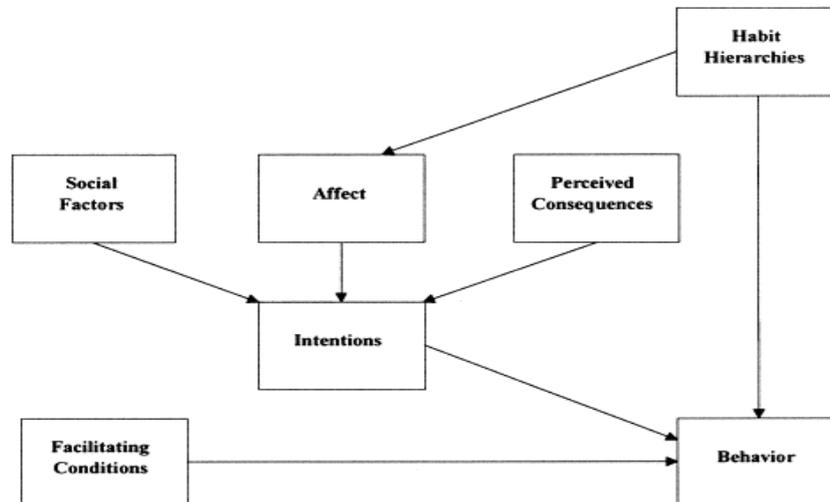
Despite the wide use of TAM by researchers and practitioners to predict and explain user acceptance of IT, researchers have also recognized that the generality of TAM fails to supply more meaningful information on user's opinions about a specific system (Lu et al., 2003).

Further, Dillon et al. (1996) argued the major theoretical limitation of TAM is the "exclusion of the possibility of influence from institutional, social, and personal control factors". Therefore, some authors provided a refined view to assess the appropriateness of the model for predicting general individual acceptance, since the main TAM constructs do not fully reflect the specific influences of technological and usage-context factors that may alter user acceptance (Rouibah., 2008). Accordingly, the original TAM models have been modified and changed in response to these limitations. The Unified Theory of Acceptance and Use of Technology (UTAUT) is the most prominent model that integrates constructs across eight models (Hofstede, 1991). UTAUT developed a new understanding of how the determinants of intention and behaviour evolve over time and assumes that there are three direct determinants of intention to use (performance expectancy, effort expectancy and social influence) and two direct determinants of usage behaviour (Rao and Troshani, 2007). In this sense, prior researches (Al-Gahtani et al., 2007; Riffai, Grant and Edgar, 2012) used UTAUT to surpass the TAM limitations and to enhance our understanding of the acceptance and the intention to use of Information System (IS).

***Triandis's Theory of Interpersonal Behaviour (TIB).*** The TIB is considered as a theory of social behaviour that complements the Theory of Reasoned Action (TRA) and provides the norms through which human social behaviour can be understood (Kim and Lee, 2012). Triandis's model argued the probability of performing a given behaviour is determined by a number of factors and considers habit, social factors (similar to subjective norms), affect, perceived consequences, and facilitating conditions (similar to perceived behavioural control) for understanding human behaviour of intention and actual behaviour.

In this study, we focus on a subset of Triandis's framework (Figure 1) which is similar to the one adopted in Thompson et al. (1991), and Chueng et al. (2000), because it is relevant to this study.

**Figure 1. Subset of Triandis's Framework**



Source: Triandis (1980)

## **2. Related work to Location-Based Social Networking (LBSN)**

This section describes the main literature stream relevant for this research. Firstly, we defined the LBSN phenomenon. Then, we reviewed the literature related to the mobile LBSN acceptance and adoption.

**What are LBSN?** The LBSN phenomenon has also been named Locative Mobile Social Networks. De Souza et al. (2010) defined LBSN as commercial applications, available through a cell phone, that help build networks of mobile nodes (in this case moving people) by displaying the geographic position of users on a map. Users are enabled to locate each other in physical space and interact with one another depending on the relative distance. Furthermore, Fusco et al. (2011) defined LBSN “*as the converge between location-based services (LBS) and online social networking (OSN)*”. Further, they argued that LBSN applications offer users the ability to look up the location of another “friend” remotely using a smart phone, desktop or other device any time anywhere. For the purpose of our study, we adopt the LBSN definition of Fusco et al. (2011).

Moreover, Lu et al. (2003) argued that LBSN are becoming increasingly popular on a global scale. Further, they deemed that full bloom of LBS depends not only on technology improvement and development but as well as user acceptance.

Typically, LBSN such as Foursquare, Facebook, and Gowalla use LBS capabilities via mobile device Internet connection to let users notify others of their locations by “checking in” to that location. Such social networking sites (SNSs) since the moment of their introduction have attracted millions of users, many of whom have integrated these sites into their daily practices (Boyd and Ellison, 2008). In this sense, Chow et al. (2010) argued that social networking applications have become one of the most important web services (e.g., Facebook and Twitter), which provide Internet-based platforms for users to interact with other people that are socially relevant to them (e.g., their friends).

Furthermore, Miszta (1998) suggested that as location based social networking technologies are used between people they have the potential to impact relationships, which are integral not only to the operation of society but also to the individual’s well being.

In the last years, the growth of Facebook’ users number affirms that LBS are becoming more popular, rapidly adopted, and incorporated systems such as social networking sites that are already extensively. In line with this, statistics made by Shields (2015) reported that Facebook has confirmed that 1,38 billion “actively” users Facebook monthly on their mobile devices.

Research into social networking usage patterns in the social relationship context suggests that Facebook is used and adopted primarily to maintain contact with offline connections rather than to develop new relationships (Ellison et al., 2007). Moreover, Lampe et al. (2006) found that Facebook is used by students for purposes related to “social searching” rather than for “social browsing”. In other words, Lampe et al. argued that young people (mainly students) use Facebook to learn more about someone they know offline, rather than to develop new connections. In this sense, students reported using Facebook to “*keep in touch with an old friend or someone I knew from high school*” (Lampe et al., 2006). Accordingly, these studies indicate that Facebook serves a “sociability function” that enables users to maintain relationships with offline connections both near and far.

Further to the research on the social ties of social networking usage, researches focused on the privacy issue of LBSN usage on mobile phones. Ajami et al. (2012) addressed the privacy issues in mobile social networking applications considering the users’ points-of-view and their acceptance of such applications. Further, they elucidated some of the suggested mechanisms to endorse users’ trust in social interactions.

### 3. Culture perspective

Leung et al. (1989) argued “the view that social behaviour is partly a product of dominant values and ideologies of a culture has gained increasing acceptance in academic psychology” . Further, prior study has demonstrated that cultural aspects impact the manner in which web applications are used within a country (Zakaria, 2003).

**Table 1. Review of cross-cultural studies in the IT context**

Year	Author(s)	Technology Examined	Countries	Sample	Statistical Tool	Findings
2002	A. Pavlou and Chai	E-commerce	China and the United States	113 (58 from China and 55 from U.S)	PLS (PLS-Graph Version 3.0)	<p>-Attitude had a significant effect on transaction intention for the collectivist society of China. However, attitude did not significantly affect transaction intention for the individualist society.</p> <p>- Further, they found that people in long-term oriented cultures feel an inward moral obligation to follow through with their sentiments. On the other hand, individuals in short-term oriented cultures feel no such compulsion.</p> <p>-Trust was found to be a significant predictor of attitude and perceived behavior control in both countries, implying that the role of trust is not moderated by cultural idiosyncrasies evident in China</p>

						and the U.S. They suggested that trust is a common driver of e-commerce in the tow cultures.
2007	Al-Gahtani et al.	Acceptance and use of computers.	Saudi Arabia	722	PLS structural equation modeling tool.	<p>- They found that higher power distance cultures would exhibit a stronger association between subjective norm and behavioral intention.</p> <p>-They suggested that the low individualism country score for Saudi Arabia might indicate a strong relationship between subjective norms and behavioral intentions in the Arab world.</p>
2013	Kaba and Osei-Bryson	Cell Phone usage.	Quebec and Guinea	740 (463 from Guinea and 277 from Quebec)	PSS statistical software and the partial least squares (PLS) statistical analysis method	<p>-They found that the influences of Perceived Ease of Use and Perceived Usefulness on users' Attitude have been validated for Québécois but not for the Guinean group.</p> <p>-Their analysis showed that Québécois cell phone users' attitude was influenced by their perceived usefulness, and perceived ease of use. However, Guinean respondents Attitude and usage behaviour were not explained by the predictors of the research model of their study.</p> <p>-They argued Québécois rely more on their own perceptions in the process of adoption an ICT, while Guineans, coming</p>

						from a collectivist culture, do not.
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In earlier research, there have been enormous efforts to examine human cultures and their cultural differences in several fields such as anthropology and cross-cultural psychology (Abramson and Inglehart, 1995; Hofstede, 1980; Schwartz and Ros, 1995; Shalom et al. 2000; Triandis, 1990). In spite of this, Straub et al. (2002) argued cross-cultural study has not received as much attention as necessary in IS research areas because of its difficulties in explicitly defining and measuring the concept of culture. Further, Rouibah (2009) argued very few studies have focused on IT/ICT in the Arab world compared to those in North America and Europe. Therefore, this study attempts to investigate the influence of the Arabic culture comparing to the Western culture on the LBSN usage on mobile phones.

**Characteristics of Arab culture.** Arab culture puts an emphasis on social relationships, is based on oral communication, and has its priority on face-to-face interactions. With the emergence of new ICT, Arab people found new channels to disguise their real identity, to talk free of any social norm (Rouibah, 2009). These characteristics may explain why and how Arabs engage in social network sites in general and LBSN in particular, especially after the critical roles of SNSs in so-called Arab Spring (Al Omoush et al., 2012).

**Hofstede’s cultural dimensions.** Hofstede (2001) defines culture as patterns of thinking, feeling and potential acting, which have been learned throughout a lifetime, and which are likely to be used repeatedly and unlikely (or difficult) to be changed by the individual.

Hofstede (2001) describes culture using five dimensions:

Power Distance (PDI). Power distance refers to the extent that people accept a hierarchical system with an unequal power distribution. High power distance means that less powerful individuals accept large status differences. Superiors tend to be autocratic and paternalistic, and subordinates willingly do as they are told (Hofstede, 1991).

Uncertainty Avoidance (UAI). Uncertainty avoidance refers to the way that a society deals with the fact that the future can never be known: should we try to control the future or just let it happen? This ambiguity brings with it anxiety and different cultures have learnt to deal with this anxiety in different ways.

Individualism vs. Collectivism. Collectivism refers to the extent to which individuals are integrated into groups and form their judgments based on group norms (Hofstede and Bond, 1988). Members of individualistic societies prefer self-sufficiency, while those in collectivistic cultures acknowledge their interdependent natures and obligations to the group (Hofstede, 1980). Other studies have replicated Hofstede's cultural dimension of collectivism, finding that it places relatively greater importance on the group's needs and norms than individualism (Williamson, 2002).

Long-Term Orientation (LTO). According to Hofstede (2001), a long-term orientation culture means that people feel free to put off making a decision until they are comfortable with its ramifications. In essence, this gives such people more control over their actions.

Masculinity (MAS). Masculinity refers to the distribution of emotional roles between the sexes. In masculine cultures, the gap between the values of men and women is wider than in feminine cultures; thus, men are more assertive and competitive, while women are more modest and caring than in feminine cultures (Hofstede, 1980). The fundamental issue addressed by this dimension is the way in which a society allocates social roles to the sexes.

Masculinity versus femininity is linked to the sex roles society assigns to its people. It captures the extent to which "masculine" values such as assertiveness and success prevail over "feminine" values that focus more on the quality of life.

Regardless of the considerable criticism of Hofstede's work over the years (McSweeney, 2002; Triandis, 1990), Hofstede's framework had a widespread use in social science research for defining and measuring cultural differences (Smotherman and Kooros, 2001) and it has also received strong empirical support (Sondergaard, 1994). Despite, Hofstede's cultural dimensions were provided as the most influential culture theory among social science research (Nakata and Sivakumar, 2001), there are still few studies (Cardon et al., 2009; Veltri and Elgarah, 2009; Zakaria et al., 2003) focusing on the exploitation and application of such cultural dimensions in explaining LBSN behaviour usage across-cultures.

### **III. Conceptual Framework**

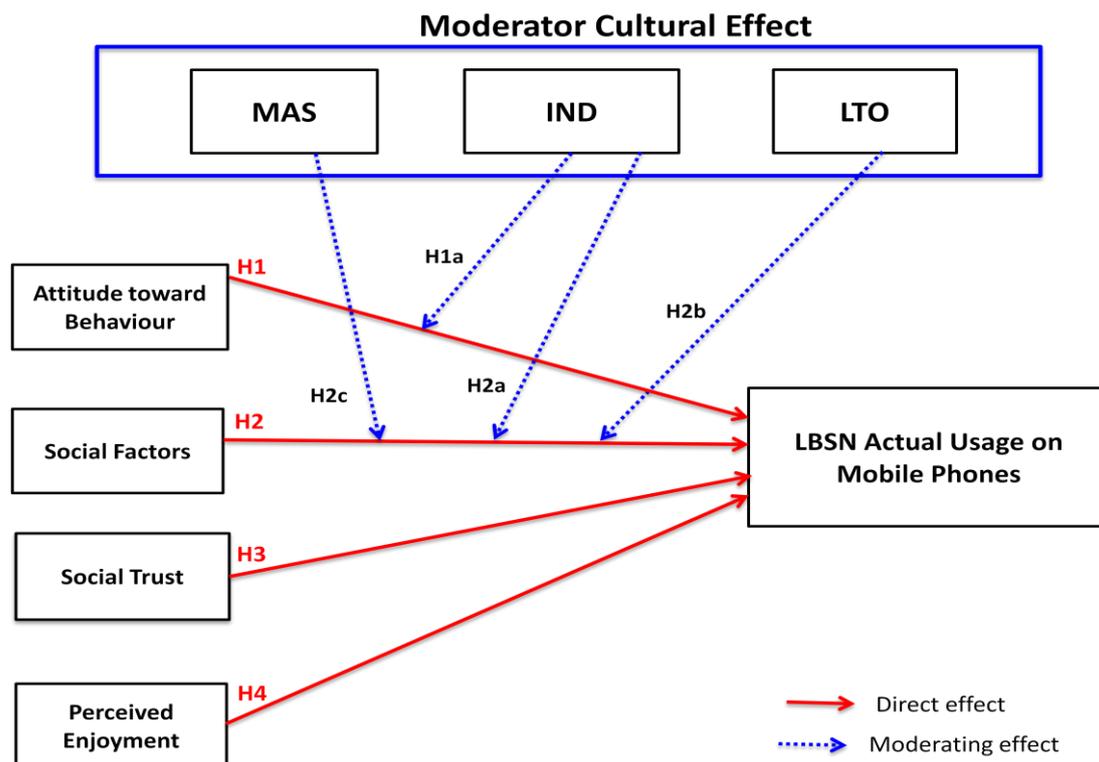
Drawing on the findings of literature review presented before, a theoretical framework was developed for this research study and it is presented in this section.

This section presents the conceptual framework and hypothesised relationships emerging from the proposed framework of the study. The main purpose of this section is (1) to propose

a conceptual model (Figure 2.), (2) to test the direct impact of four variables (Social factor, Social trust, Attitude, and Perceived enjoyment) on the consumer`s LBSN actual usage on mobile phone, and test the cultural moderating effect among variables with their hypothesised paths.

We developed our proposed model and hypotheses (Figure 2.) by modifying and combining some relevant constructs for the research from TAM and the TIB to enhance our understanding of the determinants and the antecedents of LBSN usage on mobile phones across Western and Arabic cultures. Accordingly, based on previous results of Pavlou and Chai (2002) study, we incorporate three of Hofstede`s (2001) cultural dimensions: individualism vs. collectivism (IND), high vs. low power distance (DPI), and long vs. short orientation term (LOT), into the research model as key moderators of the model` constructs, aiming to explain LBSN use on mobile phones across cultures.

**Figure 2. Proposed Research Model and Hypotheses**



## 1. Hypotheses

### 1.1 Direct Effect

**Attitude.** Attitude towards behaviour “is a person’s inclination to exhibit a certain response

toward a concept or object” (Doob, 1947).

Further, attitude toward an innovation is a critical intervening variable in the innovation adoption decision (Rogers, 1995). Thus, attitude toward a specific information technology is conceptualized as a potential user’s assessment of the desirability of using that technology (Davis et al., 1989; Porter and Donthu, 2006) and, according to the TAM, predicts an individual’s use of technology. Therefore, we would expect that:

**H1. There is a positive relationship between an individual’s attitude toward LBSN and his/her actual use of LBSN on mobile phones.**

**Social Factors.** Social factor is defined as “*an individual’s internalization of the reference group’s subjective culture, and specific interpersonal agreements that the individual has made with others, in specific social situations*” (Triandis, 1980).. Subjective culture consists of ways of categorizing experiences, beliefs, attitudes, ideals, roles, norms, and values, which can be understood as the characteristic way that a human group views the human-made part of its environment (Cheung, Chang, and Lai, 2000). This concept is similar to the subjective norm, which refers to “*a persons’ perception that most people who are important to him think he should or should not perform the behaviour in question*” (Fishbein and Ajzen, 1975). In other words, LBSN’ users may believe that their family, colleagues and peers would approve certain LBSN behaviours, and this belief plays an important role in influencing their behaviour.

Despite dropping the subjective norm from the TAM, Davis et al. (1989) did call for further research to assess the generalizability of their subjective norm findings and to investigate conditions and mechanisms governing the impact of social influences on usage behaviour (Hofstede, 2001). However, when the Triandis’s model (1980) was used as a guiding framework, a number of studies found a positive relationship between what the subject thought others wanted him/her to do and the usage of various IS (Bergeron et al., 1995; Pare and Elam,1995).Therefore, consistent with previous empirical findings based on Triandis’s model, we would predict that:

**H2: There is a positive relationship between the social factor and the actual LBSN usage on mobile phones.**

**Social Trust.** Nahapiet and. Ghoshal, (1998) The degree of one’s willingness to vulnerable to the actions of other people. The concept of “Trust” has recently become a popular issue in marketing literature because of the relational orientation emerging in marketing activities

(Ballester and Alemán, 2001; Ballester and Alemán, 2005; Chow and Chan, 2008). The importance of trust has been widely recognised and, traditionally, trust has been analysed from different perspectives (Jarvenpaa, Tractinsky and Vitale, 1999; Geyskens, Steenkamp and Kumar, 1998). Indeed, trust is increasingly developed between partners; people develop greater knowledge and appreciation for each other's contribution to the relationship (Doney Cannon, 1997). Such increased knowledge, appreciation and dependency will strengthen their intention to continue in the relationship (Geyskens, Steenkamp and Kumar, 1998). Therefore, we included this construct in our model, and we expect that social trust to be positively related to the actual use of LBSN on mobile phones. We propose that:

**H3: There is a positive relationship between social trust and the actual LBSN usage on mobile phones.**

***Perceived enjoyment.*** Perceived enjoyment may be defined as the extent to which the activity of using the computer is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated (Carroll and Thomas, 1988; Deci, 1971; Malone, 1981). Hence, individuals who experience immediate pleasure and joy from using the computer per se will be more likely to use it more extensively than others (Teo, 2001). In this sense, Triandis (Triandis, 1980; Triandis, 1971) supported this idea by positing that affect “*the feeling of joy, elation, pleasure or depression, disgust, displeasure and hate associated by an individual with a particular act*” has an impact on behaviour (Teo, 2001). By extending these results to the context of LBSN, we can therefore, postulate that:

**H4: There is a positive relationship between perceived enjoyment and the actual LBSN usage on mobile phones.**

## *1.2 Moderator Effect*

***Individualism vs. Collectivism.*** We note an important cultural difference related to social factors between Arabic nations and Western nations: individualism vs. collectivism. Members of individualistic societies prefer self-sufficiency, while those in collectivistic cultures acknowledge their interdependent natures and obligations to the group (Hofstede, 1980). Previous studies have replicated Hofstede's cultural dimension of collectivism, finding that it places relatively greater importance on the group's needs and norms than individualism (Hofstede, 1990). Because Arabic nations such as Tunisia and Kuwait are highly collectivist

and Western nations (Italy) are highly individualistic, we expect a cultural difference in the effect of social factors on the actual LBSN usage on mobile phones. Therefore, we postulate:

**H2b: The positive relationship between social factors and the actual LBSN usage on mobile phones is stronger in collectivist than in individualist nations.**

Further, we can note that the cultural component is relevant to the relationship between attitude toward LBSN on mobile phones and actual usage. Collectivist nations (e.g. Tunisia and Kuwait) have strong relations within the “in-group”, in other words, peers, the extended family and familiar acquaintances have a key role in impacting the individual’s behaviour (Hofstede and Bond, 1988). In-group relations focus on maintaining harmony by going along with the group’s wishes and promoting long-term relationships. Therefore, Hofstede’s cultural dimension of individualism vs. collectivism has also an impact on the attitude toward using LBSN on mobile phones with the actual behaviour, thus, we expect that:

**H1b: The positive relationship between attitude and the actual LBSN usage on mobile phones is stronger in collectivist than in individualist nations.**

**Long-Term Orientation (LTO).** Cultural differences between Arabic and Western nations are also relevant to the relationship between the facilitating conditions and the actual behaviour. According to Hofstede (2001), Arabic countries are extremely high on long-term orientation which is a cultural dimension reminiscent of the teachings of Confucius. Confucian thinking emphasizes persistence and thrift, in addition to respect for tradition.

In essence, this gives such people more control over their actions. In contrast to Arabic countries, Western countries in particular, Italy has low scores on long-term orientation dimension. For this reason, we would expect Arabic users to require more control of their LBSN use on mobile phones than Italian users, and rely on this control in their LBSN adoption behaviour.

**H3a: The positive relationship between Social factors and the actual LBSN usage on mobile phones is stronger in nations characterized by long versus short-term orientation.**

**Masculinity (MAS).** In addition to the moderating effect of Hofstede cultural dimensions above mentioned between actual usage and the model independent construct variables, masculinity versus femininity values can affect the relationship between social factors and the actual usage. People who belong to feminine cultural values tend to be more concerned with

maintaining personal relationships, cooperation, and interpersonal harmony than people who belong to masculine cultural values (Hofstede 1984). Indeed, people who belong to feminine cultural values tend to be more involved than those who adopt more masculine values to the needs of others and to recognize opinions and suggestions of others by acquiescing and agreeing (Roberts 1950). Furthermore, Venkatesh et al. (2004) found that, in the context of IT acceptance indicate, while the behavioural intentions of feminine-typed individuals were influenced by social factors, the effect was non-significant for masculine-typed individuals. Therefore, individuals who espouse feminine cultural values will be more likely to yield to social influence than would individuals who espouse masculine cultural values. This leads to the following hypothesis:

**H2c: The relationship between social factors and LBSN actual usage on mobile phones is stronger for individuals who belong to a society with low masculinity (vs. high femininity) culture.**

#### **IV. Methodology and Research Plan**

##### **1. Research context**

The research setting we investigated is the LBSN usage on mobile phones in the social networking context across different cultures. The proliferation of LBSN provides the ubiquity, convenience, localization, and personalization for users participating in mobile communications and service activities. Therefore, it is required to any LBSN providers, in order to respond to critical issue in social networking sites around the world, to pay attention to how they fit their social networking services to the differences across-culture and not putting their efforts just on language translation and other visible aspects when entering a foreign market. Indeed, LBSN has a ubiquitous nature, hence, a cross-cultural approach to research on adoption and usage of LBSN is essential.

Kuwait, Tunisia, and Italy are chosen for this study because they represent areas with apparently analogous information communication technology infrastructures but with nearly reverse positions on several important Hofstede's cultural dimensions.

##### **2. Research design**

Cooper and Schindler (2001) argued a research design is a plan of the research project to investigate and obtain answers to research questions. In this study, we employed a quantitative data collection method and survey approach to obtain data concerning the usage

of LBSN by active users on their mobile phone. A cross-cultural study employing a survey method was carried out for collecting the data. The survey method was used because it is designed to deal more directly with the respondents' thoughts, feeling and opinions, especially when collecting information regarding attitudes and beliefs is concerned (Yin, 1994; Sekaran, 2000). In addition, survey method offers more accurate means of evaluating information about the sample and enables the researcher to draw conclusions about generalising the findings from a sample to the population (Creswell, 1994).

Moreover, we employed as the mean statistical tool the Analysis of Moment Structures (AMOS) software. The primary intent of this statistical approach is that it allows a researcher to model and predict relationships between constructs in the hypothesised manner.

### *2.1. Sample*

The sampling is a process in which researchers choose a sample (e.g., certain number of selected participants) from available members of the population. In this research, each individual, who used LBSN (Mainly Facebook) on his/her mobile phone, became the member of the population. Samples were drawn from Kuwaiti, Tunisian, and Italian' undergraduate students. The present research used a matched samples technique which is considered as a good approach advocated by cross-cultural research methodologists, where the samples of cultural groups to be compared are made as similar as possible in their demographic characteristics (Vijver and Leung, 1997).

**Sample Size.** The role of sample size is crucial in all statistical analysis. According to Luck and Rubin (1987), the more sophisticated the statistical analysis the larger the sample size needed. Therefore, the sample size requirement in this study was based on the selected statistical analysis technique used that is, structural equation modelling (SEM). SEM, like other statistical technique, requires an appropriate sample size in order to obtain reliable estimates (Hair et al., 1998). Gorsuch (1983) suggested at least 5 participants per construct and not less than 100 individuals per data analysis. Harris and Schaubroeck (1990), proposed a sample size of 200 at least to guarantee robust structural equation modelling. Kline (2005) argued that a very complicated path model needs a sample size of 200 or larger. In addition, Hair et al. (1998) recommended that a sample size of at least 200 and not exceeding 400 is considered appropriate. They further argued that when the sample size exceeds 400 to 500 participants the SEM analysis becomes too sensitive and almost any difference is detected, making goodness-of-fit measure show poor fit. Therefore, as a general rule, a sample of

minimum 200 is needed to give parameter estimates with any degree of confidence (Gerbing and Anderson, 1993). In line with previous researches' recommendations and assumptions, our main concerns were to reach a minimum of 200 usable responses for each sample.

## *2.2. Questionnaires*

Malhotra, (1999) argued that designing a questionnaire requires both artistic as well as scientific skills and experience. The questionnaire should be designed in a way to try to obtain accurate and complete information about the research problem (Malhotra, 1999).

In the present study, the question items and response categories were designed in a way to motivate the respondents to participate in the research study. In fact, we did our best to keep the questions simple, easy to read, and unambiguous. In this manner, the respondents will be able to comprehend the questions easily, reducing their chances of misunderstand the questions, and keeping their interest only in the survey.

Questionnaires were developed in English, Italian, French and Arabic based on the research model and an exhaustive literature review. As was mentioned by previous cultural studies (Pavlou and Chai, 2002; Al Omoush et al., 2012), wording can be difficult cross-culturally even in cultures that use the same language. As the questionnaires were destined to be translated into several other languages (those native to the countries being sampled), it was fundamental that the English questionnaire version would be as clear and understandable as possible.

The translation process involved the supervision of at least two collaborators in the fields of communication technology and information systems to help in the translation for each target language. Cavusgil and Das (1997) argued that the need to maintain the same or equivalent meaning from one language to another is crucial in ensuring that the measurement tool does not fall into error or misunderstanding in a particular culture.

In line with their recommendations, we used also the method of "back translation" to guarantee the best possible match of meaning and nuance between language versions (Neuman, 2000; Michener, DeLamater and Myers, 2004).

Once the questionnaires were translated and proofed for all the countries being surveyed they were ready to be distributed. There were four finalized language versions of the questionnaire: Arabic, English, French and Italian (please refer to Appendix A for examples of the translated

questionnaires). The Arabic and English version of the questionnaire went to: Kuwait. The French version went to Tunisian sample. Finally, the Italian version was distributed in Italy.

Furthermore, the survey questionnaire was created on the basis of previously validated scales and survey instruments. The questionnaires' items were taken from existing studies on the use of Triandis's model (1980) applied to IT use (Cheung et al., 2000), on the use of TAM (Porter and Donthu, 2006). and previous studies that analysed the trust effect on the IT adoption (Gefen et al., 2003). Finally, we used the CVSCALE (Yoo, Naveen and Lenartowicz, 2011), which is a psychometric measurement tool that assesses Hofstede's cultural dimensions. However, questionnaires were adapted as necessary from the previous published literature to fit within the context of this study.

## **V. Results**

The primary purpose of this research study was to identify and investigate the factors that affect consumer actual use of LBSN. In order to achieve these objectives, this study used two different statistical software tools. Statistical Package for Social Sciences (SPSS) was used for analysing the preliminary data, explained in the following paragraphs. The Analysis Moment of Structures Software (AMOS) for Structural Equation Modelling (SEM) was performed for measurement model analysis and structural model to test the proposed hypothesised model.

Further, we used in the structural equation modelling (SEM) analysis a two-step approach. In the first step, measurement model evaluation was conducted, in order to examine the unidimensionality, validity, and reliability of latent constructs using confirmatory factor analysis (CFA). In the second step, we examined the hypothesised relationships between the latent constructs in the proposed model (Kline, 2005; Hair et al., 1998).

For each sample (Kuwaiti, Tunisian, and Italian) we first conducted exploratory factor analysis (EFA) to examine the dimensions of each construct and then confirmatory factor analysis (CFA) was performed for testing and confirming relationships between the observed variables under each hypothesised construct (Hair et al., 1998).

### **1. Data sample**

As questionnaires arrived back from collaborators their data was entered into SPSS spreadsheets. In total, for each country the final sample was formed by 200 valid responses from users of mobile

social networking (in our case Facebook) after removing atypical cases and incomplete questionnaires. The present research have used a matched samples technique which is considered as a good approach advocated by cross-cultural research methodologists, where the samples of cultural groups to be compared are made as similar as possible in their demographic characteristics (Vijver and Leung, 1997). In this line, Table 1 summarizes the socio-demographic data of our samples. We have compared the socio-demographic profile of our Kuwaiti, Tunisian, and Italian samples. In sum, samples are quite well balanced and we obtained similar profiles. The Kuwaiti sample is composed of 68% males and 32% female with an average age of 20,55 years. The response rate was 85%. The Tunisian sample is composed of 69% males and 31% female with an average age of 25 years. The response rate was 60%. Finally, the Italian sample is composed 69% males and 31% female with an average age of 25 years. The response rate was 75%. Only students who had a Facebook account on their mobile phone participated in this study.

**Table2. Demographic Summary**

<b>Countries</b>	<b>Number Respondents</b>	<b>Male (%)</b>	<b>Female (%)</b>	<b>Av Age (Mean)</b>
<b>Kuwait</b>	200	32	68	20.55
<b>Tunisia</b>	200	31	69	21.8
<b>Italy</b>	200	45	54.5	22.34

## **2.Exploratory Factor Analysis (EFA)**

Statistical Package for Social Sciences (SPSS), version 16.0, was used to conduct exploratory factor analysis (EFA) for the first stage of data analysis to summarize information from many variables in the proposed research model into a smaller number of factors, which is known as dimension reduction (Hair et al., 1998). This software package is widely accepted and used by researchers in different disciplines including social sciences, business studies, and information systems research (Zikmund, 2003). Therefore, this tool has been used to screen the data of this research study in terms of data coding, treatment of missing data, identification of outliers and find out the data normality (i.e. using kurtosis and skewness statistics). In addition, SPSS was also applied to perform descriptive statistics such as frequencies, percentages, mean values, and standard deviations. These analyses were performed for each variable separately and to summarize the

demographic profile of the respondents in order to get preliminary information and the feel of the data (Sekaran, 2000). Furthermore, Cronbach's alpha was employed to evaluate the reliability of model constructs by examining their internal consistency. Estimate greater than 0.70 are generally acceptable threshold (Nunally, 1978).

### **3. Confirmatory Factor Analyses (CFA)**

In this research, confirmatory factor analysis (CFA) was performed for testing and confirming relationships between the observed variables under each hypothesised construct (Sekaran, 2000; Hair et al., 1998) to assess the unidimensionality, reliability, and validity of measures. Nevertheless, Hair et al. (1998) recommended that confirmatory factor analysis (CFA) should be performed after exploratory factor analysis (EFA) in order to verify and confirm the scales derived from EFA.

There are two broad approaches used in CFA to evaluate the measurement model: (1) deciding the goodness of fit (GOF) criteria indices, (2) and evaluating the validity and reliability of measurement model (Hair et al., 1998). In the current study, two broad approaches were used in the CFA to assess the measurement model. First, we considered the goodness of fit (GOF) criteria indices that were measured by three types of indices: (a) absolute fit indices, (b) incremental fit indices, and (c) parsimonious fit indices (Hair et al., 1998). Second, we evaluated the validity and reliability of the measurement model.

CFA was performed on the measurement model comprising nine factors, which were: social factor (SF); perceived enjoyment (PE); social trust (ST); attitude (A); individualism (IND); long-term orientation (LOT); masculinity (MAS); and usage of LBSN.

In the following paragraphs, for each sample (Kuwaiti, Tunisian and Italian), it will be described the results of the analysis and the validation of the measurement scales. Then, we will interpret the result of SEM which was performed to explain the different causal links between the various constructs in each sample. Finally, we will compare the results of the three models (Kuwaiti, Tunisian and Italian).

#### *3.1. The analysis and validation of measurement scales: Kuwaiti Sample*

In this section, we analyzed the validity of the measurement scales. First, we started by making exploratory analyzes on each construct. Then we made a confirmatory analysis of all the measures to assess the reliability and validity of the model constructs.

3.1.1. Scale validation of Attitude toward the behaviour

*a. PCA of Attitude toward the behaviour*

The principle components analysis (PCA) of this scale has highlighted a scale of one factor with an explained variance equal to 79,219 %. We note that all the items have commonalities larger than 0,5. In addition, the value of KMO (0,677) is acceptable and Bartlett's sphericity test is significant. The results are presented in the following table:

Items	Commonalities	Cont. Fact.	Reliability
A1	0.651	0.930	<b>0.868</b>
A2	0.861	0.928	
A3	0.864	0.807	
<b>KMO</b>		0,677	
<b>Bartlett's sphericity test:</b>			
<b>Chi-square</b>		357.473	
<b>df</b>		3	
<b>significante</b>		0.000	

The internal reliability of the scale shows a very satisfactory level of reliability (Cronbach's alpha=0,868).

*b. CFA of Attitude toward the behaviour*

We verified the psychometric quality of the scale and calculated its validity. The scale includes three items (A1, A2 and A3). The construct is just-identified, consequently the confirmatory analysis on the AMOS software cannot provide the results of the fit indices .

Method	Maximum Likelihood (ML)				Bootstrap	
	Standardised Coff.	SMC	C.r.	Sig.	Bias	P

Items						
A1	0.647	0.419	9.951	0.000	-0.006	0.005
A1	0.923	0.852	15.866	0.000	0.001	0.014
A3	0.828	0.861	15.986	0.000	0.000	0.006
<b>Rh<math>\hat{o}</math> of J<math>\ddot{o}</math>reskog <math>\rho_{\xi}</math></b>	0.878					
<b>Pvc</b>	0.711					

This result is satisfactory: very satisfactory internal consistency 0,878 , convergent validity ( **$\rho_{vc}$** ) is above 0,5, and the other conditions of verification of their validity were met (t significant test for all items, the squared multiple correlations (SMC) are much higher than the standard norm 0,5).

### 3.1.2. Scale Validation of Social Factors

#### a. PCA scale of Social Factors

The principle components analysis (PCA) of this scale has demonstrated a scale of one factor with an explained variance equal to 96,936 %. We note that all the items have commonalities larger than 0.5. In addition , the value of KMO ( 0,805 ) is acceptable and Bartlett's sphericity test is significant. The results are presented in the following table:

Items	Commonalities	Cont. Fact.	Reliability
SF1	0.819	0.923	<b>0.934</b>
SF2	0.852	0.920	
SF3	0.847	0.909	
SF4	0.826	0.905	
<b>KMO</b>		0.805	
<b>Bartlett's sphericity test:</b>			
<b>Chi-square</b>		711.736	
<b>df</b>		6	

significante	0.000
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The internal reliability of the scale shows a very satisfactory level of reliability (Cronbach's alpha=0,934).

*b. CFA scale of Social Factor*

The multi-normality test of this scale declares a non normality of data through a Mardia coefficient equal to 121,033 which is greater than 3. In addition, this multi-normality test was not significant ( $t = 338,062 > 1,96$ ).

Therefore, in addition to the maximum likelihood technique, we made the bootstrapping procedure (with 250 resamples as suggested by Akrouf, 2010) to test the stability of the results and to obtain estimates of standard errors for testing the statistical significance of path coefficients using a t-test. Comparing Bias and standardized coefficients of correlation, we get the stability results (bias<0,01). Factor analysis performed on this scale shows an acceptable fit as shown in the following table:

Absolute Indices					Incremental Indices		Parsimonious Indices		
X <sup>2</sup>	GFI	AGFI	RMR	RMSEA	TLI	CFI	X <sup>2</sup> /df	BIC	CAIC
50.726								93.112	101.112
df=2	0.880	0.399	0.139	0.350	0.795	0.932	25.363	Ms	Ms
p =0,000								52.983	62.983

**Note:** Ms=Saturated Model

We note that the results are not good with the exception of the incremental indices (CFI>0,90) that is in the standards. The parsimonious indices are not good (Chi2 adjusted above 3<25,363 and BIC, CAIC). Thus, we corrected the model and we added a relationship between the error terms of items SF1 and SF2 to improve the fit indices. The results of the corrected model are present in the following table:

Absolute Indices			Incremental Indices		Parsimonious Indices		
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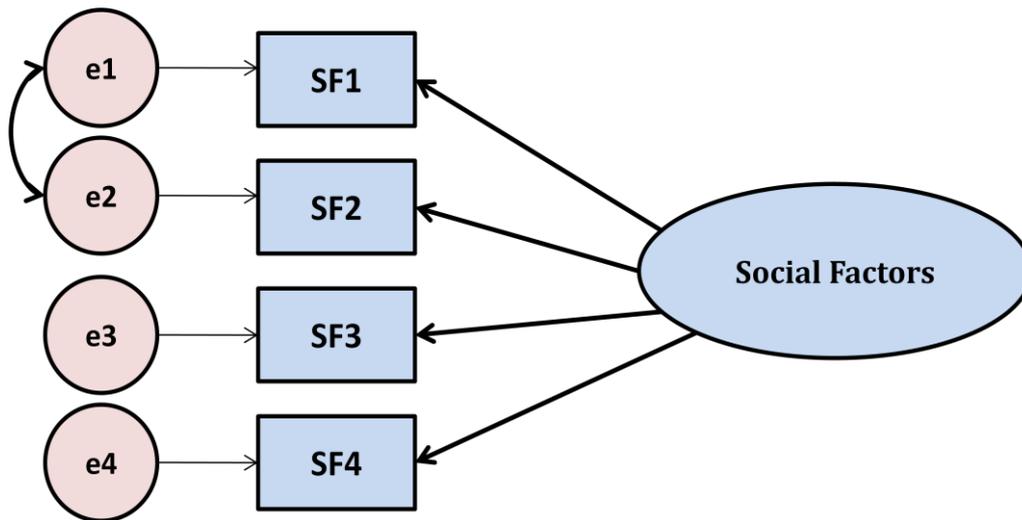
$X^2$	GFI	AGFI	RMR	RMSEA	TLI	CFI	$X^2/df$	BIC	CAIC
3.160								50.845	
df=1	0.992	0.922	0.024	0.104	0.982	0.997	3.160	Ms 52.983	101.112 Ms 62.983
p =0.000									

The results show a significant chi-square test and the rest of absolute, incremental and parsimonious indices are good.

Items	Method	Maximum Likelihood (ML)				Bootstrap	
		Standardised Coff.	SMC	C.r.	Sig.	Bias	P
SF1		0.796	0.634	13.237	0.000	-0.005	0.006
SF2		0.828	0.686	14.064	0.000	-0.007	0.004
SF3		0.926	0.857	16.760	0.000	-0.001	0.011
SF4		0.916	0.838	16.452	0.000	0.002	0.036
<b>Rh<math>\hat{o}</math> of J<math>\ddot{o}</math>reskog <math>\rho\xi</math></b>		0.935					
<b>Pvc</b>		0.782					

The  $\rho$  of J $\ddot{o}$ reskog is greater than 0,7 and the  $\rho_{VC}$  is greater than 0,5. So, this scale has strong convergent validity. The following figure shows the values of various standardized correlation coefficients and the squared multiple correlations.

**Figure 4.CFA of Social Factor**



### 3.1.3. Scale Validation of Social Trust

#### a. PCA of Social Trust

Social Trust scale is originally unidimensional with 3 items. We conducted a factor analysis with Varimax rotation to check its structure. The results of this analysis confirm the initial structure of the scale, since we found a one factor structure explained by the 75,546 %. Indeed the value of KMO (0,692) is acceptable and Bartlett's sphericity test is significant. The PCA shows the results in the following table:

Items	Commonalities	Cont. Fact.	Reliability
ST1	0.766	0.909	<b>0.835</b>
ST2	0.826	0.875	
ST3	0.675	0.822	
<b>KMO</b>		0.692	
<b>Bartlett's sphericity test:</b>			
<b>Chi-square</b>		252.170	
<b>df</b>		3	
<b>significante</b>		0.000	

*b. CFA of Social Trust*

We verified the psychometric quality of the scale and calculated its validity. The scale includes three items( ST1, ST2 and ST3). This construct is just-identified, consequently the confirmatory analysis on the AMOS software cannot provide the results of the fit indices .

Table 10. CFA Results of Social Trust						
Items	Method	Maximum Likelihood (ML)			Bootstrap	
	Standardised Coff.	SMC	C.r.	Sig.	Bias	P
ST1	0.830	0.689	14.135	0.000	-0.002	0.014
ST2	0.877	0.770	14.937	0.000	-0.001	0.006
ST3	0.689	0.567	10.498	0.000	-0.002	0.009
<b>Rh<math>\hat{o}</math> of J<math>\ddot{o}</math>reskog <math>\rho_{\xi}</math></b>	0.842					
<b>Pvc</b>	0.643					

This result is satisfactory: very satisfactory internal consistency 0,842 , convergent validity is above 0,5 and the other conditions of verification of their validity are met (t test is significant for all items, the squared multiple correlations are much higher 0,5).

*3.1.4. Scale Validation of Perceived Enjoyment*

*a. PCA of Perceived Enjoyment*

A principal component analysis was performed on the perceived enjoyment scale (3 items). The results show that the items of this scale are factorable (the value of KMO equal to 0,714 is considered satisfactory, and the significance of Bartlett’s sphericity test is perfect). We note that the commonalities of all the items are above 0,5. The result shows that the scale items form one dimension that recovers 88,504 % of the information. We calculated the reliability of this scale. The results show that the Cronbach’s alpha= 0,934 is very satisfactory. The following table summarizes our results:

Items	Commonalities	Cont. Fact.	Reliability
PE1	0.847	0.968	<b>0.934</b>
PE2	0.936	0.934	
PE3	0.872	0.920	
<b>KMO</b>		0.714	
<b>Bartlett's sphericity test:</b>			
<b>Chi-square</b>		543.083	
<b>df</b>		3	
<b>significante</b>		0.000	

*b. CFA of Perceived Enjoyment*

We verified the psychometric quality of the scale and calculated its validity. The scale includes three items. The construct is a just-identified factor consequently the confirmatory analysis on the AMOS software cannot provided the results of the fit indices.

Items	Method	Maximum Likelihood (ML)				Bootstrap	
		Standardised Coff.	SMC	C.r.	Sig.	Bias	P
PE1		0.889	0.731	14.943	0.000	0.000	0.001
PE2		0.990	0.980	19.152	0.000	0.000	0.001
PE3		0.871	0.790	15.879	0.000	0.001	0.001
<b>Rh� of J�reskog <math>\rho\xi</math></b>		0.939					
<b>Pvc</b>		0.837					

This result is satisfactory: very satisfactory internal consistency 0,939, convergent validity is above 0,5, and the other conditions of verification of their validity are met (t significant test for all items, and the squared multiple correlations are much higher 0,5 ).

### 3.1.5. Scale Validation of Usage

#### a. PCA of Usage

A principal component analysis was performed on the usage scale which includes 6 items. The results show that the items of this scale are factorable (the value of KMO equal to 0,890 is considered satisfactory, and the significance of Bartlett's sphericity test is perfect) . We note that the commonalities of all the items are above 0,5. The items form an unidimensional scale which recovers 69,806 % of the information . We calculated the reliability of this scale. The results show that the Cronbach's alpha= 0,913 is very satisfactory. The following table summarizes our results:

Table 13. PCA of Usage			
Items	Commonalities	Cont. Fact.	Reliability
Usage1	0.625	0.791	<b>0.913</b>
Usage2	0.758	0.871	
Usage3	0.720	0.848	
Usage4	0.756	0.870	
Usage5	0.646	0.804	
Usage6	0.683	0.826	
	<b>KMO</b>	0.890	
	<b>Bartlett's sphericity test:</b>		
	<b>Chi-square</b>	765.018	
	<b>df</b>	15	
	<b>significante</b>	0.000	

*b. CFA of Usage*

The multi-normality test shows that this construct has a coefficient of Mardia much greater than  $3 < 16,789$ . Further, the normality test is not significant with a value of  $t = 47149 > \pm 1,96$ . Therefore, in addition to the maximum likelihood technique, we made the bootstrap procedure to test the stability of the results. Following Akrouf (2010), bootstrapping (with 250 resamples) was performed on the model to obtain estimates of standard errors for testing the statistical significance of path coefficients using a t-test. Comparing Bias and standardized coefficients of correlation, results were stable. Therefore, we interpreted the indices provided by the maximum likelihood.

The results of the factor analysis performed on this construct are shown in the following table:

Absolute Indices					Incremental Indices		Parsimonious Indices		
$\chi^2$	GFI	AGFI	RMR	RMSEA	TLI	CFI	$\chi^2/df$	BIC	CAIC
35.607 df=9 p =0.000	0.946	0.875	0.130	0.122	0.942	0.965	3.956	99.187 Ms 111.265	111.187 Ms 132.265

All indices of the model are quite satisfactory. Also, the normalized chi-square is well above 3. Therefore, we decided to correct the model by checking the items' SMC and the correlations between the error terms and the modification indices. Thus, we found that the contributions of all items are above 0,5. We analyzed the change in indices. We found significant correlations between the error terms of the U1 and U4 items. Therefore, we added a correlation between these error terms of these items. The results are shown in the following table :

Absolute Indices					Incremental Indices		Parsimonious Indices		
$\chi^2$	GFI	AGFI	RMR	RMSEA	TLI	CFI	$\chi^2/df$	BIC	CAIC

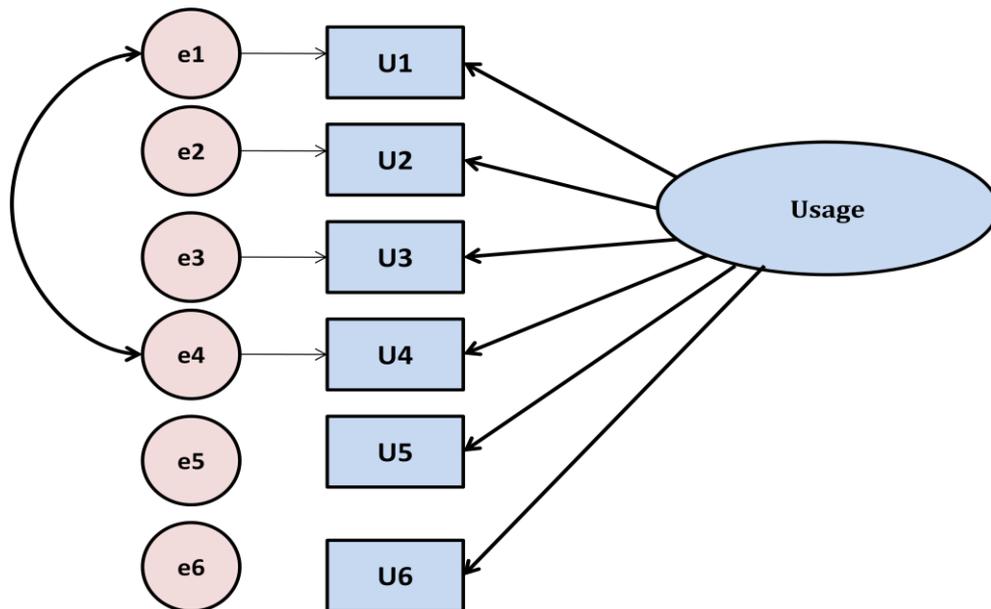
15.417								84.295	97.295
df=8	0.975	0.954	0.092	0.068	0.982	0.975	1.927	Ms	Ms
p =0.052								111.265	132.265

Incremental indices (TLI, CFI) have good quality representation. Both are greater than 0,9. This model also seems parsimonious given that BIC has a value lower than the saturated model. The GFI and AGFI absolute fit indices are well above the threshold of 0,9. Similarly the RMR is below 0,01.

Method Items	Maximum Likelihood (ML)				Bootstrap	
	Standardised Coff.	SMC	C.r.	Sig.	Bias	P
Usage1	0.670	0.549	12.439	0.000	0.013	0.049
Usage2	0.758	0.575	14.250	0.000	0.006	0.025
Usage3	0.708	0.501	13.472	0.000	0.009	0.032
Usage4	0.786	0.617	15.285	0.000	0.006	0.025
Usage5	0.646	0.417	12.358	0.000	0.005	0.016
Usage6	0.720	0.589	12.36	0.000	0.010	0.030
<b>Rh� of J�reskog <math>\rho\xi</math></b>	0.914					
<b>Pvc</b>	0.639					

The results are excellent, all the factor contributions are greater than 0,5, the convergent validity of the scale exceeds 0,5 and its reliability is greater than 0,8. The following figure shows confirmatory factor analysis of Usage:

**Figure 7. AFC of Usage**



### 3.1.6. Scale Validation of Long-Term Orientation

#### a. PCA of Long-Term Orientation

A principal component analysis was performed on the long-term orientation scale that identified two items (LTO1 and LTO2). We note that the commonalities of all the items are above 0,5. The result shows 2 items that form one dimension that recovers 88,504 % of the information. We calculated the reliability of this scale. The results show that the Cronbach's alpha= 0,860 is very satisfactory. The following table summarizes our results:

Items	Commonalities	Cont. Fact.	Reliability
LTO1	0.877	0.937	<b>0.860</b>
LTO2	0.877	0.937	
<b>KMO</b>		0.500	
<b>Bartlett's sphericity test:</b>			
<b>Chi-square</b>		166.364	
<b>df</b>		1	
<b>signification</b>		0.000	

*b. CFA of Long-Term Orientation*

We verified the psychometric quality of the scale and calculated its validity. The scale includes three items. This construct is a just-identified factor, consequently the confirmatory analysis on the AMOS software cannot provide the results of the fit indices .

Items	Method	Maximum Likelihood (ML)			Bootstrap	
	Standardised Coff.	SMC	C.r.	Sig.	Bias	P
LTO1	0.950	0.903	12.008	0.000	0.028	0.012
LTO2	0.794	0.631	10.348	0.000	0.001	0.016
<b>Rh<math>\hat{o}</math> of J<math>\ddot{o}</math>reskog <math>\rho\xi</math></b>	0.867					
<b>Pvc</b>	0.766					

This result is satisfactory: very satisfactory internal consistency 0,867, convergent validity is above 0,5 and the other conditions of verification of their validity are met (t test is significant for all items, and the squared multiple correlations are much higher 0,5).

*3.1.7. Scale Validation of Masculinity*

*a. PCA of Masculinity*

A principal component analysis was performed on the masculinity scale that includes 3 items. We noted that the commonalities of all the items are above 0,5. The result has three items that form one dimension that recovers 68,680 % of the information. We calculated the reliability of this scale. The results show a Cronbach’s alpha= 0,766 is satisfactory. The following table summarizes our results:

Items	Commonalities	Cont. Fact.	Reliability
MAS1	0.617	0.881	<b>0.766</b>
MAS2	0.777	0.816	
MAS3	0.666	0.786	
<b>KMO</b>		0.662	
<b>Bartlett's sphericity test:</b>			
<b>Chi-square</b>		167.443	
<b>df</b>		3	
<b>signification</b>		0.000	

*b. CFA of Masculinity*

We verified the psychometric quality of the scale and calculated its validity. The scale includes three items. The construct is a just-identified factor, consequently the confirmatory analysis on the AMOS software cannot provided the results of the fit indices .

Items	Method	Maximum Likelihood (ML)				Bootstrap	
		Standardised Coff.	SMC	C.r.	Sig.	Bias	P
MAS1		0.644	0.515	9.087	0.000	0.004	0.012
MAS2		0.846	0.746	12.455	0.000	0.003	0.013
MAS3		0.695	0.483	9.864	0.000	-0.009	0.004
<b>Rh<math>\hat{o}</math> of J<math>\ddot{o}</math>reskog <math>\rho\xi</math></b>		0.782					
<b>Pvc</b>		0.548					

This result is satisfactory: satisfactory internal consistency 0,782, convergent validity is above 0,5 and the other conditions of verification of their validity are verified( t test is significant for all items, and the squared multiple correlations are above 0,5) .

### 3.1.8. Scale Validation of Individualism

#### a. PCA of Individualism

A principal component analysis was performed on the individualism scale that identified two items. We note that the commonalities of all the items are above 0,5. The result shows 3 items that form one dimension that recovers 66,498 % of the information. We calculated the reliability of this scale. The results show that the Cronbach’s alpha= 0,746 is satisfactory. The following table summarizes our results:

Items	Commonalities	Cont. Fact.	Reliability
IND1	0.631	0.881	<b>0.746</b>
IND2	0.776	0.794	
IND3	0.588	0.767	
<b>KMO</b>		0.635	
<b>Bartlett’s sphericity test:</b>			
<b>Chi-square</b>		150.526	
<b>df</b>		3	
<b>signification</b>		0.000	

#### b. CFA of Individualism

We verified the psychometric quality of the scale and calculated its validity. The scale includes three items. This construct is a just-identified, consequently the confirmatory analysis on the AMOS software cannot provide the results of the fit indices.

Items	Method	Maximum Likelihood (ML)				Bootstrap	
		Standardised Coff.	SMC	C.r.	Sig.	Bias	P
IND1		0.666	0.444	9.320	0.000	-0.013	0.008
IND2		0.814	0.663	11.616	0.000	-0.002	0.016
IND3		0.633	0.440	9.274	0.000	0.001	0.011
<b>Rh<math>\hat{o}</math> of J<math>\ddot{o}</math>reskog <math>\rho\xi</math></b>		0.782					
<b>Pvc</b>		0.559					

### 3.1.9. Validation of Measurement Global Model and Discriminate Validity: Kuwaiti Sample

#### a. Test of the measurement model

We verified the violation of multi-normality. Indeed, an examination of the distribution noted a strong deviation despite all values of skewness and kurtosis are below the | 3 |. The so-called deviation was recorded by a Mardia coefficient = 163,766 and CR = 27,309. The ML method is however valid since the bootstrap procedure (250 ) showed very low Bias values (bias <0,01 ).

Absolute fit measures					Incremental fit measures		Parsimonious fit measure		
X <sup>2</sup>	GFI	AGFI	RMR	RMSEA	NFI	CFI	X <sup>2</sup> /df	BIC	CAIC
606.414									
df=341	0.837	0.792	0.168	0.063	0.866	0.936	1.778	1104.456	
p=0,000									1198.456

**Note:**  $\chi^2$  = Chi-square; **df**= degree of freedom; **GFI** = Goodness of fit index;

**RMSEA** = Root mean square error of approximation; **NFI** = Normated fit index;

**CFI** = Comparative fit index; **AGFI** – Adjusted goodness of fit index.

We tested the goodness of fit of the measurement model. The result is considered good, as all indices have values meeting the standards listed above, except for the RMR which is below the norm, this is due to model complexity.

***b. Discriminate Validity***

Discriminate validity refers to the extent to which a latent construct is truly distinct from other latent constructs (Hair et al., 1998). The methodology used to verify the discriminate validity is the one suggested by Hair et al., in which the average variance extracted for each construct is compared with the corresponding squared inter-construct correlations (SIC), and the AVE estimate consistently larger than the SIC estimates indicates support for discriminate validity of the construct. This procedure was used in this research to assess the discriminate validity of each of the constructs.

**Table 24. Reliability and convergent validity of the measurement model (Kuwaiti Sample)**

	<b>Rhô of convergent validity (<math>\rho_{vc}</math>)</b>	<b>Rhô of Jöreskog</b>
Usage	0.639	0.914
social factor	0.782	0.935
Perceived Enjoyment	0.837	0.939
Social Trust	0.643	0.842
Attitude toward Behaviour	0.711	0.878
IND	0.515	0.759
LTO	0.766	0.867
MAS	0.548	0.782

**Table 25. Measurement Model: Convergent and Discriminate Validity**

	usage	SF	PE	ST	A	IND	LTO	MAS
--	-------	----	----	----	---	-----	-----	-----

Usage	<b>0,639</b>								
SF	0,469	<b>0,782</b>							
PE	0,612	0,527	<b>0,837</b>						
ST	0,603	0,423	0,583	<b>0,643</b>					
A	0,543	0,450	0,558	0,585	<b>0,711</b>				
IND	0,035	0,022	0,038	0,063	0,053	0,087	<b>0,515</b>		
LTO	0,016	0,09	0,015	0,029	0,021	0,028	0,186	<b>0,766</b>	
MAS	0,038	0,023	0,046	0,023	0,029	0,070	0,131	0,078	<b>0,548</b>

All squared correlation coefficients are less than the average variance extracted. Therefore the discriminate validity is checked.

### 3.2. The analysis and validation of measurement scales: Tunisian Sample

In this section, we analyzed the validity of the measurement scales. First, we started by making exploratory analyzes on each construct. Then we made a confirmatory analysis of all the measures to assess the reliability and validity of the model` constructs.

Further, for this sample, reliability of the measures was assessed by examining the consistency of the respondents' answers to all items in the measure. Cronbach's alpha reliability coefficients were used to measure the internal consistency of each measure. In order to find out the overall reliability of the each of the latent constructs used in the model. Construct reliabilities were calculated and the results mentioned in the Table 28. showed that the reliability coefficient for the construct Usage was 0,888, which was above the criteria strictly recommended ( $>0,7$ ), indicating the observed variables are reasonably good measurement of the construct Usage. The results also revealed that construct's reliability estimate for Usage indicated high internal consistency and adequate reliability of the construct. Besides, all other estimation values were above the recommended cut off point indicating strong reliability and high internal consistency in measuring relationship in the model. This also suggested strong construct validity (Hair et al., 1998). Results of construct reliability calculated are presented in Table 26 (Annex I). Construct reliabilities for all nine constructs were found greater than the minimum acceptable level of construct reliability for each construct (Annex I).

### 3.2.1. Validation of Measurement Global Model and Discriminate Validity: Tunisian Sample

Again for the second sample data, confirmatory factor analysis (CFA) was performed on the measurement model (Figure 3.) to assess the unidimensionality, reliability, and validity of measures.

The measurement model was evaluated by using the maximum likelihood (ML) estimation techniques provided by the AMOS 18. Results of the respective measurement model after removal of redundant items indicated the absolute fit measures such as GFI and RMSEA were 0,837 and 0,063, respectively, the incremental fit measures such as NFI and CFI were 0,866 and 0.936, respectively and the parsimony fit measure such as AGFI was 0,792. All these measures surpassed the minimum recommended values. In addition to these indices, the ratio of  $\chi^2/df$  was 1,778 which was within the acceptable threshold level (i.e.,  $1,0 < X^2/df < 3,0$ ). These goodness of fit statistics therefore confirmed that the model adequately fitted the data.

Table 27. Goodness of fit statistics of CFA model

Table 27. Goodness of fit statistics of CFA model									
Absolute fit measures					Incremental fit measures		Parsimonious fit measure		
$\chi^2$	GFI	AGFI	RMR	RMSEA	NFI	CFI	$\chi^2/df$	BIC	CAIC
606.414									
df=341	0.837	0.792	0.168	0.063	0.866	0.936	1.778	1104.456	
p=0,000									1198.456

The measurement model test included convergent and discriminate validity measures, that was satisfactory (Table 28 and Table 29 see Annex I).

### 3.3. The analysis and validation of measurement scales: Italian Sample

In this section, we analyzed the validity of the measurement scales related to the Italian sample. First, we started by making exploratory analyzes on each construct. Then we made a confirmatory analysis of all the measures to assess the reliability and validity of the model` constructs.

Moreover, reliability of the measures was assessed by examining the consistency of the respondents` answers to all items in the measure. Cronbach`s alpha reliability coefficients were used to measure the internal consistency of each measure. In order to find out the overall reliability

of the each of the latent constructs used in the model. Construct reliabilities were calculated and the results mentioned in the Table 32 showed that the reliability coefficient for the construct Usage was 0,888 which was above the criteria strictly recommended ( $>0,7$ ), indicating the observed variables are reasonably good measurement of the construct Usage. The results also revealed that construct's reliability estimate for Usage indicated high internal consistency and adequate reliability of the construct. Besides, all other estimation values were above the recommended cut off point indicating strong reliability and high internal consistency in measuring relationship in the model. This also suggested strong construct validity (Hair et al., 1998).

Results of construct reliability calculated are presented in Table 30. Construct reliabilities for all nine constructs were found greater than the minimum acceptable level of construct reliability for each construct (Annex I).

*3.3.1. Validation of Measurement Global Model and Discriminate Validity: Italian Sample*  
 Confirmatory factor analysis (CFA) was performed also on the Italian measurement model (Figure 3.) to assess the unidimensionality, reliability, and validity of measures.

The measurement model was evaluated by using the maximum likelihood (ML) estimation techniques provided by the AMOS 18. Results of the respective measurement model after removal of redundant items indicated the absolute fit measures such as GFI and RMSEA were 0,901 and 0,075, respectively, the incremental fit measures such as NFI and CFI were 0,871 and 0.926, respectively and the parsimony fit measure such as AGFI was 0,849. All these measures surpassed the minimum recommended values (Table 11). In addition to these indices, the ratio of  $\chi^2/df$  was 2,119 which was within the acceptable threshold level (i.e.,  $1,0 < \chi^2/df < 3,0$ ). These goodness of fit statistics therefore confirmed that the model adequately fitted the data.

Table 31. Goodness of fit statistics of CFA model		
Absolute fit measures	Incremental	Parsimonious fit measure

					fit measures				
$\chi^2$	GFI	AGFI	RMR	RMSEA	NFI	CFI	$\chi^2/df$	BIC	CAIC
606.414									
df=341	0.837	0.792	0.168	0.063	0.866	0.936	1.778	1104.456	
p=0,000									1198.456

The measurement model test included convergent and discriminate validity measures, that was satisfactory (Table 32 and Table 33 see Annex).

#### 4.Hypothesis Testing

##### 4.1. Structural Equations Modelling (SEM)

The objective of structural analysis is to explain the different causal relationships between the various constructs. SEM ensures that the regressions found between latent variables correspond to significant causal relationships allowing for measurement errors. The interpretation of the model is performed at two levels: the estimation of the model fit to the data and the quality of the causal model.

To study the model fit to the data , the indices used in the confirmatory analysis can be used. The causality analysis returns to study the relationship between the theoretical constructs of the model, which are defined by a measurement scale. A structural equation model specifies theoretical constructs as latent variables. It represents the assumptions about relationships between variables through a causal paths. The structural equations provide coefficients for all relations between latent variables. Each parameter is the subject of a tStudent. This test verifies the assumption that the parameter value is significantly different from 0.

##### 4.2. Analysis of Moderating Effect

A moderating variable affects the direction or the strength of a relationship between other variables. The proof of the existence of such an effect is done by calculating the influence of the interaction between the moderating variable and the independent variable in relation of origin with the dependent variable. If this influence is significant, then there's a moderating effect. We chose to

work with the method of multi-group analysis because it is simple and robust despite its limitations. In order to identify the moderating effect of a variable, we have to follow several steps:

#### *4.2.1. Identify groups*

As we seek to measure the effect of cultural dimensions on the model constructs` relationships, we realized regression analyzes to find out the groups. Our moderator variable is ordinal, thus, we proceeded by calculating the median and transformed it in a dichotomous variable .

#### *4.2.2. Confirmatory multi-group factor analysis*

Secondly, we first check whether the correlations between the four constructs and measurement variables are significantly different from one group to another. For this we carried a confirmatory factor analysis on the measurement of construct items where the correlations are left without any restrictions. Then the same model is estimated as a constraint model by making same correlations between the different cultural groups. Finally, a difference in chi-square test was performed to assess significance. Therefore, we adopted a constraint multi-groups analysis.

#### *4.2.3. Analysis and interpretation of the structural model*

We compared the models adjustment quality for the different groups. In addition, the regression coefficients obtained will be compared by the test of “ the significant difference between the regression coefficients (  $\gamma$  )”. If the coefficients estimates vary between groups, the moderating effect is established (MacKenzie and Spreng, 1992).

#### *4.3. Hypothesis Testing: Direct Effect*

Before presenting the results of our analysis we recall the assumptions related to our conceptual model.

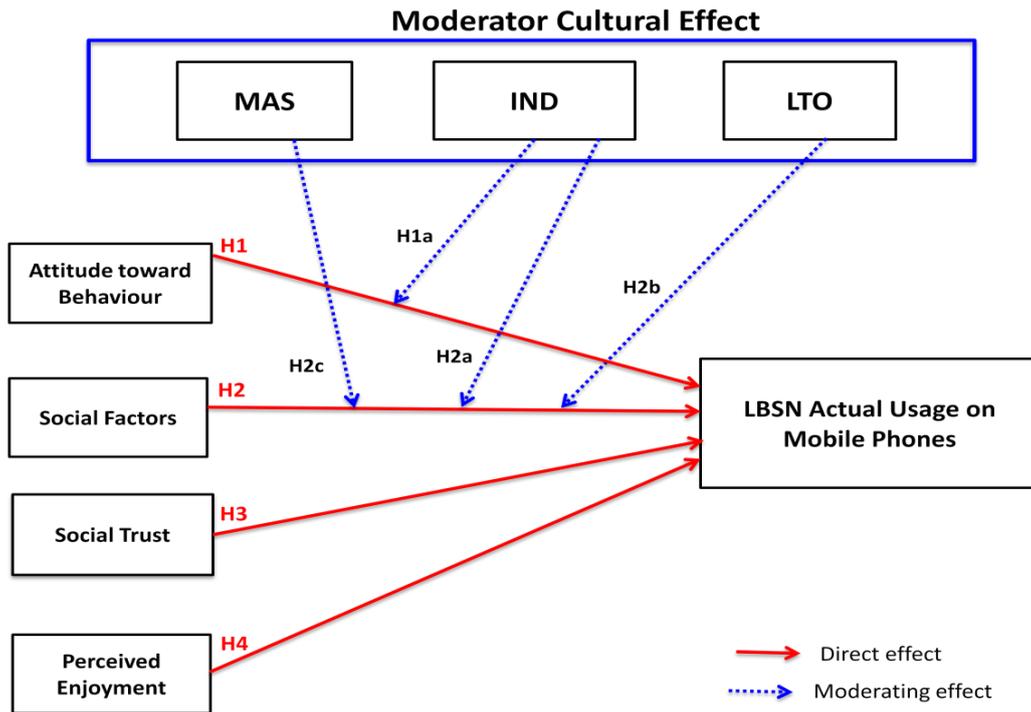


Table 34. Hypotheses related to the conceptual model

Hypotheses	Assumptions
<b>H1</b>	There is a positive relationship between an individual's attitude toward LBSN and his/her actual use of LBSN on mobile phones.
<b>H2</b>	There is a positive relationship between the social factor and the actual LBSN usage on mobile phones.
<b>H3</b>	There is a positive relationship between social trust and the actual LBSN usage on mobile phones.
<b>H4</b>	There is a positive relationship between perceived enjoyment and the actual LBSN usage on mobile phones.
<b>H1a</b>	The positive relationship between attitude and the actual LBSN usage on mobile phones is stronger in collectivist than in individualist nations.

<b>H2a</b>	The positive relationship between social factors and the actual LBSN usage on mobile phones is stronger in collectivist than in individualist nations.
<b>H2b</b>	The positive relationship between social factor and the actual LBSN usage on mobile phones is stronger in nations characterized by long versus short-term orientation.
<b>H2c</b>	The positive relationship between social factors and the actual LBSN usage on mobile phones is stronger in nations with high level of masculinity.

*4.3.1. Hypotheses testing direct effect: Kuwaiti Sample*

The quality of the model fit obtained is satisfactory. Indeed, the chi-square test is significant at a probability equal to zero. Absolute indices GFI and AGFI have values below the standard ( respectively 0,837 and 0,792 ) but are still acceptable. Incremental indices evidence that the model is very close to the saturated model: TLI and CFI indices have values greater than 0,9 ( 0,923 and 0,936 respectively). The values of the parsimonious indices indicate that the proposed model is more parsimonious than the saturated model. We have summarized all results of the adjustment indices for the Kuwaiti model in the following table :

Table 351. Adjustment Indices of the Structural Model (Direct Effect)									
Absolute Indices					Incremental Indices		Parsimonious Indices		
$\chi^2$	GFI	AGFI	RMR	RMSEA	TLI	CFI	$\chi^2/df$	BIC	CAIC
606.414									
df=341	0.837	0.792	0.168	0.063	0.923	0.936	1.778	1104.456	1198.456
p=0.000									

In sum all relationships between the independent variable and the dependent variable are statistically significant ( $p < 0,05$ ). The following table summarizes the results of the structural model:

Table 36. Results of the Structural Model (Direct Effect)
---

Hypo	Relation		$\Gamma$	$\gamma$ stand.	S.E.	C.R.	P
H1	Usage	<--- Attitude	0.163	0.148	0.065	2.521	0.012
H2	Usage	<--- Social factor	0.215	0.195	0.066	3.262	0.001
H3	Usage	<--- Social trust	0.573	0.521	0.084	6.829	0.000
H4	Usage	<--- Perceived enjoyment	0.535	0.486	0.080	6.704	0.000

a. *The influence of Attitude toward LBSN on the consumer's usage on mobile phone: H1*

The hypothesis H1 provides that Attitude toward LBSN positively influences the consumer's usage on mobile phone. The test shows that the hypothetical relationship is significant. Indeed, the structural relationship between Attitude and Usage is significant ( $t = 2,521$  and  $p = 0,012$ ), in addition this relationship is positive ( $\gamma = 0,163$ ). Therefore, H1 is validated and confirmed.

b. *The influence of Social Factor on the consumer's LBSN usage on mobile phone: H2*

The hypothesis H2 provides that Social Factors positively influence the consumer's usage on mobile phone. The test shows that the hypothetical relationship is significant. Indeed, the structural relationship between the two constructs is significant ( $t = 3,262$  and  $p = 0,001$ ), in addition this relationship is positive ( $\gamma = 0,215$ ). Therefore, H2 is validated and confirmed.

c. *The influence of Social Trust on the consumer's LBSN usage on mobile phone: H3*

The hypothesis H3 provides that Social Trust over LBSN positively influences the consumer's usage on mobile phone. Therefore, more the consumers trust on the mobile social networking more they will use LBSN on their mobile phones.

The test shows that the hypothetical relationship is significant. Indeed, the structural relationship between Social Trust and Usage is significant ( $t = 6,829 > 1,96$  and  $p = 0,000$ ), in addition this relationship is positive ( $\gamma = 0,573$ ). Therefore, H3 is validated and confirmed.

d. *The influence of Perceived Enjoyment on the consumer's LBSN usage on mobile phone: H4*

The hypothesis H4 provides that Perceived Enjoyment positively influences the consumer's LBSN usage on mobile phones.

The structural relationship between perceived enjoyment and consumer's LBSN usage on mobile phones is significant ( $t=6,704$  and  $p=0,000$ ), in addition this relationship is positive ( $\gamma = 0,535$ ). Therefore, H4 is validated and confirmed.

Table 37. Results of Hypotheses (Direct Effect)

Hypotheses	Assumptions	Result
H1	There is a positive relationship between an individual's attitude toward LBSN and his/her actual use of LBSN on mobile phones.	<b>Valid</b>
H2	There is a positive relationship between the social factor and the actual LBSN usage on mobile phones.	<b>Valid</b>
H3	There is a positive relationship between social trust and the actual LBSN usage on mobile phones.	<b>Valid</b>
H4	There is a positive relationship between perceived enjoyment and the actual LBSN usage on mobile phones.	<b>Valid</b>

#### 4.3.2. Hypotheses testing direct effect: Tunisian Sample

For further analysis and modelling exercise (SEM), we made the same procedures as we did for the Kuwaiti sample to test the direct effect between the independent variables (Social Factors, Social Trust, Attitude, and Perceived Enjoyment) and the dependent variable (LBSN Usage). Based on the structural equation modelling results, the model indicated a good fit between the data and the model ( $X^2/df=1,493$ ;  $CFI=0,950$ ;  $TLI=0,931$ ;  $RMSEA=0,050$ ) (Hair et al., 1998). The results of hypothesis model indicate that there are significant relationship between Attitude and LBSN usage ( $\gamma^=0,231$ ;  $t= 2,719$  and  $p= 0,007$ ); significant between Social factors and LBSN usage ( $\gamma^=0,167$ ;  $t= 1,965$  and  $p= 0,056$ ); significant between Social Trust and LBSN usage ( $\gamma^=0,581$ ;  $t=5,859>1,96$  and  $p=0,000$ ); and significant between Perceived Enjoyment and LBSN usage ( $\gamma^=0,587$ ;  $t=6,039$  and  $p=0,000$ ). Consequently, all hypotheses were supported( Table 38).

Hypo	Relation	$\gamma'$	$\gamma'$ stand.	S.E.	C.R.	P
H1	usage <--- Attitude	0.231	0.182	0.085	2.719	0.007
H2	usage <--- Social factor	0.167	0.132	0.087	1.965	0.056
H3	usage <--- Social trust	0.581	0.458	0.099	5.859	0.000
H4	usage <--- Perceived enjoyment	0.587	0.463	0.087	6.039	0.000

Hypotheses	Assumptions	Result
H1	There is a positive relationship between an individual's attitude toward LBSN and his/her actual use of LBSN on mobile phones.	<b>Valid</b>
H2	There is a positive relationship between the social factor and the actual LBSN usage on mobile phones.	<b>Valid</b>
H3	There is a positive relationship between social trust and the actual LBSN usage on mobile phones.	<b>Valid</b>
H4	There is a positive relationship between perceived enjoyment and the actual LBSN usage on mobile phones.	<b>Valid</b>

#### 4.3.3. Hypotheses testing direct effect: Italian Sample

For further analysis and modelling exercise (SEM), LBSN usage model have been adapted to test the relationship of constructs variables between exogenous variables (Social Factors, Social Trust,

Attitude, and Perceived Enjoyment) and endogenous variable (LBSN Usage). Based on the structural equation modelling results, the model indicated a (good) fit near to the standard criteria between the data and the model ( $X^2/df=1,728$ ; CFI=0,895; TLI=0,860; RMSEA=0,075 ) (Hair et al., 1998). The results of hypothesis model indicate that there are significant relationship between Attitude and LBSN usage ( $\gamma'' =0,280$ ;  $t = 2,269$  and  $p = 0,023$ ); significant relationship between Social factors and LBSN usage ( $\gamma'' =0,278$ ;  $t = 2,289$  and  $p = 0,022$ ); significant relationship between Perceived Enjoyment and LBSN usage ( $\gamma'' =0,280$ ;  $t =2,241$  and  $p = 0,025$ ) and finally no significant relationship between Social Trust and LBSN usage ( $\gamma'' = -0,038$ ;  $t = -0,293$  and  $p=0,770$ ); and no significant relationship between Perceived Enjoyment and LBSN usage ( $\gamma'' =0,176$ ;  $t=1,136$ ,  $p=0,256$ ) as indicated in Table 40. Consequently, the hypothesis H3 and H4 were not supported(Table 40.).

Hypo	Relation		$\gamma''$	$\gamma''$ stand.	S.E.	C.R.	P
H1	Usage	<--- Attitude	0.280	0.252	0.123	2.269	0.023
H2	Usage	<--- Social factor	0.278	0.250	0.121	2.289	0.022
H3	Usage	<--- Social trust	-0.038	-0.034	0.129	-0.239	0.770
H4	Usage	<--- Perceived enjoyment	0.280	0.252	0.125	2.241	0.025

Hypotheses	Assumptions	Result
H1	There is a positive relationship between an individual's attitude toward LBSN and his/her actual use of LBSN on mobile phones.	<b>Valid</b>
H2	There is a positive relationship between the social factor and the actual LBSN usage on mobile phones.	<b>Valid</b>
H3	There is a positive relationship between social trust and the actual LBSN usage on mobile phones.	<b>Not Valid</b>

H4	There is a positive relationship between perceived enjoyment and the actual LBSN usage on mobile phones.	<b>Valid</b>
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#### 4.4. Hypothesis Testing: Moderating Effect

To analyze the moderating effect we conducted a multiple-groups analyzes. Groups are made for different levels of cultural moderator variables. The following table presents the hypotheses assumptions of the moderating variables:

Hypotheses	Assumptions
<b>H1a</b>	The positive relationship between attitude and the actual LBSN usage on mobile phones is stronger in collectivist than in individualist nations.
<b>H2a</b>	The positive relationship between social factors and the actual LBSN usage on mobile phones is stronger in collectivist than in individualist nations.
<b>H2b</b>	The positive relationship between social factor and the actual LBSN usage on mobile phones is stronger in nations characterized by long versus short-term orientation.
<b>H2c</b>	The positive relationship between social factors and the actual LBSN usage on mobile phones is stronger in nations with high level of masculinity.

##### 4.4.1. Moderating effect of Individualism

The moderator variable is a dummy variable divided into two groups. These two levels of culture : Individualism vs. collectivism

We made the multi-group analysis of the two groups for each sample as shown in the following table:

**Table 43. Cultural Groups (Individualism vs. Collectivism)**

Country	Kuwait	Tunisia	Italy
---------	--------	---------	-------

<b>Cultural level groups</b>	Individualism	Collectivism	Individualism	Collectivism	Individualism	Collectivism
<b>Sub-sample (N)</b>	89	111	92	108	140	60

We analyzed the moderating effect of individualism (vs. Collectivism) cultural dimension at the individual level for each sample, as shown in Table 43. we have found that people who belong to the collectivist nations such as Kuwait and Tunisia may adopt an individualistic behaviour and vice versa. However, most of the individuals cultural value in each sample are in line with the Hofstede Score Index which defines countries level of culture value, for instance, according Hofstede Score Index Kuwait is a collectivist country while Italy is an Individualistic country. Indeed, to study the consumer behaviour across culture in our case the user behaviour of LBSN on mobile phone we have to analyze the phenomenon at the individual level.

By analyzing the difference between the chi-square of the unconstrained model and the constrained model, we noted that the difference is significant ( $p = 0,000 < 0,05$ ). Therefore, we concluded that the variable « Individualism vs. Collectivism » exerts a moderating effect on the relationship between attitude towards LBSN and the actual usage of LBSN on mobile phone.

Table 45. Moderating effect of Individualism							
We suppose that the unconstrained model to be correct							
Model	Df	CMIN	P	NFI	IFI	RFI	TLI
<b>Unconstrained Model (Kuwait)</b>	292	985.314	<b>0.000</b>	0.750	0.812	0.707	0.776
<b>Unconstrained Model (Tunisia)</b>	100	259.630	<b>0.000</b>	0.752	0.830	0.725	0.796
<b>Unconstrained Model (Italy)</b>	150	286.379	<b>0.000</b>	0.702	0.820	0.705	0.815

a. Moderating effect of Individualism between attitude towards LBSN and the usage on mobile phone : H1a

Table 46. Multi-groups analyses of moderating effect of Individualism vs. Collectivism						
Relation	LBSN usage<--> attitude					
Country	Kuwait		Tunisia		Italy	
Groups	IND	COL	IND	COL	IND	COL
Coef. Stand	0.335	0.032	-0.083	0.084	0.527	-0.081
CR	3.852	0.401	-1.233	0.596	2.940	-0.553
P	<b>0.000</b>	0.689	0.218	0.551	<b>0.003</b>	0.596

Furthermore, the impact of attitude towards LBSN on usage is significant only on the Individualistic groups for all samples except the Tunisian sample which the moderator effect of Individualism (vs. Collectivism) was statistically not significant. This means that the individualistic groups are strongly influenced by their cultural value to use LBSN on mobile phones than the collectivist groups. Therefore, H1a is rejected and not confirmed.

*b. Moderating effect of Individualism between social factors and the usage on mobile phone: H2a*

Table 47. Multi-groups analyses of moderating effect of Individualism vs. Collectivism						
Relation	LBSN usage<--> social factors					
Country	Kuwait		Tunisia		Italy	
Groups	IND	COL	IND	COL	IND	COL
Coef. Stand	0.092	0.293	0.148	0.215	0.334	0.414
CR	1.144	3.291	1.650	1.534	2.005	2.459
P	0.253	<b>0.000</b>	0.099	0.125	<b>0.045</b>	<b>0.014</b>

As shown in Table 48. the relationship between social factors and LBSN actual usage on mobile phone is significant only on the Collectivistic groups for all samples except the Tunisian sample which the moderator effect of Individualism (vs. Collectivism) was statistically not significant. This

means that the collectivistic groups are strongly influenced by their cultural value to use LBSN on mobile phones than the collectivist groups. Therefore, H2a is accepted and confirmed.

#### 4.4.2. Moderating effect of Long-Term Orientation

The moderator variable is a dummy variable divided into 2 groups. These two levels of culture : Long-Term Orientation (LTO) vs. Short-Term Orientation (STO)

We made the multi-group analysis of the two groups for each sample as shown in the following table:

**Table 49. Cultural Groups (LTO vs. STO)**

Country	Kuwait		Tunisia		Italy	
Cultural level groups	LTO	STO	LTO	STO	LTO	STO
Sub-sample (N)	123	77	103	97	64	136

By analyzing the difference between the chi-square of the unconstrained model and the constrained model (Table 50), we noted that the difference is significant ( $p = 0,000 < 0,05$ ). Therefore, we concluded that the variable «long-term orientation vs. short-term orientation» exerts a moderating effect on the relationship between social factors and the actual usage of LBSN on mobile phone.

Table 50. Moderating effect of Long-Term Orientation

Table 50. Moderating effect of Long-Term Orientation							
We suppose that the unconstrained model to be correct							
Model	Df	CMIN	P	NFI	IFI	RFI	TLI
Unconstrained Model (Kuwait)	292	893.493	<b>0.000</b>	0.766	0.829	0.726	0.797
Unconstrained Model (Tunisia)	100	245.162	<b>0.000</b>	0.732	0.820	0.706	0.780

<b>Unconstrained Model (Italy)</b>	150	272.647	<b>0.000</b>	0.702	0.829	0.706	0.817
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a. Moderating effect of Long-Term Orientation between social factors and the usage on mobile phone: H2b

Table 51. Multi-groups analyses of moderating effect of LTO vs. STO						
Relation	<b>LBSN usage&lt;--&gt; social factors</b>					
Country	<b>Kuwait</b>		<b>Tunisia</b>		<b>Italy</b>	
Groups	<b>LTO</b>	<b>STO</b>	<b>LTO</b>	<b>STO</b>	<b>LTO</b>	<b>STO</b>
Coef. Stand	0.452	0.038	0.170	0.091	0.221	0.292
CR	3.897	0.584	1.949	1.052	1.232	1.871
P	<b>0.000</b>	0.559	<b>0.050</b>	0.293	0.218	0.061

As shown in Table 51. the relationship between social factors and LBSN actual usage on mobile phone is significant only on the Long-Term Orientation (vs. Short-Term Orientation) groups for all samples except the Italian sample which the moderator effect of LTO (vs. STO) was statistically not significant. This means that the LTO groups are strongly influenced by their cultural value to use LBSN on mobile phones than the collectivist groups. Therefore, H2b is accepted and confirmed.

#### 4.4.3. Moderating effect of Masculinity vs. Femininity

The moderator variable is a dummy variable divided into 2 groups. These two levels of culture : Masculinity vs. Femininity .

We made the multi-group analysis of the two groups for each sample as shown in the following table:

**Table 52. Cultural Groups (MAS vs. FEM)**

Country	Kuwait		Tunisia		Italy	
Cultural level groups	MAS	FEM	MAS	FEM	MAS	FEM
Sub-sample (N)	100	100	100	100	102	98

By analyzing the difference between the chi-square of the unconstrained model and the constrained model (Table 53), we noted that the difference is significant ( $p = 0,000 < 0,05$ ). Therefore, we concluded that the variable «Masculinity vs. Femininity» exerts a moderating effect on the relationship between social trust and the actual usage of LBSN on mobile phone.

Table 53. Moderating effect of Masculinity							
We suppose that the unconstrained model to be correct							
Model	Df	CMIN	P	NFI	IFI	RFI	TLI
Unconstrained Model (Kuwait)	292	925.156	<b>0.000</b>	0.759	0.822	0.731	0.801
Unconstrained Model (Tunisia)	100	253.578	<b>0.000</b>	0.749	0.823	0.715	0.823
Unconstrained Model (Italy)	100	253.578	<b>0.000</b>	0.701	0.838	0.715	0.789

a. Moderating effect of Masculinity between social factors and the usage on mobile phone:  
H2c

Table 54. Multi-groups analyses of moderating effect of Masculinity						
Relation	LBSN usage<--> social factors					
Country	Kuwait		Tunisia		Italy	
Groups	MAS	FEM	MAS	FEM	MAS	FEM

Coef. Stand	0.208	0.285	0.076	0.222	0.251	0.219
CR	2.441	2.964	1.254	2.098	2.380	1.250
P	<b>0.015</b>	<b>0.003</b>	0.210	<b>0.036</b>	<b>0.017</b>	0.211

As shown in Table 54. the relationship between social factors and LBSN actual usage on mobile phones is stronger for individuals who belong to a society with low masculinity (vs. high femininity) culture for all samples except the Italian sample which the moderator effect of MAS(vs. FEM) was statistically not significant for individuals who belong to groups with high femininity culture . This means that individuals who belong to groups with high femininity culture are strongly influenced by their cultural value to use LBSN on mobile phones than groups with high masculinity culture. Therefore, H2c is accepted and confirmed.

Table 55. Results of Hypotheses (Moderating Effect)		
Hypotheses	Assumptions	Result
<b>H1a</b>	The positive relationship between attitude and the actual LBSN usage on mobile phones is stronger in collectivist than in individualist nations.	<b>Not Valid</b>
<b>H2a</b>	The positive relationship between social factors and the actual LBSN usage on mobile phones is stronger in collectivist than in individualist nations.	<b>Valid</b>
<b>H2b</b>	The positive relationship between social factor and the actual LBSN usage on mobile phones is stronger in nations characterized by long versus short-term orientation.	<b>Valid</b>
<b>H2c</b>	The positive relationship between social factors and the actual LBSN usage on mobile phones is stronger in nations with high level of masculinity.	<b>Valid</b>

## VI. Discussion based on Data Analysis Results

In the present paragraph, a discussion of the data analysis results is presented. Indeed, the data analysis results show that culture has a significant impact on user acceptance of LBSN usage on mobile phone as this study proposes. Specifically, our conceptual model holds in the research setting of Kuwaiti, Tunisian and Italian cultures; three out of the four related cultural values are found to have interaction effect on user acceptance of LBSN on mobile phone. Details of the relationships among the model constructs and the relationships between the model constructs and cultural dimensions as moderator variables are discussed as follows.

### **1. Relationships among LBSN actual usage on mobile phone constructs**

The current study examines the validity of the LBSN usage on mobile phone conceptual model in three different countries (Kuwait, Tunisia, and Italy). The results prove the capability and validity of our model to predict LBSN actual usage on mobile phone in these three countries with some differences, between the three samples (Kuwaiti, Tunisian, and Italian), on the effect weight of the model's independent constructs on the LBSN actual usage due to the cultural moderating effect. Therefore, we obtained three different models of LBSN actual usage on mobile phone.

Indeed, results from the assessment of the measurement models proved the research instrument's validity (convergent and discriminate), reliability (Cormbach Alpha and composite reliability) and the ability to assess the structural model. Regarding the SEM, the study's findings reveal that all model direct relationships are significant in the three samples except the relationship between social trust and the actual usage in the Italian sample and this result will be discussed later on. Concerning the result of attitude towards LBSN on mobile phone, as expected and in line with previous studies (Pelling and White, 2009; Madge et al., 2009), attitude has positive and significant effect on LBSN actual use. Further, social factors are found to have also positive and significant effect on LBSN actual use in our three samples. An explanation could lie in the type of the IT used. In other words, LBSN are based on the individual relationships on the social network platforms, in our case the LBSN used by samples is Facebook. In this sense, Lampe et al. (2006) argued that young people (mainly students) use Facebook to learn more about someone they know offline, rather than to develop new connections. Therefore, social factors are fundamental to explain the LBSN usage on mobile specifically when students reported using Facebook as LBSN application on their mobile phone to keep in touch with their old friend (Lampe et al., 2006). In accordance with previous research on SNS (Boyd and Ellison, 2007; Thambusamy et al., 2010), perceived enjoyment has a positive and significant effect on LBSN actual use since SNS members have fun using SNSs (Ernst et al., 2013). Whereas, Social trust has found to have effect on LBSN actual use only in the Kuwait and Tunisian samples and non in the Italian sample. Indeed, this result could be explained based on

samples cultural values. According to Triandis (1972), members of collectivist groups focus and act on group interests over individual interests. The personal relationships between people who belong to collectivist cultures are often multiplex, meaning they have “overlapping roles, actions, and affiliations within a relationship” (Kuwabara, Luo, and Sheldon 2010). In collectivist cultures, the cliquish nature of social ties facilitates monitoring and sanctioning of in-group members (see also Miller and Kanazawa 2000). Therefore, they trust easily their friend on LBSN. However, people who espouse individualist cultures often maintain simplex social relations (Simpson, 2006), which are linked by a single type of relationship (i.e., co-worker, friend, or fellow churchgoer). Simplex relationships are typically non-overlapping. Additionally, people in individualist groups tend to have more nonkin social ties than those in collectivist cultures (Kashima et al. 1995). The number and complexity of social ties tax actors’ ability to maintain them, which results in weaker connections for those in individualist compared with collectivist groups.

Summing up, we proposed a new model as a synthesis of the major social media technology user acceptance models. As the key variables and theoretical relationships in the TAM model are similar to those of the Triandis’ model, it is reasonable to conclude that the dominance of the TAM based theory in the research area of social media consumer behaviour is further enhanced by our new model rather than challenged. Research findings show that relationships among LBSN actual usage on mobile phone model’s constructs are generally consistent with those found in the TAM and Triandis model (Mathieson, 1991; Lu et al., 2003; Porter and Donthu, 2006; Jeon and Kim, 2005; Kim and Lee, 2012). It therefore can be regarded as supportive evidence of TAM and Triandis model’s applicability across cultures.

## **2. Discussion of Relationships Moderated by Hofstede’s Cultural Dimensions**

To assess the effect of culture on LBSN actual usage on mobile phone, Hofstede’s cultural dimensions were incorporated to serve as a moderator constructs. This section will draw some general conclusions about the significant relationships regarding each of the three cultural values: Individualism (vs. Collectivism), Long term-orientation (vs. Short-Term Orientation), and Masculinity (vs. Femininity).

### **Individualism vs. Collectivism**

The findings of this study are mostly in accordance with expectations. As hypothesized (H2a), social factors had a significant effect on LBSN usage on mobile phone for the collectivist nations mainly Kuwait and Tunisia. However, social factors did not significantly affect LBSN usage for the individualist society mainly the Italian sample. This hypothesis was developed based on the

relationship orientation nature of collectivism and the resultant conformity tendency. Individuals high in collectivist value were found to be more subject to social factors over LBSN use on mobile phone. However, Collectivism is found to significantly moderate the relationship between social factors and LBSN usage on mobile phone. That is to say, the higher an individual's collectivist value, the greater his or her concerns about social factors using LBSN, and in turn the more useful is LBSN usage perceived to be. This reasoning is confirmed by Bochner's (1994) proposition that collectivists will more likely be "sensitive to the demands of their social context and more responsive to the assumed needs of others", and that behaviours that disrupt harmony are not desirable.

Results of this study show, contrary to hypotheses (H1a), that in Kuwait and Tunisia, attitude does not have a significantly greater effect on LBSN usage on mobile phone than in Italy. As noted above,  $p > 0,05$  for Kuwait and Tunisia contrary to Italy ( $p < 0,005$ ). However, hypotheses (Ha1) was not strongly supported since the interaction of attitude with the individualism cultural dimension did not have a significant effect on LBSN usage on mobile phone.

### **Long-Term Orientation**

Individual perceptions can differ based on orientation, with individuals in short-term orientation cultures experiencing materialist consumption pressures such as keeping up with social networking (Dwyer et al., 2005) and adopting new technology rapidly.

The results of this study reveal that people who belong to LTO cultures tend to prefer and predominantly use LBSN on their mobile phone. Indeed people in long-term oriented cultures feel an inward moral obligation to follow what their peer/friends do via mobile LBSN. On the contrary, individuals in short-term oriented cultures feel no such need. Results of this study confirm these affirmations, as hypothesized (H2b), the positive relationship between social factors and the actual LBSN usage on mobile phones is stronger in nations characterized by long versus short-term orientation.

### **Masculinity**

A significant femininity moderating effect is found between the positive relationship of social factors and LBSN usage on mobile phone. This significant relationship suggests that social factors are probably not sensitive to the masculine values of individuals. In other words, this means that individuals who belong to groups with high femininity culture are strongly influenced by their cultural value to use LBSN on mobile phones than groups with high masculinity culture. In this

study , we have assumed that the more one holds femininity value, the higher the level of social factors one would perceive for LBSN usage on mobile phone. However, this proposition is not supported in the Italian sample. This unexpected finding may be due to poor correspondence between the measurement items and the underlying concepts of masculine value. According to Srite (2000), the items in Hofstede' s Value Survey Module (VSM) measures actually gender differences rather than directly measuring masculine value.

## **VII. Contributions**

In this section, contributions and limitations of the study are examined. Finally, directions for future research are then explored.

### **1. Contribution to Research**

The current research is one of the few researches that makes a number of contributions to the body of knowledge in the LBSN area, notably, the LBSN usage on mobile phones.

First, this research advances technology acceptance theories, mainly, TAM and Triandis' Model by integrating these two theoretical streams of research and cultural theories. Since cultural differences have been observed in IT user acceptance and usage research, the lack of considering such cultural dimensions in the different technology models and theories, for instance TAM and Triandis' Model risk neglecting an important aspect of technology user adoption and usage. The present study extends researchers' call for more rigorous and empirical cultural IT studies to examine culture' s influence on user technology acceptance explicitly at the micro level. Moreover, cultural dimensions are found to have a moderating effects on LBSN users usage on mobile phones. This allows researchers to make a priori predictions of LBSN acceptance in different cultures based on the revealed links between culture and LBSN adoption on mobile phones. There have been very few studies examining the role of cultural values in LBSN acceptance using a comparative analysis. Indeed, this comparative analyse presented in the current research will contribute to efforts of identifying the role of contextual factors in individual-level adoption and diffusion processes of LBSN on mobile phones. Further, this study places an emphasis on theory and aims at additional validation of the Triandis's model, by integrating Hofstede's cultural dimensions into the research model. Thereby, it enlarges the picture of the relationship of LBSN and culture, still restricted in recent research. Moreover, our research findings reveal how individuals with varying cultural values use differently LBSN technology, therefore allowing researchers to make a

priori predictions of technology acceptance behaviours in different cultures provided the cultures are classified according to Hofstede's dimensions.

Furthermore, this study contributes to the development of instruments for measuring cultural values at the individual level. These validated measurement scales could be replicated in future cultural research. The comprehensive validation of scales measuring cultural values contributes to the systematic study on the interaction of culture and IT acceptance at the micro-level. In addition, structural equation modelling (SEM) using the AMOS statistical package was used to test the measurement and structural models. Use of this methodology employing sophisticated statistical tools has been limited in previous literature. Therefore, this study sets a new pattern in the research on LBSN research. This could be a significant step for future cultural IS study, which has long been considered as piecemeal and confusing due to the unavailability or inefficiency of good measurements of culture and a lack of vigorous methods to examine culture's moderating effect on IT acceptance.

## **2. Contributions to Practice**

Findings of this study have some important managerial implications. Indeed, the current research provides several practical suggestions for practices. The current study suggests that investigating the LBSN users adoption on mobile phones with attention to the effect of Hofstede's cultural dimensions at users behaviour are appropriate starting points when dealing with cultural diversity in LBSN environments. Now days, LBSN providers and practitioners need to acquire a deeper understanding of the impact of users characteristics and their behaviour on the LBSN usage on mobile phones in different cultural contexts. Therefore, our research model will give LBSN' providers insights to predict user's willingness to accept and use LBSN on mobile phones, and finally to develop corrective steps.

## **VIII. Limitations and directions for future research**

Although the findings of this study are encouraging and useful, it has some limitations as most field surveys suffer from. First, the data collected for this study was cross-sectional, longitudinal data will be needed in the future to investigate what factors will influence individuals' perceptions in continuing to use the LBSN on their mobile phones. Further, using a cross-sectional method in this study might have left out some features of LBSN adoption within users in different cultures, such as changes in pre-adoption and post-adoption. Therefore, future research could adopt a longitudinal data analysis to understand how culture-technology relationship alters

over time which provides more rigorous evidences to validate this proposed relationships. Another limitation is that the breadth of exploration of cultural impact is limited to Hofstede' s four cultural values. Other cultural factors may also influence LBSN usage on mobile phones. For example, cultural attributes of the Arabic language may place LBSN at a disadvantage because it is difficult to use mobile keyboards to represent a large number of characters.

The current research has developed an integrated model that provided systematic way to understand LBSN usage and adoption on mobile phones by intended users, several favourable areas for future research, however, remain to be explored. For example, results of this study are limited to LBSN usage on mobile phones; future research may apply or replicate this study in other social media platforms, such as online shopping or s-commerce environment. This would be valuable in establishing the external validity of model.

## Annex I

Table 28. Construct measurement loadings, reliability and convergent validity (Tunisian Sample)

Construct	Items	Cronbach's alpha	Explained Variance	KMO	Significance
<b>Attitude</b>	3	0,746	66,498%	0,635	,000
<b>Perceived Enjoyment</b>	3	0,807	72,162%	0,713	,000
<b>Social Trust</b>	3	0,848	86,868%	0,500	,000
<b>Social Factor</b>	2	0,673	70,089%	0,500	,000
<b>Usage</b>	2	0,888	89,966%	0,500	,000
<b>Power Distance</b>	3	0,619	64,974%	0,667	,000
<b>Masculinity</b>	3	0,525	66,435%	0,500	,000
<b>Long-Term Orientation</b>	3	0,762	68,333%	0,663	,000
<b>IND</b>	2	0,661	74,710%	0,500	,000

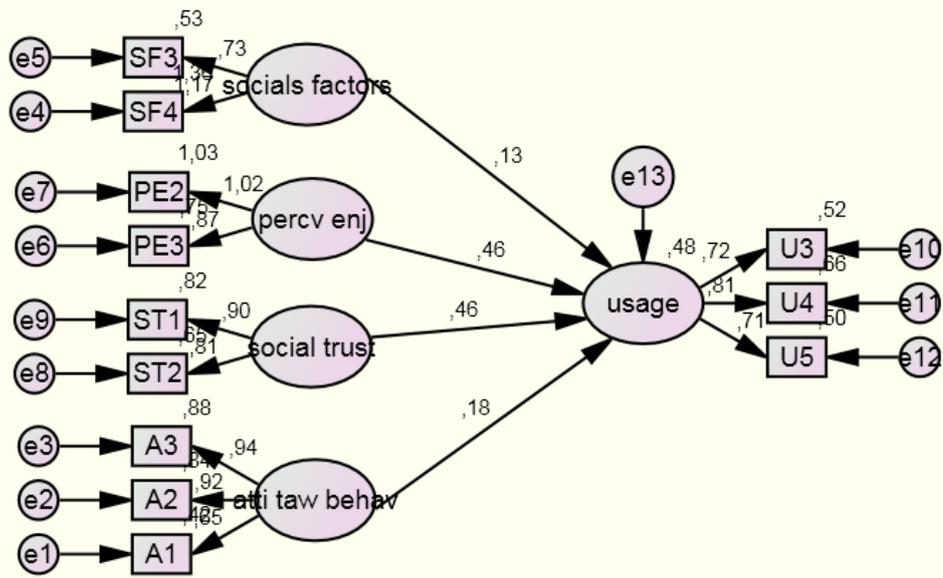
Table 30. Reliability and convergent validity of the measurement model (Tunisian Sample)

	<b>Rh� de validit� convergente (<math>\rho_{vc}</math>)</b>	<b>Rh� de J�reskog</b>
Usage	0,673	0,860
social factors	0,846	0,917
Perceived Enjoyment	0,881	0,937
Social Trust	0,729	0,843
Attitude toward Behaviour	0,710	0,878
IND	0,611	0,754
LTO	0,754	0,860
MAS	0,548	0,782

Table 31. Discrimenet Validity (Tunisian Sample)

	Usage	SF	PE	ST	A	IND	LTO	MAS	
usage	<b>0,673</b>								
SF	0,393	<b>0,846</b>							
PE	0,595	0,455	<b>0,881</b>						
ST	0,617	0,442	0,608	<b>0,729</b>					
A	0,480	0,426	0,549	0,583	<b>0,710</b>				
IND	0,078	0,023	0,048	0,071	0,097	0,171	<b>0,611</b>		
LTO	0,011	0	0,014	0,021	0,024	0,057	0,094	<b>0,754</b>	
MAS	0,031	0,01	0,044	0,023	0,029	0,117	0,055	0,099	<b>0,548</b>

Figure 5. CFA Structural Model: Tunisian Sample (AMOS.18 Output)



## ANNEX II

### Questionnaire (Italian Version)

Salve!

Stiamo conducendo una ricerca sul comportamento dei consumatori, in particolare, su come e perché le persone usano **Facebook sui propri cellulari**.

Vi invitiamo a partecipare al nostro sondaggio rispondendo alle domande che seguono. Vi ricordiamo che non ci sono risposte giuste o sbagliate, ma ai fini della ricerca è importante che le vostre risposte siano sincere.

Il questionario è **ASSOLUTAMENTE ANONIMO**.

Grazie per il vostro tempo e la collaborazione.

Esprimi il tuo grado di accordo/disaccordo nei confronti di ciascuna di queste affermazioni. Se ciò che viene affermato descrive la tua opinione esprimi accordo altrimenti esprimi disaccordo, tenendo conto che il giudizio può essere:

Completamente in disaccordo	In disaccordo	Parzialmente in disaccordo	Incerto	Parzialmente in accordo	In accordo	Completamente d'accordo
1	2	3	4	5	6	7

SF							
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	La maggior parte delle persone che sono importanti per me (la mia famiglia) utilizzano Facebook sui propri cellulari .1
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	La maggior parte delle persone che sono importanti per me (i miei amici) utilizzano Facebook sui propri cellulari .2

7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	La maggior parte delle persone che sono importanti per me vorrebbero che io usassi Facebook sul mio cellulare .3
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Le persone le cui opinioni per me contano gradirebbero che io usassi Facebook sul mio cellulare .4

**A**

5. Per me utilizzare Facebook sul mio cellulare è:

Molto dannoso  Dannoso  Poco dannoso  Neutro  Poco vantaggioso  Vantaggioso  Molto vantaggioso

Per me utilizzare Facebook sul mio cellulare è: .6

Molto spiacevole  Spiacevole  Poco spiacevole  Neutro  Poco piacevole  Piacevole  Molto piacevole

Per me utilizzare Facebook sul mio cellulare è: .7

Molto inutile  Inutile  Poco inutile  Neutro  Poco utile  Utile  Molto Utile

**PE**

7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Io uso Facebook sul mio cellulare, nel mio tempo libero, quando mi sento annoiato(a) .8
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Io uso Facebook sul mio cellulare per divertirmi .9
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Io uso Facebook sul mio cellulare per intrattenermi .10

ST							
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	So che la mia comunità di Facebook (ad esempio, i miei amici e i miei parenti ) sarà sempre pronta ad aiutarmi se avrò dei problemi .11
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Mi sento sempre sicuro(a) di poter contare sulle risposte e sui commenti della mia comunità Facebook (ad esempio, gli amici e i parenti) quando sono in contatto con loro .12
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Non mi dà fastidio il fatto che i miei amici su Facebook seguano i miei interessi personali (la mia attuale posizione, i miei amici, le mie foto ....) .13
FU							
Da quanto tempo stai usando Facebook sul tuo cellulare? .14							
<input type="checkbox"/> Meno di un mese <input type="checkbox"/> Da 1-6 mesi <input type="checkbox"/> Da 6 mesi ad un anno <input type="checkbox"/> 1-2 anni <input type="checkbox"/> 2-3 anni <input type="checkbox"/> 3-4 anni <input type="checkbox"/> Piu di 4 anni							
Da quanto tempo stai usando Facebook sul tuo cellulare? .15							
<input type="checkbox"/> Mai <input type="checkbox"/> Meno di una volta al mese <input type="checkbox"/> Una volta al mese <input type="checkbox"/> 1-2 volte al mese <input type="checkbox"/> Una volta per settimana <input type="checkbox"/> 2-3 volte per settimana <input type="checkbox"/> Quotidianamente							
U							
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Io uso Facebook sul mio cellulare perché mi permette di informare i miei amici circa la mia posizione tramite l'opzione "checking-in" .16
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Io uso Facebook sul mio cellulare per ottenere informazioni sugli eventi universitari .17

7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Io uso Facebook sul mio cellulare per ottenere .18 informazioni sugli eventi politici
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Io uso Facebook sul mio cellulare per ottenere .19 informazioni dalle mie pagine fans (cucina, moda, turismo, ecc)
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Io uso Facebook sul mio cellulare per ottenere .20 informazioni sulle proposte delle imprese (ad esempio, offerte di lavoro, campagne di marketing, ecc)
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Io uso Facebook sul mio cellulare per mantenere i .21 contatti con le persone che per me sono importanti
<b>PD</b>							
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	I superiori dovrebbero chiedere molto raramente le .22 opinioni dei propri subordinati
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Per un superiore è spesso necessario usare autorità e .23 potere nei rapporti con i propri subordinati
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	I subordinati non dovrebbero essere in disaccordo con le .24 decisioni dai loro superiori
<b>IND</b>							
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Il benessere del gruppo è più importante rispetto alle .25 ricompense individuali
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Il successo del gruppo è più importante rispetto al .26 successo individuale
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Essere accettato dai membri del mio gruppo è per me .27 molto importante

<b>LTO</b>							
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Io lavoro per raggiungere obiettivi futuri .28
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Io lavoro duro per avere successo in futuro .29
<b>MAS</b>							
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Gli uomini di solito risolvono i problemi con l'analisi logica, le donne di solito risolvono i problemi con l'intuizione .30
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	Risolvere i problemi di solito richiede un approccio diretto, che è tipico degli uomini .31
7 <input type="checkbox"/>	6 <input type="checkbox"/>	5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	E' preferibile avere un uomo in una posizione di alto livello piuttosto che una donna .32

### Dati anagrafici

Indica il tuo genere .33
<input type="checkbox"/> M <input type="checkbox"/> F
Indica la tua età .34
Indica il tuo corso di laurea .35

Indica la tua nazionalità **.36**

## Questionnaire (Arabic Version)

### استبيان حول اسباب الأفراد لاستخدام الفيسبوك على هواتفهم المحمولة

تهدف هذه الدراسة استقصاء سلوك المستخدمين، بخصوص اسباب الأفراد لاستخدام الفيسبوك على هواتفهم المحمولة. لهذا ندعوكم للمشاركة في هذا الاستبيان. يرجى العلم أنه لا توجد إجابات صحيحة أو خاطئة، بل الهدف هو الحصول على إجابات صادقة منكم. إذا وافقت على المشاركة، سيتم الحفاظ على كل المعلومات الخاصة بك بسرية تامة وأن اسمك لن يظهر مع أي معلومات قد نحصل عليها منك.

شكراً لك على وقتك و على تعاونك

الرجاء قراءة الأسئلة التالية بتأني و تمعن اختيار أو تضليل ما يناسبك- مع الأخذ في عين الاعتبار ما يلي:

7 = موافق، 6 = غير موافق تماماً، 2 = غير موافق، 3 = غير موافق إلى حد ما، 4 = محايد، 5 = موافق إلى حد ما،  
موافق تماماً

موافق تماماً	موافق	موافق إلى حد ما	محايد	غير موافق إلى حد ما	غير موافق	غير موافق تماماً	
SF							
							37. يستخدم معظم أفراد عائلتي الذين يهتمي أمرهم الفيسبوك على هواتفهم المحمولة
							38. يستخدم معظم أصدقائي الذين يهتمي أمرهم الفيسبوك على هواتفهم المحمولة
							39. يطلب مني معظم الناس الذين يهتمي أمرهم أن استخدم الفيسبوك على هاتفي المحمول
							40. يفضل جل الناس الذين أقدر آراءهم أن استخدم الفيسبوك على هاتفي المحمول

A

41. أعتبر أن استخدام الفيسبوك على هاتفي المحمول

ضار جداً

ضار

ضار بعض الشيء

محايد

نافع بعض الشيء

نافع

نافع جداً

42. أعتبر أن استخدام الفيسبوك على هاتفي المحمول

ممل جداً

ممل

ممل بعض الشيء

محايد

ممتع بعض الشيء

ممتع

ممتع جداً

43. أعتبر أن استخدام الفيسبوك على هاتفي المحمول

عدم الجدوى تماماً

عدم الجدوى

عدم الجدوى بعض الشيء

محايد

مفيد بعض الشيء

مفيد

مفيد جداً

PE

5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	44. استخدم الفيسبوك على هاتفي المحمول أثناء أوقات الضيق و الملل
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	45. استخدم الفيسبوك على هاتفي المحمول للاستمتاع
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	46. استخدم الفيسبوك على هاتفي المحمول للتسلية
ST					
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	47. أعرف أن مجتمعي في الفيسبوك (المكون من الأصدقاء والأقارب) سيحاول دائما مساعدتي إذا واجهتني صعوبات
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	48. أشعر دائما بالثقة في مجتمعي بالفيسبوك (المكون من الأصدقاء والأقارب) حيث يمكنني الاعتماد على اجابتهم و ردود أفعالهم عند التفاعل معهم
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	49. لا يزعجني أن يتابع أصدقائي على الفيسبوك اهتماماتي الشخصية (كتحديد موقعي الحالي، ومعرفة شبكة أصدقائي، والإطلاع على صوري)
FU					
50. منذ متى بدأت باستخدام الفيسبوك على الهاتف المحمول؟					
<input type="checkbox"/> أقل من شهر <input type="checkbox"/> من شهر إلى ستة أشهر <input type="checkbox"/> من ستة أشهر إلى سنة <input type="checkbox"/> من سنة إلى سنتين <input type="checkbox"/> من سنتين إلى 3 سنوات <input type="checkbox"/> من 3 سنوات إلى 4 سنوات <input type="checkbox"/> أكثر من 4 سنوات					
51. أعتبر أن استخدام الفيسبوك على هاتفي المحمول					
<input type="checkbox"/> لا استعمله أبداً <input type="checkbox"/> أقل من مرة في الشهر <input type="checkbox"/> مرة في الشهر <input type="checkbox"/> 2 - 3 مرات في الشهر <input type="checkbox"/> مرة في الاسبوع <input type="checkbox"/> 2 - 3 مرات في الاسبوع <input type="checkbox"/> يومياً					
U					
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	52. استخدم الفيسبوك على هاتفي المحمول من أجل اخبار أصدقائي عن موقعي الحالي عن طريق خدمة تفعيل خدمة "التشكين"

					"Cheking-in"
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	53. استخدم الفيسبوك على هاتفي المحمول من أجل الحصول على معلومات حول الأنشطة الجامعية
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	54. استخدم الفيسبوك على هاتفي المحمول من أجل الحصول على معلومات تخص الأحداث السياسية
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	55. استخدم الفيسبوك على هاتفي المحمول من أجل الحصول على معلومات ذات الصلة بصفحات المعجبين (كمعلومات المطبخ، والأزياء، وغيرها)
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	56. استخدم الفيسبوك على هاتفي المحمول من أجل الحصول على معلومات تخص إعلانات الشركات (كوظائف العمل أو الإعلانات التسويقية، الخ)
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	57. استخدم الفيسبوك على هاتفي المحمول للحفاظ على الاتصالات مع الناس الذين يهتمي أمرهم
PD					
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	58. لا ينبغي على المديرين أو الرؤساء أن يسألوا موظفيهم عن أرائهم
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	59. ينبغي على المديرين أو الرؤساء استخدام السلطة والقوة عند التعامل مع موظفيهم
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	60. ينبغي على الموظفين أن لا يختلفوا مع قرارات رؤسائهم أو مدرائهم
IND					
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	61. بالنسبة لي رفاهية المجموعة أكثر أهمية من المكافآت الفردية
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	62. بالنسبة لي رفاهية نجاح المجموعة أكثر أهمية من النجاح الفردي
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	63. بالنسبة لي رفاهية من المهم جدا أن أكون مرغوب بي من قبل المجموعة التي أنتمي إليها
LTO					
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	64. أعمل من أجل تحقيق أهداف المستقبل
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	65. أعمل من أجل تحقيق أهداف المستقبل
MAS					
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	66. عادة ما يقوم الرجال باستخدام التحليل المبني على المنطق في حل المشاكل بينما تعتمد النساء على الحدس
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	67. عادة ما يتطلب حل المشاكل أسلوب المواجهة المباشر، وهو أمر يلقى بالرجال أكثر من النساء
5 <input type="checkbox"/>	4 <input type="checkbox"/>	3 <input type="checkbox"/>	2 <input type="checkbox"/>	1 <input type="checkbox"/>	68. أعتقد أنه من الأفضل أن يكون رجلا في مستوى إداري عالي بدلا من امرأة

### معلومات عامة عن الطالب

1. ما هو عمرك؟	2. الجنس
----------------	----------

1 <input type="checkbox"/> ذكر	
2 <input type="checkbox"/> أنثى	
الجنسية؟	المستوى الدراسي؟

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## CHAPTER III

### THE MODERATING EFFECT OF GENDER ON TUNISIAN PURCHASE DECISION IN S-COMMERCE ENVIRONMENT: AN EMPIRICAL INVESTIGATION

#### Abstract

Nowadays, the rapid development of Web 2.0 technologies and online social media created a new trend of online commerce that leverages basically on social networking's virtual communities called social commerce. This new phenomenon has evoked the combination of two big digital trends, e-commerce and social media. Thanks to this new commerce opportunity, consumers could create content in the web and influence each other purchase decisions. Indeed, the social commerce has been driven by consumer product information sharing (See-Pui Ng, 2013). Therefore, there is a shift from the traditional dialogue between company and consumers to a new way of dialogue between consumer and other consumers that had experienced the social commerce site as a virtual marketplace.

Despite the wide use of social media platforms, larger scale research is still needed to reach significant results in area of evaluating customers' purchasing behaviour through social media channels. Accordingly, this study aims to enhance understanding of what motivates consumers to interact with virtual communities in the scope of discussing the product characteristics in online social media environments. In other words, there is a clear need for research that analyses both hedonic and utilitarian gratifications or motivations of consumer activity in social commerce environments and explains the role that plays consumers' trust in such environment. Further, we analyzed the impact of the consumers' familiarity with a social commerce sites and the reputation of these sites on the purchasing behaviour. Neither these dimensions alone are not sufficient to explain and capture the complex phenomenon of such consumer behaviour, we need also to analyze consumers' purchase behaviour from a gender perspective for identifying the differences between women and men purchase decisions in the social commerce context.

This essay will contribute to efforts of identifying the social media role in creating a new economic value. Further, this paper will provide the development of a more comprehensive view of the consumer behavioural change toward the use of social media platforms. Finally, the paper will contribute to the field by developing some managerial practices.

**Keywords:** Social Media, Web 0.2., Social Commerce, Utilitarian and Hedonic Gratifications, Gender Perspective.

## ABBREVIATION

<b>S-commerce</b>	Social Commerce
<b>E-commerce</b>	Electronic Commerce
<b>F-commerce</b>	Facebook Commerce
<b>SNSs</b>	Social Networking Sites
<b>U&amp;G</b>	Uses and Gratifications Theory
<b>SEM</b>	Structural Equation Modelling
<b>PCA</b>	Principal Component Analysis
<b>CFA</b>	Confirmatory Factor Analysis
<b>ML</b>	Maximum Likelihood
<b>SMC</b>	Squared Multiple Correlations
<b>SIC</b>	Squared Inter-construct Correlations
<b>GFI</b>	Goodness of Fit Index
<b>RMSEA</b>	Root Mean Square Error of Approximation
<b>GFI</b>	Normed Fit Index
<b>CFI</b>	Comparative Fit Index
<b>AGFI</b>	Adjusted Goodness of Fit Index

## I. INTRODUCTION

The emergence and increasing popularity use of social media tools has dramatically changed how people interact with one another and has revolutionized the way for E-commerce and lead to the creation of a new phenomenon called the social commerce. In line with this, Kim and Park (2012) argued the development of social networking sites (SNSs) as a social media instrument has given rise to a new e-commerce paradigm called social commerce. Actually, the social commerce concept open new insights to examine issues related to information-content, new social media technologies, and people's behaviour in such environment.

Because many consumers not only purchase products and services but also they share their shopping experiences and product information on the communities virtual pages, they tend to play a more important role in s-commerce than in e-commerce. Further, the s-commerce site is considered as an online marketplace where consumers make informed decisions based on information not only from the s-commerce firms, but also from other consumers that had previous shopping experience on that s-commerce site. Therefore, to better understand how people behave face to these new forms of online purchasing, this paper aims: first, to examine the consumers' purchasing behaviour in a social commerce context and second, to enhance our understanding on the gender differences in a such context.

Previous studies have examined the s-commerce phenomenon partially. For instance, some studies have focused only on the analysis of the s-commerce market (Kim, 2011), the differences between s-commerce and other types of e-commerce (Bansal and Chen, 2011), and the adoption of s-commerce (Hsiao et al., 2010; Lin and Lu, 2011). Nevertheless, not enough scholarly attention has been devoted to study the social commerce phenomenon. More recently, Wang and Zhang (2012) argued that there are conceptual ambiguities on the scopes and boundaries of social commerce. This study highlighted other important key factors that influence the consumers' purchase decision in these social media channels, mainly consumers' trust, their hedonic and utilitarian gratifications, s-commerce sites' reputation, consumers' familiarity with the purchase process on the s-commerce site. Indeed, there is a lack of studies that emphasize the crucial role of gender differences in this new context. All of these indicate that further research is needed to gain clearer insights into how consumers will react face the emerging nature of social commerce concept which is different from all other phenomena we are familiar with.

In order to address these gaps in the literature, the current study aims to undertake these challenges by developing a model for consumer purchasing behaviour in social commerce virtual communities pages (F-commerce, etc.). In particular, we empirically examine the key factors that play an important role in the formation of consumers' purchase decisions behaviour in the social environment, such as, trust, utilitarian and hedonic gratifications, familiarity and reputation. In addition, the current research purposed to explore the moderating effect of gender on the relationship between these factors and the consumers' purchase decision as a new business paradigm. We hunt for answers to the following research questions:

**RQ1.** What did past literature investigate and what did previous studies left in the area of social commerce environment? **RQ2.**What are the determinants of consumers' purchasing behaviour in the social commerce environment? And how do they influence the consumers' decisions?**RQ3.** Does gender play a significant role in influencing consumers purchasing behaviour? If so, **RQ4.** To what extent do gender differences impact the purchase behaviour on the social media sites?

## **II. Theoretical Background**

This section described the main literature streams that are relevant for this study. First, we reviewed social commerce definitions and then we formulated our definition of this new concept. Second, we reviewed the literature related to uses and gratifications theory (U&G). Third, we reviewed previous studies related to users behaviour toward the social commerce. Finally, we examined the gender moderating effect on the consumers' purchase decision behaviour.

### **1. What is Social Commerce?**

Debates continue on what social commerce is and whether it should work. Different chronological definitions emerge that identified different aspects of social commerce.

The term "*social commerce*" or "s-commerce" is a new phenomenon first widely acknowledged in 2005 on Yahoo! (Rubel, 2005). Because s-commerce is a new concept in emerging e-commerce markets, previous studies have defined it in many ways. Beisel (2006) defined social commerce as creating places where people can collaborate online, get advice from trusted individuals, and find goods and services and then purchase them. Further, Stephen and Toubia

(2010) defined s-commerce as a subset of e-commerce and a group-and relation-based online open market. In addition, Marsden (2010) claimed that s-commerce combines e-commerce with SNSs to facilitate the selling and buying of products and services by using various internet technologies. More recently, Wang and Zhang (2012) defined social commerce as a form of commerce mediated by social media and is converging both online and offline environments. Since the social commerce is a new theme, we seek to contribute to the social commerce literature by defining social commerce from our perception to this new phenomenon. In fact, we define social commerce as a new marketplace form of online commerce that offers varied merchandizing opportunities by combining shopping and social networking via social media channels.

Despite social commerce has been defined in different ways, the abovementioned definitions offer researchers and practitioners a broad understanding of its concepts

## **2. Uses and gratifications theory (U&G)**

To examine the gratifications that drive consumers to buy through online social media channels mainly s-commerce virtual pages, we have reviewed the users and gratifications theory.

The uses and gratifications theory is a media use paradigm that inquires into the reasons why people use certain media and the gratifications derived from usage and access (Fusco et al., 2011). Moreover, Ruggiero (2000) argued U&G is utilized to fulfil the needs of individual users with different goals. In this sense, previous research on the social network sites (SNS) usage argue U&G is a theoretical framework that examines how and why people use media, in other words, it investigates motives and outcomes behind the media use (Dillon and Morris, 1996). Users of social media are often attempting to satisfy certain social and personal needs, such as social interaction, information seeking, information exchange, conversation and socializing, information viewing, information and education, escape and diversion, reassurance, fashion and status, entertainment, personal identity, and companionship (Ali and Lee, 2010; Leary and Allen, 2011; Raacke and Bonds-Raacke, 2008; Sa et al., 2009).

Lampe et al. (2010) applied U&G to compare individual motivations versus social motivations amongst both registered and anonymous users of a user-generated content site. Liu et al. (2010) utilized U&G to study the post-adoption effects of Twitter, and to understand factors influencing intention to continue usage of Twitter. They argued that content gratifications and new technology gratification were the two key types of gratifications affecting the intention to continue using the technology.

Based on U&G theory, Papacharissi and Rubin (2000) developed a scale of Internet usage motivation consisting of five motives: entertainment, to pass time, interpersonal utility, information-seeking, and convenience; these draw from interpersonal, media, and new technology motives, supporting informative and interactive capabilities of the Internet.

Despite this large amount of research done in the shopping area, there is still a need for morework to be done regarding to the effects of utilitarian and hedonic values on constructs such as behavioural purchase decision in s-commerce environment. If we consider that E-commerce is similar or at least has common point with s-commerce, then also there is a need to enhance our knowledge about the utilitarian and hedonic effect on consumers' purchase decision in s-commerce channels.

Building on the U&G framework, the current study broadly adopted the idea that consumers' shopping behaviour includes both utilitarian and hedonic motivations. Therefore, for this research we propose these two socio-persona gratifications for analysing consumers' purchase decision.

### **3. Related works to S-commerce**

Most of the previous studies have focused on the conceptual aspects of s-commerce and social media such as social networking sites (SNSs). For example, Stephen and Toubia (2010) examined the evolution of s-commerce networks in a large online marketplace to compare a set of edge formation mechanisms with that of the classical e-commerce market. They found that s-commerce symbolizes a customer-driven online marketplace with personalized stores connected through a network of sellers and consumers and that consumers move from one store to another through hyperlinks. Further, Hsiao et al. (2010) investigated the antecedents and consequences of trust in s-commerce and proposed a comprehensive framework for investigating the effects of two sub-concepts of trust on the intention to purchase products from websites. More recently, Weijun and Lin (2011) provided a review of s-commerce studies and examined the rise of s-commerce by using documentary methods and comparative analyses. In their study, Weijun and Lin summarized the definitions and characteristics of s-commerce, analyzed s-commerce, and explored the future of s-commerce to provide a basic understanding of s-commerce. Further, they proposed various variables such as the information quality, communication, and viral marketing to be the key characteristics of s-commerce.

Moreover, Bansal and Chen (2011) suggested a research model for examining the relationship between the type of website (e.g., e-commerce and s-commerce sites) and trust as well as for

investigating the moderating effect of privacy concerns and found that users are more likely to trust e-commerce sites than s-commerce ones.

Although s-commerce has become an important topic for many researchers, among the published academic studies on social commerce, some have generally been limited in either defining and describing s-commerce (Stephen and Toubia, 2010), revealing the characteristics of s-commerce (Weijun and Lin, 2011), and observing factors such as loyalty (Huang, 2011). Other studies examined design features and their impacts (Curty and Zhang, 2013). Indeed, the gaps of previous studies in the context of s-commerce leave a large room for new investigation.

#### **4. Gender perspective in s-commerce environment**

Gender has always been considered as one of the most commonly recognized and investigated individual difference variables (Agarwal and Prasad, 1999; Teo, 2001; Teo and Lim, 2000). Although, it can be established that social commerce is still in its infancy and there are no studies based on the gender perspective that deal with this theme. Therefore, we reviewed recent studies on effects of gender in similar context such as e-commerce, the new technology adoption and internet usage activities. Venkatesh and Morris (2000) argued that gender plays an important role in determining technology use. They suggested that men and women have different decision-making processes.

In the context of online services, Weiser (2000) argued that males and females differ in terms of use patterns, usage styles, and preferences for specific applications. More recently, Chen and Macredie (2010) found that females and males behave differently face the Web-based interaction. Indeed, the perspective of gender orientation was examined to demonstrate the difference between e-commerce and social commerce. In line with this, shopping for fun or for pleasure is considered more female-oriented, whereas efficiency-maximizing e-commerce is considered more male-oriented (Carroll, 2008). Accordingly, e-commerce is considered to be oriented toward efficiency, transaction, and “masculinity,” while social commerce is oriented toward social networking, branding, and “femininity” (Beisel 2006, Clawson 2008, Carroll 2008).

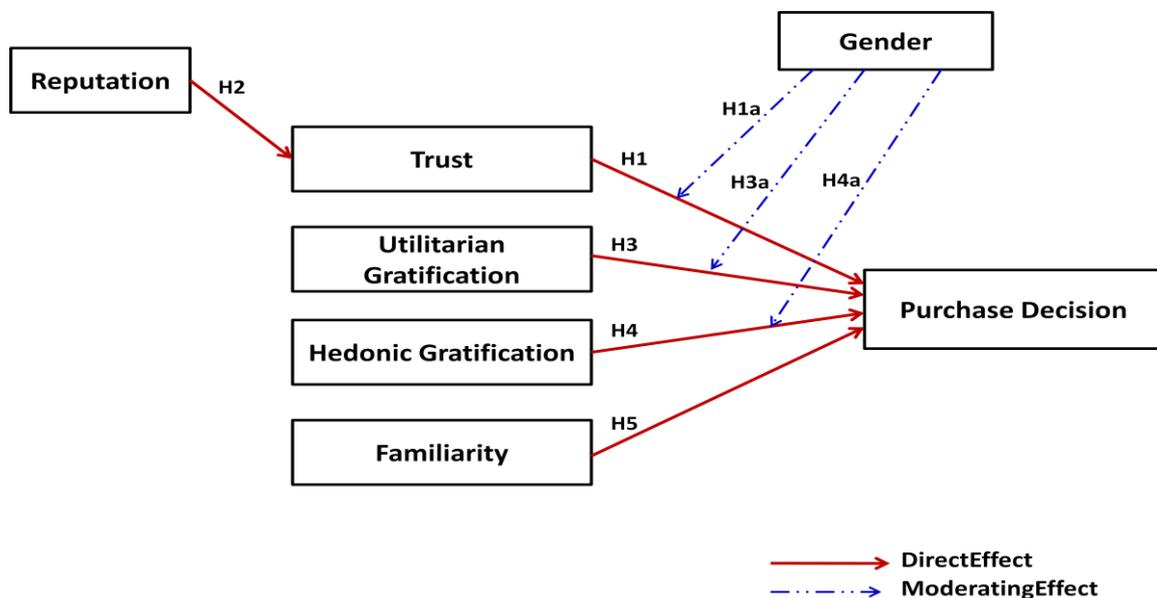
### **III. Conceptual Development**

This section described the conceptual framework and hypothesised relationships emerging from the proposed framework of the study. While the basic proposed model looked at the

direct effect of five variables on purchase decision, the impact of some variables could be mediated by the socio-demographic variable “gender” in the model.

The conceptual framework for the present study is presented in Figure 1. The relevant independent variables in the framework are trust, utilitarian gratifications, hedonic gratifications and familiarity. The dependent variable is purchase decision. As the conceptual framework specifies, some of these variables have interrelations as well as direct and indirect relations in the path model.

**Figure1. Proposed Research Model**



The hypotheses for the relationships in the model will be proposed in the sections to follow.

## 1.Hypotheses

### 1.1 Direct Effect

***Trust.*** The consumers’ trust has become a crucial factor in the success of s-commerce firms, requiring these firms to make more effort to gain this trust (Kim and Park, 2012).

S-commerce users employ social media channels, mainly social networking sites, as a tool for

consumers to collaborate with each other by sharing their online shopping experiences and information related to products and services. In addition, s-commerce users make informed purchases and obtain the best prices by exchanging trustworthy information on certain products and services, which is the main advantage of s-commerce. Therefore, we hypothesize that:

**H1. There is a positive relationship between a consumer's trust and his/her purchase decision in social commerce sites.**

**Reputation.** Reputation is defined as the extent to which consumers believe that a firm is honest and concerned about its customers (Doney and Cannon, 1997).

Tian et al. (2008) suggested that reputation operates as an extrinsic signal to the trustor to award trust to the trustee when the credibility of the trustee cannot be judged. In other words, a high reputation level enhances customers' confidence and decreases risk perceptions when they make a judgment on organizational performance and the quality of products or services (Keh and Xie 2009). In line with this, previous studies have considered other factors that have positive effects on trust, for example, Kim et al. (2005) claimed that gaining consumers' trust is a key factor in s-commerce and found that various constructs can play critical roles in fostering this trust. Among these constructs, they found that the construct of reputation influences positively the construct of trust. More recently, Hsiao et al. (2010) suggested that various variables such as the website's reputation, quality, and institutional assurance have significant influence on trust in s-commerce. In this regard, researches in social commerce context argued that the perceived reputation of an s-commerce firm has a positive effect on the formation of the relationship between the s-commerce firm and its customers and becomes a key determinant of trust (Jarvenpaa et al., 2000; Park et al., 2012; Teo and Liu, 2007).

Summing up, an s-commerce firm with a good reputation enjoys a higher level of customers' trust (Doney and Cannon, 1997; Jarvenpaa et al., 2000), thus, this led to the formulation of the following hypothesis:

**H2. A s-commerce firm's reputation has a positive effect on consumers' trust in this s-commerce site.**

**Utilitarian and Hedonic Gratifications.** Babin et al. (1994) expanded Faber and O'Guinn's

study (1987), by claiming that consumption activities could generate both hedonic and utilitarian attributes and developing scales to measure the value of each aspect during shopping activity. Further, they defined utilitarian behaviour as goal-oriented and rational, concerned with effectiveness and instrumental value, whilst hedonic behaviour implies seeking fun, play, enjoyment and experience hedonic value “more subjective and personal than its utilitarian counterpart and resulting more from fun and playfulness than from task completion” (Babin et al., 1994, p.646). Therefore, both dimensions have been found to explain traditional consumer behaviour (Babin et al., 1994), as well as, more recent research, in the area of online purchase, suggested that positive affect associated with a website is related to both hedonic and utilitarian shopping value, impacting share of purchase (Cotte et al., 2006; Hartman et al. 2006).

Accordingly, marketing researchers suggested that hedonic and utilitarian values are important dimensions that impact future consumer decisions. For that reason, recent research has also shown the importance of utilitarian and hedonic values in driving repeat purchase intention (Jones et al., 2006; Ryu et al., 2010). Further, researchers in consumer behaviour area focused on utilitarian and hedonic values because they are always present in all types of consumption (Hirschman and Holbrook, 1982; Babin et al., 1994; Childers et al., 2001; Jones et al., 2006; Bridges and Florsheim, 2008).

Moreover, previous research has discussed the various principal components of the hedonic and utilitarian values of online shopping (Wolfenbarger and Gilly, 2001; Girard et al., 2003; Forsythe et al., 2006; Lin et al., 2005; Delafrooz et al., 2009).

In the present study, we suggest that consumers with utilitarian motivations at a given time seek to achieve a certain goal through the community, such as finding useful information before making a purchase decision. Hedonic motivations, on the other hand, refer to the search for fun and entertainment from the community experience itself. Further, we would expect utilitarian motivations for using a community to be related to obtaining useful information on the object of interest, for example, and making consumption-related decisions in a more efficient manner. Nevertheless, the hedonic motivations are likely to be related to finding a good way to spend time and having fun while visiting the s-commerce community virtual page.

Therefore, consistent with previous empirical findings based on the principal components of the hedonic and utilitarian values of online shopping, we would predict that:

**H3: There is a positive relationship between customers' utilitarian gratifications and his/her purchase behaviour in social commerce sites.**

**H4: There is a positive relationship between customers' hedonic gratifications and his/her purchase behaviour in social commerce sites.**

***Familiarity.*** Familiarity is an understanding, often based on previous interactions, experiences, and learning of what, why, where and when others do what they do (Luhmann N., 1979). Further, Gefen (2000) argued people who are overwhelmed by the complexity of an Internet vendor's interface are likely to give up on purchasing or inquiring at the site all together, if only because they do not understand how to do so. Therefore, people with familiarity of the s-commerce sites (i.e. purchase procedures) should have the willingness to take part in the purchase experience in the s-commerce sites. In line with this, we propose that:

**H5. There is a positive relationship between a consumer's familiarity with a social commerce site and his/her purchase decision in this site.**

### *1.2 Moderator Effect*

***Gender perspective*** Putrevu (2001) argued that gender has been applied and continues to be applied as one of the most common segmentation strategy in marketing. Previous studies in marketing have demonstrated that female consumers have higher level of trust concerns than males and are less likely to engage in purchasing on the web (Sheehan, 1999). Further, Kolsaker and Payne (2002) suggested that women may be more concerned about the most important online issues "trust" than men. Therefore, we propose the following hypothesis:

**H1a. Trust will have a stronger effect on consumers' purchase decision in s-commerce in Males than in Females.**

In relation to the current study, gender moderates also the relationship between utilitarian and hedonic gratifications and the consumers' purchase decisions in s-commerce environments. Indeed, shopping for fun (Hedonic gratifications) is considered more female-oriented, while

efficiency-maximizing e-commerce (Utilitarian gratifications) is considered more male-oriented (Carroll 2008). Furthermore, females trend to focus on social interactions on s-commerce by following a friend's recommendation which is a stronger influence over online purchase decisions in females (Garbarino and Strahilevitz, 2004), while males care more about the utilitarian aspects of communication in the s-commerce context (Gefen and Ridings 2005; Hofstede 1980). Based on this line of arguments it seems reasonable to hypothesize that:

**H3a. Utilitarian gratifications influence consumers' purchase decision in s-commerce sites more strongly for men than for women.**

**H4a. Hedonic gratifications influence consumers' purchase decision in s-commerce sites more strongly for women than for men.**

#### **IV. Methodology and Research Plan**

The aim of this section is to explain the research methodology adopted to address the research aim and objectives. The aim of the research is to test and examine the determinants of consumers' purchase behaviour and the causality relationship among the determinants in the context of the social commerce sites. The key feature of the adopted methodology is the use of primary research to capture data concerning purchase behaviour in social commerce sites and the moderating effect of gender in order to estimate the structural equation model. The research instrument is a questionnaire linked to the survey methodology administered to a sample of active users of social commerce site mainly F-commerce.

##### **1. Research context**

The main purpose of our research was to study the behaviour of Tunisian consumers who purchase products/services via social commerce sites. In other words, we focused on the purchasing decision behaviour of people who belong to virtual communities in social media (such as Facebook, Twitter, Instagram, Youtube, etc.) and to understand their perceptions during a shopping experience on these communities virtual pages.

##### **2. Research design**

A research design ensures that the study will be relevant to the research context and will employ appropriate procedures (Churchill, 1991; Frankfort and Nachmias, 1992). This study seeks to investigate the drivers of customers' purchasing behaviour in the social commerce environment and the effect of these drivers on customers' decision to buy on these sites. In

order to do so, it is important to apply the appropriate research methodology that uses suitable instruments to help in collecting the necessary data that reflect customers' views. Therefore, for this study we adopted a quantitative/empirical research method. Actually, quantitative techniques can measure specific characteristics through structured data collection procedures from a large representative sample, so that the result can be projected to the entire population (Davis, 2000). A survey methodology used for this study. According Hair et al. (2003), the survey method have several advantages, such as the ability to accommodate large sample sizes and distinguish small differences, the increased generalisability of results, the convenience of managing and recording questions and answers, the capability of using statistical analysis and the ability to tap into factors and relationships not directly measurable. Obviously the disadvantages of the survey method also exist, such as the difficulties of questionnaire designs, the lack of control over timeliness.

### *2.1. Questionnaires*

Malhotra (1999) argued that questionnaires should be designed in a way to try to obtain accurate and complete information about the research problem. In the present study, the questionnaire items and response categories were designed such so as to motivate the respondents to participate in the research study. Therefore, we let the respondent to comprehend the questions easily by reducing their chances of misunderstand the questions, and keeping their interest alive in the survey.

The questionnaire was developed in English then translated in French based on the research model and an exhaustive literature review.

We used also the method of "back translation" to guarantee the best possible match of meaning and nuance between language versions (Neuman, 2000; Michener et al., 2004). Furthermore, the survey questionnaire was created on the basis of previously validated scales and survey instruments. The questionnaire's items were taken from existing studies on the use of social media(Kim and Park, 2012; D. Gefen, 2000; Anderson, 1998; Westbrook, 1987). However, the questionnaire was adapted as necessary from the previous published literature to fit within the social commerce context.

The questionnaire in this study was organised in five thematic sections (Appendix I). The first section was concerned with customer trust with respect to social commerce sites and the purchasing process on these sites. The construct of Trust was designed as three items. The measures of trust construct were mostly adopted from Gefen (2000).

The second section was concerned with consumer gratifications. It consisted of two constructs concerned with utilitarian gratifications and hedonic gratifications. The construct of utilitarian gratifications was designed as three items. Further, the construct of hedonic gratifications was designed as two items. The measures of utilitarian and hedonic gratifications were adopted from Hartman et al. (2006) study.

The third section was concerned with the s-commerce characteristics mainly the social commerce reputation and the consumer’s familiarity with the social commerce sites. The construct of reputation was designed as three items (Fombrun et al., 2000) and the construct of familiarity was designed as two constructs (Gefen, 2000).

The fourth section was concerned with the consumer’s purchase decision. The construct of purchase decision was designed as four items adopted from Mittal(1989).

Finally, the fifth section was concerned with the socio-demographic characteristics of the respondents. This section included nominal measures of gender, age, educational level, occupation and personal income.

All measures were designed as seven-point scales (1=Strongly disagree, 7=Strongly agree).

The following table summarises the model constructs:

Constructs	Definition	Items	Reference
<b>Trust</b>	trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the	T1:I believe that communities virtual s-commerce pages are trustworthy T2:I trust communities virtuals-commerce pages T3:Even if not monitored, I would trust communities virtual s-commerce pages to do the job right.	Gefen, 2000

	<p>intentions or behaviour of another under conditions of risk and interdependence” (Rousseau et al., 1998, p. 395).</p>		
<b>Utilitarian Gratifications</b>	<p>Utilitarian gratification is defined as goal-oriented and rational, concerned with effectiveness and instrumental value (Babin et al., 1994).</p>	<p>UG1: Success in this s-commerce virtual page is finding what I’m looking for.</p> <p>UG2: This-commerce virtual community helps me with recommendation based on their previous purchase experience on this s-commerce virtual page.</p> <p>UG3: I like to get in and out this s-commerce virtual community pages with no time wasted.</p>	<p>Hartman et al. (2006)</p>
<b>Hedonic Gratifications</b>	<p>Hedonic gratification implies seeking fun, play, enjoyment (Babin et al., 1994).</p>	<p>HG1: I find visiting s-commerce virtual community pages pleasant.</p> <p>HG2: I find visiting the s-commerce virtual community pages entertaining.</p>	<p>Babin et al. (1994) and Hartman et al. (2006)</p>
<b>Reputation</b>	<p>Is defined as the extent to which believe that a</p>	<p>R1: I have a good feeling about communities virtual s-commerce pages.</p> <p>R2: Communities virtual commerce pages offer high</p>	<p>Fombrun et al. (2000)</p>

	<p>firm is honest and concerned about its customers (Doney and Cannon, 1997).</p>	<p>quality products and services.</p> <p>R3: Communities virtual s-commerce pages offer products and services that are good value for money.</p>	
<p><b>Familiarity</b></p>	<p>Is an understanding, often based on previous interactions, experiences, and learning of what, why, where and when others do what they do (Luhmann N., 1979).</p>	<p>F1: I am familiar with searching for products/services on communities virtual s-commerce pages.</p> <p>F2: I am familiar with the processes of purchasing products/services on communities virtual s-commerce pages.</p>	<p>Gefen, 2000</p>
<p><b>Purchase Decision</b></p>	<p>Purchase Decision is defined as the extent of interest and concern that a consumer brings to bear upon a purchase-decision task (Mittal, 1989).</p>	<p>PUR1: In selecting from many types and brands of product/ service available in this virtual s-commerce page, would you say that:</p> <p>I would not care at all as to which one I buy 1→7 I would care a great deal As to which one I buy.</p> <p>PUR2:</p> <p>Do you think that the various products and services available in this virtual s-commerce page are all very alike or are</p> <p>All very different?</p> <p>PUR3: How important would it be to you to make a right choice of this virtual s-commerce page as a</p>	<p>Mittal, 1989</p>

		market place.  PUR4:In making your choice to purchase in this virtual s-commerce page, how concerned would you be about the outcome of your choice.	
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## 2.2. Data sample

In the field survey, 220 questionnaires were returned out of 400 distributed, which represented a response rate of 55% of the original sample. However, among those returned questionnaire, 17 responses were discarded because five of them were returned completely blank, three respondents had put the same answers on all the Likert scale items, four respondents mentioned that they had never had shopping experience in the social commerce sites before and five questionnaires were partially answered (i.e. some questions and/or some parts of the questionnaire such as demographic questions were left blank). Therefore, remaining 203 questionnaires were valid and used for further data analysis. As a result, the final response rate in this study was 50,75%.

Demographic Features	Frequency	Percent%
<b>Gender</b>		
Male	90	44.3
Female	113	55.7
<b>Age</b>		
Below 25 years	90	44.3
25 to 35 years	94	46.3
Above 35 years	19	9.4
<b>Occupation</b>		

Student	92	45.3
Employee	68	33.5
Executive	33	16.3
Retired	3	1.5
Unemployed	7	3.4
<b>Personal Income</b>		
Less than 500	94	46.3
500-1000	60	29.6
1000-1500	32	15.8
1500-2000	6	3
More than 2000	10	4.9

## V. Data Analysis: Results

This section presents the data analysis. The section begins by elaborating on the method of data analysis. After establishing reliability and validity, the results of the data analysis are presented and the results from the testing of the hypotheses are summarised.

### 1. Data Analysis: Method

#### *1.1. Structural equation modelling (SEM)*

Structural equation modelling (SEM) was employed in the data analysis. SEM has become popular among researchers since it allows complex phenomena to be statistically modelled and tested. SEM enables the testing of research models with latent unobservable constructs that are measured with multiple indicators and take into account the measurement error. Moreover, SEM offers various means to examine the reliability and validity of the results and offers an extensive set of fit indices to evaluate how well the model fits the empirical data. As SEM is generally considered a confirmatory rather than exploratory procedure, it is suitable for research hypotheses-testing research such as the approach taken in the current study. (Byrne, 2001; Tabachnick and Fidell, 2007).

Consequently, AMOS 18 software was selected for the data analysis. Maximum-likelihood (ML) was used as the estimation method since it has proven robust when working with medium-sized or large samples. Additionally, ML has been found robust, even in cases where the normality assumptions are severely violated (Reinartz et al., 2009). As the univariate skewness and kurtosis of the data remained within the range suggested by Finney and DiStefano (2006) and given the large sample size, ML was considered the best estimation method for the current research. The analysis was done by employing the two-step approach suggested by Anderson and Gerbing (1988). In the first stage, confirmatory factor analysis was performed on the final dataset for scale reliability and validity assessment and in order to examine how well the model fits the empirical data. In the second stage, path coefficients and the significance of the hypothesised relationships in the structural model were tested.

## 2. The analysis and validation of measurement scales

In this section, we analyzed the validity of the measurement scales. First, we started by making exploratory analyzes on each construct. Then we made a confirmatory analysis of all the measures to assess the reliability and validity of the model constructs.

### 2.1. Scale validation of Trust

#### a. PCA of Trust

The principle components analysis (PCA) of this scale has highlighted a scale of one factor with an explained variance equal to 82,277 %. We note that all the items have commonalities larger than 0,5. In addition, the value of KMO (0,729) is acceptable and Bartlett's sphericity test is significant. The results are presented in the following table:

Items	Commonalities	Cont. Fact.	Reliability
T1	0.807	0.898	<b>0.892</b>
T2	0.869	0.932	
T3	0.792	0.890	
<b>KMO</b>		0.729	
<b>Bartlett's sphericity test:</b>			
<b>Chi-square</b>		267.912	

<b>df</b>	3
<b>significante</b>	0.000

The internal reliability of the scale shows a very satisfactory level of reliability (Cronbach's alpha=0,892).

#### b.CFA of Trust

We verified the psychometric quality of the scale and calculated its validity. The scale includes three items (T1, T2 and T3). The construct is just-identified, consequently the confirmatory analysis on the AMOS software cannot provide the results of the fit indices .

Method  Items	Maximum Likelihood (ML)				Bootstrap	
	Standardised Coff.	SMC	C.r.	Sig.	Bias	P
T1	0.728	0.530	4.584	0.000	0.006	0.005
T2	0.642	0.412	4.415	0.000	0.001	0.014
T3	0.204	0.042	2.039	0.000	0.000	0.006
<b>Rh<math>\hat{o}</math> of J<math>\ddot{o}</math>reskog<math>\rho</math><math>\xi</math></b>	0.837					
<b>Pvc</b>	0.776					

## 2.2. Scale validation of Reputation

### a. PCA of Reputation

The principle components analysis (PCA) of this scale has highlighted a scale of one factor with an explained variance equal to 81,864 %. We note that all the items have commonalities larger than 0,5. In addition, the value of KMO (0,748) is acceptable and Bartlett's sphericity test is significant. The results are presented in the following table:

Items	Commonalities	Cont. Fact.	Reliability
R1	0.807	0.898	<b>0.888</b>
R2	0.869	0.932	
R3	0.792	0.890	
	<b>KMO</b>	0.729	
	<b>Bartlett's sphericity test:</b>		
	<b>Chi-square</b>	342.151	
	<b>df</b>	3	
	<b>significante</b>	0.000	

The internal reliability of the scale shows a very satisfactory level of reliability (Cronbach's alpha=0,888).

*b. CFA of Reputation*

We verified the psychometric quality of the scale and calculated its validity. The reputation scale includes three items (R1, R2 and R3). The construct is just-identified, consequently the confirmatory analysis on the AMOS software cannot provide the results of the fit indices .

Method	Maximum Likelihood (ML)				Bootstrap	
	Standardised Coff.	SMC	C.r.	Sig.	Bias	P
					Items	
R1	0.728	0.530	4.584	0.000	0.006	0.005
R2	0.642	0.412	4.415	0.000	0.001	0.014
R3	0.204	0.042	2.039	0.000	0.000	0.006
<b>Rh<math>\hat{o}</math> of J<math>\ddot{o}</math>reskog<math>\rho</math><math>\xi</math></b>	0.827					

<b>Pvc</b>	0.776	
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### 2.3. Scale Validation of Utilitarian Gratification

#### a. PCA scale of Utilitarian Gratification

A first principal component analysis was performed on the scale utilitarian gratification which includes 3 items (UG1, UG2 and UG3). We note that the commonalities of all the items are above 0,5 except the item UG1 that has a commonality equal 0.423. Thus, we conducted a second PCA eliminating UG1 and the results show the 2 items (UG2 and UG3) form one dimension that recovers 83,918 % of the information. We calculated the reliability of this scale. The results show that the Cronbach's alpha = 0,808 is very satisfactory. The following table summarizes our results:

Items	Commonalities	Cont. Fact.	Reliability
UG2	0.839	0.916	<b>0.808</b>
UG3	0.866	0.916	
	<b>KMO</b>	0.500	
	<b>Bartlett's sphericity test:</b>		
	<b>Chi-square</b>	91.550	
	<b>df</b>	1	
	<b>signification</b>	0.000	

#### b. CFA of utilitarian Gratification

We verified the psychometric quality of the scale and calculated its validity. The scale includes three items. This construct is a just-identified factor, consequently the confirmatory analysis on the AMOS software cannot provide the results of the fit indices .

Method	Maximum Likelihood (ML)	Bootstrap
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Items	Standardised Coff.	SMC	C.r.	Sig.		
					Bias	P
UG2	0.388	0.877	3.105	0.002	0.028	0.012
UG3	0.937	0.595	2.669	0.008	0.001	0.016
<b>Rh<math>\hat{o}</math> of J<math>\ddot{o}</math>reskog<math>\rho^2</math></b>	0.854					
<b>Pvc</b>	0.811					

This result is satisfactory: very satisfactory internal consistency 0,854, convergent validity is above 0,5 and the other conditions of verification of their validity are met (t test is significant for all items, and the squared multiple correlations are higher 0,5).

#### 2.4. Scale Validation of Hedonic Gratification

##### a. PCA scale of Hedonic Gratification

A principal component analysis was performed on hedonic gratification scale that identified two items (HG1 and HG2). We note that the commonalities of all the items are above 0,5. The result shows 2 items that form one dimension that recovers 86,612 % of the information. We calculated the reliability of this scale. The results show that the Cronbach's alpha= 0,826 is very satisfactory. The following table summarizes our results:

Items	Commonalities	Cont. Fact.	Reliability
HG1	0.866	0.931	<b>0.826</b>
HG2	0.866	0.931	
<b>KMO</b>		0.500	
<b>Bartlett's sphericity test:</b>			
<b>Chi-square</b>		114.083	

<b>df</b>	1
<b>signification</b>	0.000

***b. CFA of Hedonic Gratification***

We verified the psychometric quality of the scale and calculated its validity. The scale includes three items. This construct is a just-identified factor, consequently the confirmatory analysis on the AMOS software cannot provide the results of the fit indices.

Method	Maximum Likelihood (ML)				Bootstrap	
	Standardised Coff.	SMC	C.r.	Sig.	Bias	P
					Items	
HG1	0.728	0.637	3.561	0.000	0.028	0.012
HG2	0.937	0.859		0.000	0.001	0.016
<b>Rh<math>\hat{o}</math> of J<math>\ddot{o}</math>reskog<math>\rho</math><math>\xi</math></b>	0.937					
<b>Pvc</b>	0.796					

This result is satisfactory: very satisfactory internal consistency 0,937, convergent validity is above 0,5 and the other conditions of verification of their validity are met (t test is significant for all items, and the squared multiple correlations are much higher 0,5).

**2.5. Scale Validation of Familiarity**

***a. PCA scale of Familiarity***

A principal component analysis was performed on familiarity scale that identified two items (F1 and F2). We note that the commonalities of all the items are above 0,5. The result shows 2 items that form one dimension that recovers 68,426 % of the information. We calculated the reliability of this scale. The results show that the Cronbach’s alpha= 0,637isacceptable. The following table summarizes our results:

Items	Commonalities	Cont. Fact.	Reliability
F1	0.827	0.604	<b>0.637</b>
F2	0.827	0.604	
<b>KMO</b>		0.500	
<b>Bartlett's sphericity test:</b>			
<b>Chi-square</b>		29.264	
<b>df</b>		1	
<b>signification</b>		0.000	

*b. CFA of Familiarity*

We verified the psychometric quality of the scale and calculated its validity. The scale includes three items. This construct is a just-identified factor, consequently the confirmatory analysis on the AMOS software cannot provide the results of the fit indices.

Method  Items	Maximum Likelihood (ML)				Bootstrap	
	Standardised Coff.	SMC	C.r.	Sig.	Bias	P
F1	0.643	0.498	3.561	0.000	0.028	0.012
F2	0.581	0.459		0.000	0.001	0.016
<b>Rh<math>\hat{o}</math> of J<math>\ddot{o}</math>reskog<math>\rho</math><math>\xi</math></b>	0.797					
<b>Pvc</b>	0.729					

This result is satisfactory: satisfactory internal consistency 0,797, convergent validity is above 0,5 and the other conditions of verification of their validity are met.

## 2.6. Scale Validation of Purchase Decision

### a. PCA scale of Purchase Decision

The principle components analysis (PCA) of this scale has demonstrated a scale of one factor with an explained variance equal to 80,139 %. We note that all the items have commonalities larger than 0.5. In addition, the value of KMO ( 0,851 ) is acceptable and Bartlett's sphericity test is significant. The results are presented in the following table:

Items	Commonalities	Cont. Fact.	Reliability
PUR1	0.734	0.862	<b>0.914</b>
PUR2	0.843	0.918	
PUR3	0.837	0.915	
PUR4	0.783	0.885	
<b>KMO</b>		0.851	
<b>Bartlett's sphericity test:</b>			
<b>Chi-square</b>		429.675	
<b>df</b>		6	
<b>significante</b>		0.000	

The internal reliability of the scale shows a very satisfactory level of reliability (Cronbach's alpha=0,914).

### b. CFA scale of Purchase Decision

We verified the psychometric quality of the scale and calculated its validity.

Method	Maximum Likelihood (ML)				Bootstrap	
	Standardised Coff.	SMC	C.r.	Sig.	Bias	P
Items						

PUR1	0.802	0.644		0.000	-0.005	0.006
PUR2	0.901	0.811	12.940	0.000	-0.007	0.004
PUR3	0.897	0.805	12.880	0.000	-0.001	0.011
PUR4	0.838	0.702	11.737	0.000	0.002	0.036
<b>Rh<math>\hat{o}</math> of J<math>\ddot{o}</math>reskog<math>\rho^2</math></b>	0.878					
<b>Pvc</b>	0.838					

The  $\rho$  of J $\ddot{o}$ reskog is greater than 0,7 and the  $\rho_{VC}$  is greater than 0,5. Therefore, this scale has strong convergent validity. Table 14.shows the values of various standardized correlation coefficients and the squared multiple correlations.

The purchase decision scale includes four items. Consequently, this construct is a sur-identified factor, consequently the confirmatory analysis on the AMOS software was provided with the results of the fit indices .

The multi-normality test of this scale declares a non normality of data through a Mardia coefficient equal to 18,977 which is greater than |3|. In addition, this multi-normality test was not significant ( $t = 338,062 > 1,96$ ).

Therefore, in addition to the maximum likelihood technique, we made the bootstrapping procedure (with 250 resamples as suggested by Akrouf, 2010) to test the stability of the results and to obtain estimates of standard errors for testing the statistical significance of path coefficients using a t-test. Comparing Bias and standardized coefficients of correlation, we get the stability results (bias < 0,01). Factor analysis performed on this scale shows a very satisfactory fit as shown in the following table:

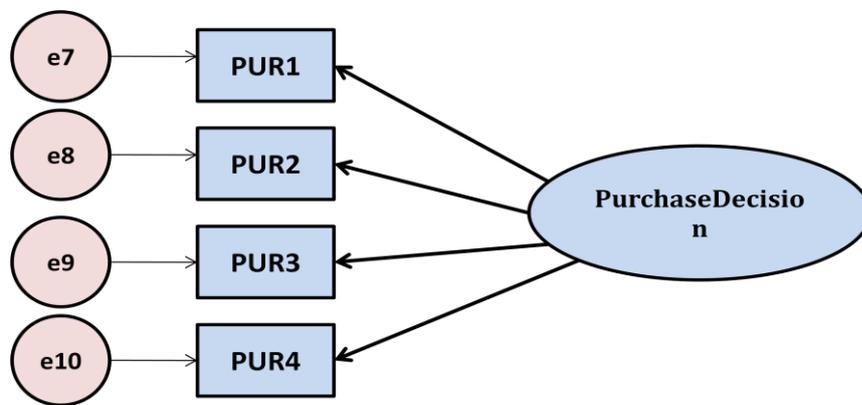
Table 15. Adjustment Indices of Purchase Decision (4 items)									
Absolute Indices					Incremental Indices		Parsimonious Indices		
$\chi^2$	GFI	AGFI	RMR	RMSEA	TLI	CFI	$\chi^2/df$	BIC	CAIC
229	0.990	0.997	0.006	0.001	0.999	1	1.115	42.735 <b>Sm</b>	50.735 <b>Sm</b>
df=2								53.132	63.132

p =0.000									
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Note:Sm=Saturated Model

We note that the results are good: incremental indices (TLI,CFI>0,90) that is in the standards. The parsimonious indices are also good ( Chi2 adjusted <3and BIC, CAIC are less than the BIC and CAIC values of saturated model).

**Figure 2. CFA of Purchase Decision**



### 3.Validation of Measurement Global Model and Discriminate Validity

#### 3.1. Test of the measurement model

Once the convergent and discriminate validity was established the fit statistics for the measurement model were examined. Covariance-based SEM provides a number of goodness of fit indices to evaluate how well the model fits the empirical data. A non-significant chi-square value has traditionally been considered a basic criteria for good model fit. However, since large sample sizes and any departure from normality tend to inflate the chi-square, increasing the risk of type 2 error, a number of other indices to examine the model fit have been developed. (Anderson and Gerbing, 1988; Hair, 1992).We verified the violation of multi-normality. Indeed, an examination of the distribution noted a strong deviation despite all values of skewness and kurtosis are below the | 3 |. The so-called deviation was recorded by a Mardia coefficient = 36,819 and CR = 10,929.

The most simplistic application of the chi-square is the normed chi-square (CMIN/DF or  $\chi^2/DF$ ), where the chi-square value is divided by the degrees of freedom. Moreover, SEM has three types of fit measures indices which are: absolute fit measures, incremental fit measures and parsimonious fit measures. The first type of these indices are used to assess the ability of the overall model fit. The incremental fit measure indices are used to compare the proposed model to some baseline model. Finally, parsimonious fit measure indices are used to investigate whether the estimated model is simpler or can be improved (Hair et al., 1998). Indeed, these indices should respect certain value and their related recommended level are presented in Table 16.

Index	Recommended Criteria	References
Chisquare ( $\chi^2$ )	$\chi^2$ , df, $p > 0.05$	Joreskog and Sorbom (1988);
Normed Chisquare ( $\chi^2/df$ )	$1.0 < \chi^2/df < 3.0$	Hair et al. (1998);
Goodness-of-fit index (GFI)	$> 0.90$	Bryne (2001);
Root mean square error of approximation (RMSEA)	$< 0.05$ good fit $< 0.08$ acceptable fit	Hu and Bentler(1998);
Normed fit index (NFI)	$> 0.90$	Hair et al. (2006)
Comparative fit index (CFI)	$> 0.90$	
Adjusted goodness-of-fit index (AGFI)	$> 0.90$	

We tested the goodness of fit of the measurement model. The result is considered very satisfactory, as all indices have values meeting the standards listed above. Table 17.summarises the goodness-of-fit statistics and their respective thresholds with reference to the literature.

Absolute fit measures					Incremental fit measures		Parsimonious fit measure		
$\chi^2$	GFI	AGFI	RMR	RMSEA	NFI	CFI	$\chi^2/df$	BIC	CAIC
114.757	0.937	0.910	0.065	0.079	0.916	0.984	1.208		373.599

df=95								332.599	
p=0.082									

**Note:**  $\chi^2$  = Chi-square; **df**= degree of freedom; **GFI** = Goodness of fit index;

**RMSEA** = Root mean square error of approximation; **NFI** = Normated fit index;

**CFI** = Comparative fit index; **AGFI** – Adjusted goodness of fit index.

### 3.2. Discriminate Validity

Discriminate validity refers to the extent to which a latent construct is truly distinct from other latent constructs (Hair et al., 2006). The methodology used to verify the discriminate validity is the one suggested by Hair et al. (2006), in which the average variance extracted for each construct is compared with the corresponding squared inter-construct correlations (SIC), and the AVE estimate consistently larger than the SIC estimates indicates support for discriminate validity of the construct. This procedure was used in this research to assess the discriminate validity of each of the constructs.

**Table 18. Reliability and convergent validity of the measurement model**

	<b>Rhô of convergent validity (<math>\rho_{vc}</math>)</b>	<b>Rhô of Jöreskog</b>
Trust	<b>0.77</b>	<b>0.83</b>
Utilitarian Gratification	<b>0.81</b>	<b>0.85</b>
Hedonic Gratification	<b>0.79</b>	<b>0.93</b>
Familiarity	<b>0.72</b>	<b>0.79</b>
Reputation	<b>0.77</b>	<b>0.82</b>

Purchase decision	<b>0.83</b>	<b>0.87</b>
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## 4. Hypothesis Testing

### 4.1. Hypothesis Testing: Direct Effect

Before presenting the results of our analysis we recall the assumptions related to our conceptual model (Table 20.).

Table 20. Hypotheses related to the conceptual model	
Hypotheses	Assumptions
<b>H1</b>	There is a positive relationship between an individual's trust and his/her purchase decision in social commerce sites.
<b>H2</b>	A s-commerce site's reputation has a positive effect on consumers' trust in this site.
<b>H3</b>	There is a positive relationship between customers' utilitarian gratifications and his/her purchase decision in social commerce sites.
<b>H4</b>	There is a positive relationship between customers' hedonic gratifications and his/her purchase decision in social commerce sites.
<b>H5</b>	There is a positive relationship between a consumer's familiarity with a social commerce site and his/her purchase decision in this site.

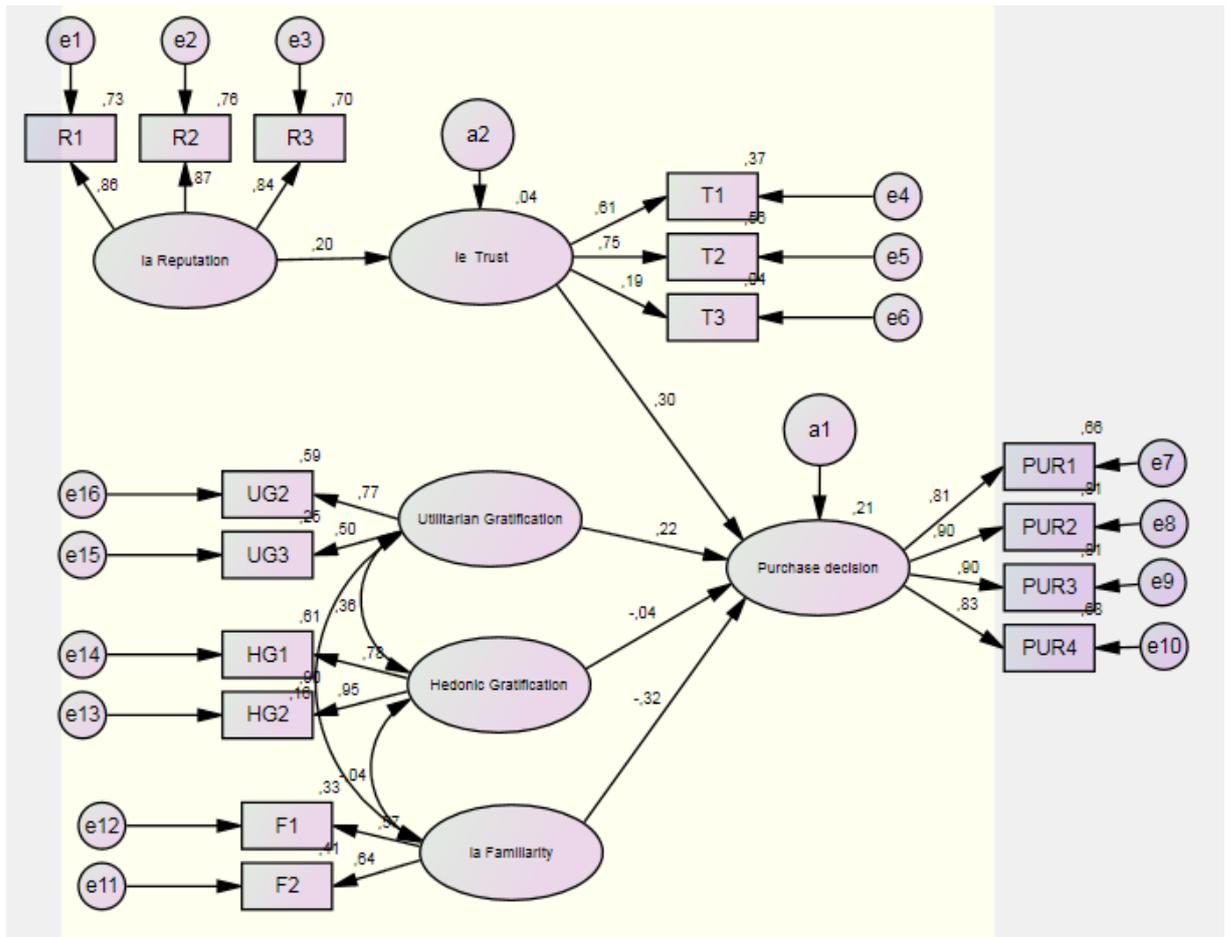
Since the fit for the measurement model was found to meet the criteria, the analysis proceeded to examining the structural model. As can be seen from Table 21.the fit with the structural model

obtained is satisfactory. Indeed, absolute indices GFI and AGFI have satisfactory values (respectively 0,937and 0,910). Incremental indices evidence that the model is very close to the saturated model. The values of the parsimonious indices indicate that the proposed model is more parsimonious than the saturated model. We have summarized all results of the adjustment indices for the structural model in the following table :

Table 212. Adjustment Indices of the Structural Model (Direct Effect)									
Absolute Indices					Incremental Indices		Parsimonious Indices		
$\chi^2$	GFI	AGFI	RMR	RMSEA	TLI	CFI	$\chi^2/df$	BIC	CAIC
113.755								332.599	373.599
df=95	0.937	0.910	0.065	0.032	0.980	0.984	1.210	<b>SM</b>	<b>SM</b>
p=0.082								722.596	858.596

Note: SM=Saturated Model

Figure 3. CFA Structural Model (AMOS Output)



In sum all relationships between the independent variable and the dependent variable are tested and the following table summarizes the results of the structural model:

Hypo	Relation	$\gamma$	$\gamma$ stand.	S.E.	C.R.	P
H1	Purchase Decision <--- Trust	0.819	0.337	0.259	3.160	0.002
H2	Trust <--- Reputation	0.077	0.207	0.036	2.128	0.033
H3	Purchase Decision <--- Utilitarian Gratification	0.567	0.213	0.288	1.970	0.049
H4	Purchase Decision <--- Hedonic Gratification	-0.015	-0.022	0.061	-0.253	0.800

<b>H5</b>	Purchase Decision	<---	Familiarity	-0.743	-0.256	0.317	-2.346	0.019
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a. The influence of trust on the consumer's purchase decision in s-commerce sites : H1

The hypothesis H1 provides that trust positively influences the consumer's purchase decision in s-commerce sites. The test shows that the hypothetical relationship is significant. Indeed, the structural relationship between social trust and purchase decision is significant ( $t = 2,128$  and  $p = 0,002$ ), in addition this relationship is positive ( $\gamma = 0,819$ ). Therefore, H1 is validated and confirmed.

b. The influence of reputation on consumer's trust on s-commerce sites : H2

The hypothesis H2 provides that reputation positively influence the consumers' trust s-commerce environment for their shopping . The test shows that the hypothetical relationship is significant. Indeed, the structural relationship between the two constructs is significant ( $t = 2,128$  and  $p = 0,033$ ), in addition this relationship is positive ( $\gamma = 0,077$ ). Despite the small effect of reputation on trust ( $\gamma = 0,077$ ), H2 is validated and confirmed.

c. The influence of utilitarian gratification on the consumer's purchase decision in s-commerce sites : H3

The hypothesis H3 provides that utilitarian gratification positively influence the consumers' purchase decision in s-commerce sites. The test shows that the hypothetical relationship is significant. Indeed, the structural relationship between the two constructs is significant ( $t = 1,970 > 1,96$  and  $p = 0,049 < 0,05$ ), in addition, this relationship is positive ( $\gamma = 0,567$ ). Therefore, H3 is validated and confirmed.

d. The influence of hedonic gratification on the consumer's purchase decision in s-commerce sites : H4

The hypothesis H4 provides that hedonic gratification positively influences the consumer's purchase decision in s-commerce sites. However, the test shows that the hypothetical relationship is not significant ( $t = |-0,253| < 1,96$  and  $p = 0,800 > 0,05$ ). Therefore, H4 is not validated.

e. The influence of the consumer's familiarity with the s-commerce sites on his/her purchase decision : H5

The hypothesis H5 provides that the consumer's familiarity with s-commerce sites positively influence the consumer's purchase decision on these sites. The test shows that the hypothetical relationship is significant. Indeed, the structural relationship between the two constructs is significant ( $t = -2,806$  and  $p = 0,005$ ). Furthermore, as contrary to what we expected this relationship is negative ( $\gamma = -0,327$ ). Therefore, H5 is not validated and not confirmed.

Hypotheses	Assumptions	Result
<b>H1</b>	There is a positive relationship between an individual's trust and his/her purchase decision on social commerce sites.	<b>Valid</b>
<b>H2</b>	A s-commerce site's reputation has a positive effect on consumers' trust in this site.	<b>Valid</b>
<b>H3</b>	There is a positive relationship between customers' utilitarian gratifications and his/her purchase decision on social commerce sites.	<b>Valid</b>
<b>H4</b>	There is a positive relationship between customers' hedonic gratifications and his/her purchase decision on social commerce sites.	<b>Not Valid</b>
<b>H5</b>	There is a positive relationship between a consumer's familiarity with a social commerce site and his/her purchase decision on this site.	<b>Not Valid</b>

#### 4.2. Hypothesis Testing: Moderating Effect

To analyze the moderating effect we conducted a multiple-groups analyzes. Groups are made based on the differences of the gender moderator variable. The following table presents the hypotheses assumptions of the moderating variables:

Hypotheses	Assumptions
<b>H1a</b>	Trust will have a stronger effect on consumers' purchase decision in s-commerce in Females than in Males.
<b>H3a</b>	Utilitarian gratifications influence consumers' purchase decision in s-commerce sites more strongly for men than for women.

<b>H4a</b>	Hedonic gratifications influence consumers' purchase decision in s-commerce sites more strongly for women than for men.
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#### 4.2.1. Moderating effect of Gender

The moderator variable is a dummy variable divided into two groups : Male and Female.

We made the multi-group analysis of the two groups:

Group 1 :Male (N=90)

Group 2 : Female (N=113)

By analyzing the difference between the chi-square of the unconstrained model and the constrained model, we noted that the difference is significant ( $p = 0,003 < 0,05$ ). Therefore, we concluded that the variable "Gender" exerts a moderating effect on the relationship between trust and purchase decision on social commerce sites and on the relationship between utilitarian gratification and purchase decision on social commerce sites.

Table 25. Moderating effect of gender							
We suppose that the unconstrained model to be correct							
Model	DL	CMIN	P	NFI	IFI	CFI	TLI
<b>Unconstrained Model</b>	190	249.181	<b>0.003</b>	0.839	0.957	0.955	0.943

a. Moderating effect of gender between consumers' trust and their purchase decision in social commerce sites: H1a

Table 26. Multi-groups analyses of moderating effect of gender						
Relation	Group1			Groupe2		
	Coef. Stan	Cr	P	Coef. stan	cr	P
Purchase Decision <-->Trust	0.920	2.754	<b>0.006</b>	0.598	1.534	<b>0.125</b>

The impact of consumers' trust on purchase decision on social commerce sites is significant only in the Male Group ( $p < 0,05$ ). This result implies that men trust more than women on s-commerce sites during their shopping experience. Therefore, H1a is confirmed and validated.

*b. Moderating effect of gender between utilitarian gratifications and consumers' purchase decision in social commerce sites: H3a*

Table 27. Multi-groups analyses of moderating effect of gender						
Relation	Group1			Group2		
	Coef. Stan	Cr	P	Coef. Stan	Cr	P
Purchase Decision $\leftrightarrow$ UG	0.420	1.072	<b>0.284</b>	0.532	1.979	<b>0.048</b>

The impact of utilitarian gratifications on consumers' purchase decision on social commerce sites is significant only in the Female Group ( $p < 0,05$ ). This result implies that women' utilitarian motivations are less stronger than man' utilitarian gratifications to make purchase decision in social commerce environment. However, the effect is in the opposite direction to what was hypothesized in H3a. For female s-commerce consumers, utilitarian gratification has a strong direct effect on purchase decision ( $\gamma = 0,532$ ;  $p = 0,048 < 0,05$ ), while the effect is less prominent or better there is no effect for men consumers ( $\gamma = 0,420$ ;  $p = 0,284 > 0,05$ ). The difference in effect between men and women is significant ( $x^2/df = 1,311$ ;  $p = 0,003$ ) but in the opposite sense that we predicted it. Therefore, H3a is not confirmed and not validated.

*c. Moderating effect of gender between hedonic gratifications and consumers' purchase decision in social commerce sites: H4a*

The impact of hedonic gratifications and purchase decision cannot be moderated by the gender effect since the direct effect of hedonic gratifications was not significant. Therefore, we cannot test the gender moderator effect between hedonic gratifications and purchase decision in social commerce virtual pages.

## VI. Discussion of Findings

Although support was received for several of the hypotheses in this study, some surprising findings were also revealed. Indeed, based on the entire sample (female group and male group), three paths are not supported (H4, H5 and H3a are not supported) while the remaining paths are all significant (H1, H2, H3, and H1a are supported). Specifically, for familiarity and

the moderating effect of gender on the relationship between utilitarian gratifications and purchase decision the results were in the opposite direction of what was hypothesized, and for hedonic gratifications there was no statistic significance ( $p > 0,05$ ) found. The finding that utilitarian gratifications is a stronger driver of purchase decision among females than males does not fit the general picture of efficiency-maximizing e-commerce (Utilitarian gratifications) is considered more male-oriented (Carroll 2008). Rather, other social and cultural mechanisms appear to be at play here. In hindsight, we might explain this effect by the fact that women are more motivated in communication on s-commerce environment than men who are more oriented to the e-commerce where they communicate less with other e-commerce users. Indeed, previous comparative studies of e-commerce and s-commerce revealed that e-commerce shopping is considered to be oriented toward efficiency, transaction, and “masculinity,” whereas s-commerce is considered to be oriented toward social networking, branding, and “femininity” (Beisel, 2006; Clawson, 2008; Carroll 2008). A possibility for the failures of H5 might be also the dichotomous measure of gender employed, which treats gender as biological sex. As suggested in the previous literature (Bem, 1981), gender may be conceptualized as psychological constructs. Male and female consumers are not at bipolar extremes on such dimensions as utilitarian gratifications, and thus they might vary based on degrees of femininity or masculinity (Bem, 1981).

Moreover, the impact of consumers’ trust on purchase decision on social commerce sites is significant only in the Male Group ( $p < 0,05$ ). In other words, women consumers have higher level of trust concerns than men and are less likely to engage in purchasing over the web (Sheehan, 1999). Therefore, the strong effect of trust on purchase decision among men may be explained by such primarily affirmation.

Further, the assumption of familiarity failed, because of the well-developed internet infrastructure. Due to the popularity of the social networking channels’ usage in Tunisia, the majority of social media users are familiar with different fashions and benefits of s-commerce, yet familiarity is surprisingly not as strong driver of purchase decision in s-commerce sites for Tunisian users.

Our findings reveal that social media services and channels mainly s-commerce may very well be perceived as instrumental for expressing the social interaction the consumers’ personal shopping experience between a s-commerce virtual community’ members while at the same time s-commerce consumers may not necessarily be passive and wait for information from the company, contrariwise they exchange their opinions about the

products/services and they report their past experiences to fulfil their needs actively . Indeed, s-commerce users recognize how to take advantage of the specific media platform. Moreover, the fact that gender moderated s-commerce users gratifications, therefore, it is important to conceptually distinguish the attitude and the purchase behaviour of females and males in such context.

## **VII. Contributions**

### **1. Contribution to Research**

The current research is one of the few researches that makes a number of contributions to the body of knowledge in the s-commerce area. Indeed, this study intends to offer a more complete understanding of the s-commerce phenomenon by providing a comprehensive definition of this new concept, once many other studies use the term without defining it. Thereby, it contributes to the academic literature, by offering the relevant knowledge regarding s-commerce definition and proposing a conceptual model to describe this new phenomenon, helping to guide researchers and practitioners to a common path in the future.

Moreover, since gender differences have been observed in e-commerce research, the lack of gender orientation in s-commerce research risk neglecting an important aspect of s-commerce users adoption and usage. Therefore, the present research analysed the major gender moderating effect in the area of s-commerce in particular and social media studies in general. In this sense, the present study extends researchers' call for more rigorous and empirical s-commerce studies to examine gender' s influence on user purchase behaviour explicitly at the micro level.

### **2. Contributions to Practice**

Findings of this study have some important managerial implications. Indeed, the current research provides several practical suggestions to s-commerce owners and business managers. Firstly, social media channels owners and more specifically s-commerce virtual communities pages owners or business managers could benefit from understanding why Tunisian consumers use these sites to purchase products/services and at the same time generate commercial recommendations. Secondly, for marketing managers, the moderating effects of gender on purchase decision in s-commerce environment also yields interesting implications for marketing communication. Since, information seeking gratification from s-commerce

provides a stronger motivation for females, while expressive information sharing gratification from s-commerce provides a stronger motivation for males, thus, to attract more users to participate in s-commerce, operators should develop a market segmentation strategy. Indeed, perceived expressive information sharing gratification needs to be communicated particularly to male users, while for female s-commerce users the focus should perhaps be more on perceived information seeking gratification and give hints on the hedonic aspects of the s-commerce communication. Moreover, marketing managers should also note that trust may be a particularly strong determinant of purchase decision in s-commerce environment for female consumers and they should improve upon weaknesses to fulfil female users' needs and enhance their shopping experiences by decreasing females' concerns about buying on s-commerce.

Finally, business managers may exploit social media channels such as F-commerce to keep in touch with potential consumers and build customer relationships in the Tunisian market.

### **VIII. Limitations and Directions for Future Research**

As with any research, the current study is not without its limitations. A major limitation lies in the measurement of gratifications used in this research was revised from a social network site context, and future research may develop the unique U&G scales to focus on s-commerce. Second, the research only reported the different gratifications between female and male users of information seeking and expressive information sharing, and future research should explore other gratifications ( e.g. psychological dimension).Furthermore, this research has employed a single method to investigate the gender moderating effect on the s-commerce users' purchase decision. Future research could use a variety of methodologies (interviews, qualitative methods, longitudinal study, etc.) to understand gender/s-commerce relationship.

Another limitation is that the breadth of exploration of s-commerce Tunisian users purchase behaviour is limited to the gender effect. Other crucial variables such as cultural factors may also influence s-commerce adoption.

The study could be replicated in other different commercial social media context (Blogs, YouTube etc.) to assess the validity of the identified relationships between gender differentiation and s-commerce user purchase behaviour.

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## CHAPTER IV

# THE UBIQUITOUS ROLE OF SOCIAL MEDIA MOBILE ADVERTISING IN MEDIATING CONSUMERS PURCHASE INTENTION: EXPERIMENTAL ANALYSIS

### ABSTRACT

Driven by the rapid expansion and importance of mobile technologies, social media mobile advertising has increased rapidly. Indeed, mobile advertising is adopted by marketers as a new marketing channel according to consumers' position at any moment of the day.

Despite the growing attention on mobile advertising, we still know little about the effects of psychological distance dimensions such as spatial distance on consumers' perceptions and behaviours. This study builds on a large scale randomized experiment of mobile advertising message(coupon) sent to 80 mobile users. Viewing mobile advertising as a form of experiential computing, we draw upon the Construal Level Theory (CLT) to examine the effects of spatial distance (Near vs. Far) and mobile advertising content (Pictorial vs. Verbal) on consumer patronage intention in a simulated mobile advertising marketing environment. The current research objective is to examine how marketers, via the social media mobile marketing platform, reach consumers in their daily routines and lifestyles with contextually relevant and personalized advertising. In light of this, advertisers will have the possibility to pre-identify consumers' needs and preferences.

**Keywords:** Social Media Mobile Advertising, Shopping Experience, Spatial Distance, Advertising Content, Construal Level Theory.

## **ABBREVIATION**

<b>CLT</b>	Construal Level Theory
<b>IT</b>	Information Technology
<b>SMS</b>	Short Message Service
<b>GPS</b>	Global Position Service

## I. Introduction

It is well recognized that today's technological revolution has covered also the shopping area. Therefore, social media mobile services and applications are becoming more and more present in our everyday life and this fact changes significantly human behaviours (Consolvo, Paulos, and Smith, 2007). This tremendous growth of the appealing features of mobile devices has created a new channel for marketing: *mobile advertising*.

Day after day, mobile advertising has diffused widely over the world. For instance, in the U.S. alone, companies' spending on mobile advertising and promotions and their ability to deliver brands to consumers is forecast to grow approximately 600% from \$9.3 billion in 2010 to \$56.5 billion by 2015 (Rohm et al., 2012; Marketing Charts, 2011). Further, creating new applications and services that meet customers' shopping desire for mobile environments has generated considerable debate in the research literature (Brunato. and Battiti, 2003; Tewari, Youll, and Maes, 2002; Tsang, Ho., and Liang, 2004). In this sense, Anacleto et al. (2011) argued "shopping centres present a rich and heterogeneous environment, where IT systems can be implemented in order to support the needs of its actors". Accordingly, mobile devices can potentially serve as a new advertising channel (Anacleto et al., 2011).

Despite large scales research attention on social media mobile services and applications for shopping orientation, potential psychological and cognitive factors (such as psychological distance dimensions) that impact consumers' intention to patronage continue to be largely unexplored. While prior researches have shown that construal level theory (CLT) has rich and important implications for explaining and predicting consumer behaviour and have already identified interesting effects on choice in diverse contexts such as purchasing decisions and intention, it has not been extended to understanding consumers' intention to buy by personalizing the content of the mobile advertising message according the consumer position (near or far from the store). Although CLT offers a cognitive account for many such phenomena, in the current research, we think to integrate the context of a real shopping experience within the CLT framework. Indeed, the construal level theory of social media mobile advertising has the potential to inform how we think about and effectively deliver contextual messages through mobile technology. Three areas of inquiry are necessary in order to achieve a disciplinary understanding of this theory from the perspective of the field of social media mobile advertising. First, the role of psychological spatial distance (Near vs. Far). In other words, how consumers differentially evaluate mobile messages under varying contexts of

spatial condition, thereby leading to variance in the effectiveness of mobile advertising promotion (coupon). Consumers patronage intentions are highest when they receive an short message service(SMS) close to the place of the promoted object or event. This occurs because closer spatial distances induce consumers to mentally construe the promotional offer more concretely, which in turn, increases their involvement and patronage intent. Second, the role of psychological message content dimension (Pictorial vs. Verbal)which in turn, influences consumers patronage intentions. Indeed, the representation of the mobile advertising message in a pictorial form is considered more concrete than verbal form (using only words), then it should be employed to represent better proximal (low-level) object or event. Although, the representation of the mobile advertising message in a verbal form should be more abstract, therefore, the verbal description of mobile advertising promotion (coupon) is considered more suitable to represent distal (high-level) object or event. Finally, the role of the interaction and integration of different psychological distance dimensions mainly: *Spatial Distance* and *Mobile Message Content* in mediating the consumer shopping experience. In fact, this integration will help us to understand consumers' different psychological distance dimensions during their shopping experience mainly their patronage intentions.

This study is the first to the authors' knowledge that systematically investigates the impact of spatial and message content psychological dimensions on consumers patronage intentions in the presence of mobile social media services. It focuses on context variables (spatial and message content) that social media mobile marketing channels will be able to simply integrate into personalized mobile advertising. In order to bridge the gaps in the literature, we aim to answer the following issues:

- **RQ1.**Why does geographical mobile advertising targeting matter?
- **RQ2.** Why dose contextual mobile advertising targeting matter?
- **RQ3.**Does the interaction of different levels of spatial distance (near vs. far) and different mobile advertising contents( pictorial vs. verbal) affect consumers patronage intention?
- **RQ4.** If so, how these different levels of spatial distance (near vs. far) and different social media mobile advertising contents (pictorial vs. verbal) alter consumers patronage intention?

The purpose of this study is twofold. First, to investigate the relationship between different psychological distance dimensions such as spatial distance, mobile advertising content (pictorial vs. verbal) and the consumer patronage intention. Second, to understand the potential for integrating

social media mobile shopping services and applications which objects and places in the physical world and analysing the consumers' purchase behaviour in the presence of opportunities for handheld and ubiquitous mobile technologies and services that support the shopping experience.

## **II. THEORETICAL BACKGROUND AND HYPOTHESES**

In order to provide a complete theoretical picture for the current research, this section briefly describes the main literature streams that are relevant for this study. First, we start by reviewing the construal level theory (CLT) and domains where this theory was applied. Second, we reviewed previous research on the mobile advertising by examining the mobile devices' characteristics and mobile advertising spatial and contextual targeting in order to enhance understanding about the role of spatial distance in shopping environments.

### **1. Construal Level Theory (CLT)**

Recently there has been an immense debate about the employment of Construal Level Theory (CTL) in the consumer behaviour area. In this attempt, CLT is considered as a good social psychological theory that provides "an account of how psychological distance influences individuals' thoughts and behaviour" (Stephan, Liberman and Trope, 2010). Indeed, the theory does not deal with actual distances, for instance between two objects, but rather with egocentric distances, where the person mental is constantly the main reference (Liberman, Trope and Stephan, 2007). In light of this, objects are psychologically distant from individuals, and they can be remote in time or in space. Accordingly, increasing distance from objects affect the way people respond to these objects (Trope and Liberman, 2003).

Further, Liberman and Trope (2007) argued the weights of psychological distance dimensions change since the construal of more distant future actions or events tends to be more abstract, while the construal of near future actions or events tends to be more concrete. Dhar and Kim (2007) argued "the strength of CLT theory is in its ability to provide a parsimonious understanding of how evaluations change on the basis of the psychological distance".

Previous studies on the CLT psychological distance have shown that construal-level differences are associated with various forms of psychological distance, for instance, social distance which is linked to power hierarchies and spatial distance between two different locations (Fujita et al., 2006).

In the current research, we seek to explore two of the CLT psychological distances: spatial distance (near vs. Far) and message content (verbal vs. Pictorial) in the mobile advertising context.

***Spatial Distance.*** The present research is grounded in a psychological spatial distance of CLT (Trope et al., 2007; Trope and Liberman, 2003) which states that as people's experience with objects and events becomes less direct and more psychologically distant, probably, people become less knowledgeable about specific details and therefore rely schematic information (abstract). Accordingly, more concrete construal (low level) is most likely used to direct experiences with objects and events. Contrary, more abstract construal (high level) is most likely used to less direct or better more psychologically distant experiences with objects and events. In this sense, people tend to represent psychologically distant events by their abstract description (high level) and psychologically near events by their concrete description (low level).

Trope and Liberman (2003) found that increasing the reported spatial distance of social objects or events should have effects on mental representation similar to those of increasing distance on other dimensions of psychological distance. In this sense, people tend to represent psychologically distant events by their abstract description (high level) and psychologically near events by their concrete description (low level). In view of that, CLT develops this association between distance and construal level that argues objects and events which are near in space or time trigger lower level of construal while objects and events which are more distant in space or time trigger higher level of construal (Fujita et al., 2006).

***Pictorial versus Verbal.*** According to CLT, individuals use their abstractions when they traverse psychological distance, because abstraction are presumably to remain unchanged as one gets closer to an object or farther away from it. Since pictures are considered more concrete than words, they should be employed to represent better proximal (low-level) object or event, while words should be more abstract, therefore, they are more suitable to represent distal (high-level) object or event (Amit, Wakslak and Trope, 2012).

***Spatial distance context and message content.*** The current research seeks to enhance understanding of mobile advertising consumers behaviour by providing a new perception of the CLT applications in marketing field. Indeed, we seek to explain and develop the implication of CLT in a concrete managerial context which is the shopping experience in the presence of ubiquity technologies such as the mobile advertising applications and services (coupon). Despite large scales research attention on CLT, social media mobile marketing channels which relay on personalized mobile advertising mobile advertising content in impacting consumers' patronage intentions continue to be largely unexplored.

There are very few research on the combination of these two psychological distance dimensions. In his experiments, Amit (2006) presented spatially, temporally, or socially near or distant items in different format (pictorial or verbal). For instance, in an experiment on spatial distance, a pair of items was presented either in pictorial or verbal format inside background pictures that created an illusion of depth. The items were presented either in closer or farther position in the background picture. The author found that participants responded faster to pictures of objects when they were spatially near than spatially distant, but they responded faster to words denoting those objects when they were spatially distant than spatially near. Consistent with Amit (2006) study's findings we propose the following hypotheses:

**H1: Spatial targeting for consumers located at proximal distances (versus far distances) from the promoted object or event and simultaneously accompanied with a pictorial mobile advertising message would be more effective in garnering consumers' patronage intentions.**

**H2: Spatial targeting for consumers located at distal distances (versus near distances) from the promoted object or event and simultaneously accompanied with a verbal mobile advertising message would be more effective in garnering consumers' patronage intentions.**

## **2. Social Media Mobile Advertising Related Works**

### *2.1. Mobile Advertising: Mobile Device Characteristics*

The advanced development of mobile devices, wireless connectivity and location-detection technologies has facilitated the existence of social media mobile applications and services. Accordingly, this rapid proliferation of mobile devices has created a new channel for marketing the so-called *mobile advertising*. Day after day, social media mobile advertising (such as coupons) becomes a power marketing instrument in terms of establishing direct, persuasive, and individualized links with consumers due to several mobile device related characteristics such as being “always on”, “always connected”, and “always with the user” (Balasubramanian et al. 2002; Kavasallis et al. 2003). In light of this, Dhar and Varshney (2011) argued that mobile advertisements are potentially personalized based on users' input, since mobile user's identities are usually carried by mobile devices due to the mobile location based characteristic.

Previous studies have examined the mobile advertising phenomenon and its mechanisms (Carroll et al., 2007; Laszlo, 2009; Chang and Villegas, 2008). For instance, Chang and Villegas (2008) argued that mobile phone has incredible potential for delivering an advertisement to consumers due to its high penetration rate, it's the only advertisement medium that consumers sustain with them

anywhere at any time. Moreover, Tsang et al. (2004) argued given that the mobile phone is a very personal device that permit to people to be connected virtually any time and anywhere, mobile advertising must be more personalized and may take different forms. Therefore, there is a need to investigate the effect of different mobile advertising content, specifically, verbal and pictorial messages contents on the shoppers' evaluation to visit a store.

More recently, Chen and Hsieh (2012) suggested that “mobile phone users who anticipate mobile advertising content can proactively search for advertisements that fit their preferences and interests, and can also register certain products to receive advertising information for related products on a regular basis”.

Thus far, we have seen the crucial role of mobile devices characteristics for instance, “always on”, “always connected”, and “always with the user everywhere/anytime”, in embedding the social media advertising. The next paragraph describes and reviews the spatial targeting role of the social media mobile advertising.

## 2.2. Mobile Advertising: Spatial Targeting

As we have seen in the previous section mobile phones are context aware and are able to detect the users' environmental factors, including two fundamental dimensions: time and location proximity of mobile users by dint of the presence of applications and sensors within the device, for instance the global positioning system (GPS). In light of this, prior research on mobile advertising highlighted the importance of location proximity in mobile decisions. Indeed, consumers are more willing to respond to a proximally located based advertising offer (Banerjee and Dholakia 2008; Spiekermann et al. 2011). In other words, consumers are more likely to respond to a mobile advertising offer when they are close to the promoting store than when they are more distal to that store (Banerjee and Dholakia 2008). Further, Spiekermann et al. (2011) found that consumers were less likely to redeem restaurant coupons when they received them at farther locations from the restaurant.

The following table summarizes the relevant finding of previous studies on mobile advertising.

**Table 1. Overview of previous studies**

Studies	Type of targeting	Sample size	Relevant findings
Banerjee and Dholakia (2008)	Spatial targeting	351	They found that consumers are more willing to respond to a

			proximally  Located based advertising offer.
Spiekermann et al. (2011)	Proximity targeting	171	They found that consumers were less likely to redeem restaurant coupons when they received them at farther locations from the restaurant.
Ghose et al. (2013)	Spatial targeting	260	They found that proximally located stores are more likely to garner clicks  in mobile-based Internet searches.
The present study	Spatial targeting  Message content targeting	80	We found that Spatial targeting for consumers located at proximal distances (versus far distances) from the promoted Aperitif and simultaneously accompanied with a pictorial mobile advertising message (Coupon of the promoted Aperitif) would be more effective in garnering consumers' patronage intentions. Further, we found that spatial targeting for consumers located at distal distances (versus near distances) from the promoted object or event and simultaneously accompanied with a verbal mobile advertising message would be more effective in garnering

			consumers' patronage intentions.
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While previous studies on mobile advertising focused on attitude toward mobile advertising (Bauer et al., 2005) or on other consumer driven factors such as perceived control and trust (Merisavo et al., 2007), little attention has been paid to the combined influence of two consumer psychological distance dimensions, mainly spatial distance and the mobile advertising content on the consumers' patronage intention. Accordingly, the current research seeks to examine effects mediated by changes in relative weight of criteria related to the spatial distance (near vs. far) and other attributes that reflect the personalization of mobile advertising content (pictorial vs. verbal) on consumers store patronage intention.

### **III. Methodology**

#### **1. Research Context**

To explore the effectiveness of mobile advertising message content on consumers patronage intention based on their position to the promoted object or event, we conducted a randomized lab experiment built on different mobile advertising scenarios. To realize this idea we thought about building a scenario based on a mobile advertising (coupon) of an Italian aperitif. This advertising message has been sent to the participants in the experiment. Indeed, the reason for choosing this type of product so an Italian aperitif is: first, our sample consists mainly of university students and generally their budget does not allow them to purchase products of high price level (e.g. electronic products). Secondly, it will not be hard for them to imagine themselves in a similar situation.

#### **2. Research design**

In the current study, we conducted a laboratory experiments for different reasons. Firstly, a field sitting involves more and unpredictable risks than a lab, therefore, it is reasonable to run an experiment in a controlled environment, which could be comparable to a practical environment. Secondly, archiving experiments in a laboratory reduces firstly the risks, and more important it reduces also the rising costs of a field experiment (Wohlin et al., 2000). Finally, the theories and research traditions from which the hypotheses are derived (i.e., CLT and mobile targeting research) are usually based on experimental methods.

In our experiment, the participants were exposed to a scenario that depicted the consumer behaviour/reaction face an advertisement of an Italian aperitif that arrives on his/her and which

detected the distance of the local offering aperitif and his/her actual position. Participants were instructed to imagine that they were the consumer in the scenario.

The use of “role-playing” scenarios is very common in experimental consumer and service research. Bitner (1990) argues that their “*primary advantages are that otherwise expensive or extremely difficult manipulations can be operationalized relatively easily and that the researcher can control otherwise unmanageable variables. In addition, role playing allows time to be compressed (...), whereas in “real life” the events would be likely to take place over several weeks*”. Accordingly, role-playing experiments have been employed with great success in previous studies on consumer behaviour in shopping environment (e.g., Aggarwal, 2004; Campbell and Kirmani, 2000).

### 2.1. Subjects and design

Subjects were 110 undergraduate students at a large university in Bologna (Italy) who were randomly assigned to the four treatments. However, at the end of the experiment we had unbalanced cells in term of number of participant by conditions/treatments (e.g. we had more participants that received the Treatment 1: Near, Verbal than Treatment 4: Far, Pictorial). Thereby, a potential bias would be the over-sampling of participants at near distance and who received a verbal mobile advertising message (coupon) and the under-sampling of participants at far distance and who received a pictorial mobile advertising message (coupon). To overcome this bias, we sampled an equal number of participants located at each of the two distances from the aperitif’s location (near vs. far). In other words, we have made a great effort to avoid such biases and have achieved a relatively balanced set of cells for the treatments. Indeed, 80 undergraduate students (55% female, 45% male and average age = 21,31) participated in the study. Further, cell sizes were 20 participant by treatment.

Participants in this study were randomly assigned to conditions 2(near vs. fare) x 2(pictorial vs. verbal) between-subjects design. This study seeks to determine whether changes in spatial distance (near vs. far) and different levels of mobile advertising content (pictorial vs. verbal) affect consumers patronage intention.

### 2.2. Procedure

Participants first were asked to read the general instructions of the experiment and were asked to imagine that they received an advertising message (coupon) for an Italian Aperitif on their mobile phones. We manipulated spatial distance by varying the distance between the aperitif’s location and the position where the consumers received the mobile advertising (coupon). Further, we manipulated the content of the mobile advertising using two different message formats: once we

used only words in the description of the promoted aperitif and in the second message format we used a pictorial content that describes the same aperitif's promotion with the same information amount as we did for the verbal format.

Since our experiment is built on 4 different conditions (near, verbal; near, pictorial; far, verbal and far, pictorial) therefore, we had 4 random groups who received these 4 treatments. In the first condition, participants who were asked to imagine themselves located near (100 metres) the promoted aperitif, received the verbal format of the advertising message as it is shown in Figure1.

**Figure 1. Treatment1: Near, Verbal**



In the other hand, participants in the second condition were located near (100 metres) the promoted aperitif, received the pictorial (low-level) format of the advertising message as it is shown in Figure2.

**Figure 2. Treatment2: Near, Pictorial**



In the third condition, participants who were located distal (2000 meters) from the promoted aperitif, received the verbal format of the advertising message as it is shown in Figure3.

Figure 3. Treatment3: Far, verbal



Finally, in the fourth condition, participants who were located distal (2000 meters) from the promoted aperitif, received the pictorial format of the advertising message as it is shown in Figure4.

Figure 4. Treatment 4: Fare, Pictorial



### 3. Measures

#### 3.1. Independent Factors

**Spatial distance.** The spatial distance is defined as the distance between the store and potential consumers. Liberman, Trope, and Stephan. (2007) deemed spatial distance may be controlled or manipulated by moving closer or farther away from things at wish. In our experiment, distance means a mobile user's physical distance from the Italian aperitif's location. This definition of location from the promoted event is in line with the Spiekermann et al. (2011) use of distance from a restaurant.

**Mobile Advertising Content.** The mobile advertising content is manipulated by varying the content of the mobile advertising (using words or pictures). In other words, participants in the pictorial (low-level) condition receive a mobile message with only pictures of the product. In the other hand, participants in the verbal (high-level) condition receive a mobile message with only words that describe the product.

### 3.2. Dependent Measures

**Patronage Intention.** Kukar-Kinney and Walters (2003) defined patronage intention as a consumer's assessment of the likelihood that they will purchase a product from a particular retailer. The construct is conceptually similar to brand purchase intentions (Dhar and Kim, 2007; Edell, et al., 1983) and the willingness-to-buy construct (Dodds et al., 1991). In the current study, patronage intention was assessed using the scale developed by Grewal, Baker, Levy, and Voss (2003). The scale was reliable ( $\alpha=0,859$ ). Using a five-point scale (5= Strongly Agree and 1= Strongly Disagree), subjects indicated their level of agreement to the following three statements:

- (1) I would be very likely to shop in this store;
- (2) I would be willing to buy merchandise at this store;
- (3) I would be willing to recommend this store to my friends.

## IV. Results and Discussion

In this section, we discuss our results and their economic impact. We also explore some additional analyses to check the robustness of the results.

The results from the ANOVA of the mean scores shown in Table 1 indicated that there was no significant main effect of spatial distance ( $p= 0,093$ ) and message content ( $p= 0,416$ ) separately on the patronage intention. However, there was significant interaction effect of spatial distance and message content on patronage intention ( $F= 42,602$  ;  $p<0,001$ ).

**Table 1. ANOVA**

### ANOVA

Dependent variable: Patronage Intention

Sorgente	Somma dei quadrati Tipo III	df	Media dei quadrati	F	Sig.	Eta quadrato parziale
Modello corretto	44,760 <sup>a</sup>	3	14,920	<b>42,602</b>	<b>,000</b>	<b>,627</b>
Intercetta	610,513	1	610,513	1743,229	,000	,958
Spatial_Distance	1,013	1	1,013	2,891	,093	,037
Message_Content	,235	1	,235	,670	,416	,009
Spatial_Distance * Message_Content	43,513	1	43,513	124,244	,000	,620
Errore	26,617	76	,350			
Totale	681,889	80				
Totale corretto	71,376	79				

a. R quadrato = ,627 (R quadrato corretto = ,612)

To test whether participants react differently to the experiment treatments (near, verbal; vs. near, pictorial; vs. far, verbal; vs. far, pictorial), we compared the four conditions mean scores as shown in Figure 1.

**Figure 1. Mean Scores**

		Message Content		
		Verbal	Pictorial	
Spatial Distance	<b>Near</b>	n=20	n=20	n=40
		Pat_Int= 2,083	Pat_Int=3,666	Pat_Int=5,749
	<b>Far</b>	n=20	n=20	n=40
		Pat_Int= 3,333	Pat_Int= 1,966	Pat_Int=5,299
		n=40	n=40	
		Pat_Int= 5,416	Pat_Int= 5,632	

**Figure 2. Effect Size**

Independent Variables	Dependent Variable: Patronage Intention
Spatial Distance	$\eta^2 = 0,037$
Message Content	$\eta^2=0,009$
Interaction: Spatial Distance x Message Content	$\eta^2= 0,620$
<b><math>R^2= 0,612</math></b>	

Results of the mean scores analysis suggest that consumers react differently to the four conditions. Moreover, the effect size shown in Figure 2. suggests that the interaction term (spatial distance x message content) in its contextual combination appeared to have stronger impact on the subjects.

Further, because our hypotheses involve interaction in the relationship between the dependent variable (patronage intention) and independent variables (spatial distance and message content) that specify nonlinear relationships, it is not straight forward to interpret these results. Consequently, to deepen the mean scores results we made multi-comparisons analysis.

Results of the Scheffe post-hoc test suggest that the estimated marginal means of the near-distance x pictorial message are statistically, significantly higher than that of near-distance x verbal message ( $p < 0,001$ ). In addition, the estimated marginal means of near-distance x pictorial message content are significantly different from those of near-distance x verbal message ( $p < 0,001$ ). Also, the multiple-comparison test results suggest that the marginal means of far-distance x pictorial message are insignificantly different from those of near-distance x verbal message ( $p=0,942$ ). As shown in Table 2, the estimated marginal mean effects results support that when targeting mobile users located in proximal distances, verbal message promotion(coupon) is less effective than pictorial message promotion (coupon), thus supporting H1.

**Table 2. Scheffe post-hoc test**

**Scheffe post-hoc test**

Dependent variable:intention\_patronage

Scheffe

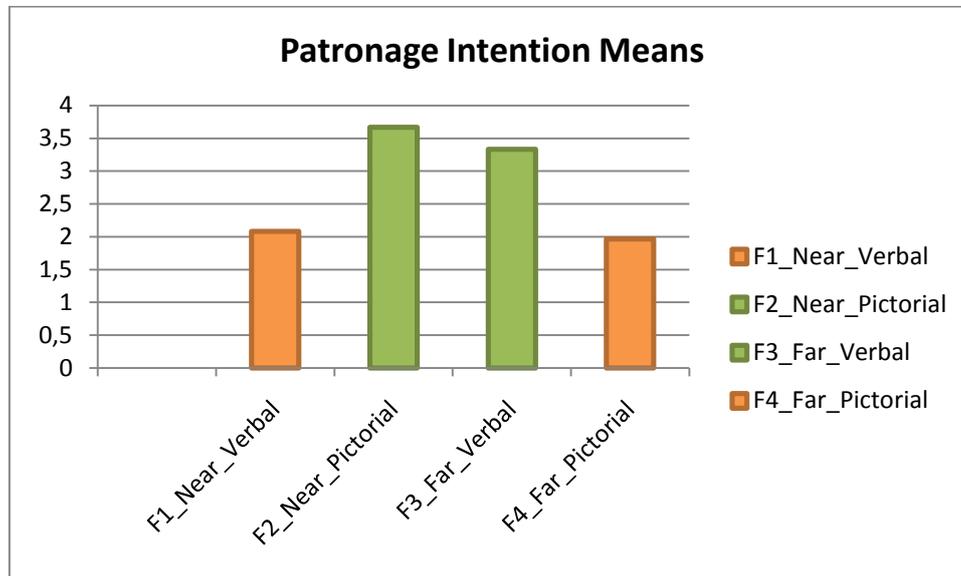
(I) Conditions	(J) Conditions	Differenza fra medie (I-J)	Errore std.	Sig.	Intervallo di confidenza 95%	
					Limite inferiore	Limite superiore
	F2_Near_Pictorial	-1,58333 <sup>*</sup>	,18714	,000	-2,1184	-1,0483
F1_Near_Verbal	F3_Far_Verbal	-1,25000 <sup>*</sup>	,18714	,000	-1,7851	-,7149
	F4_Far_Pictorial	,11667	,18714	,942	-,4184	,6517
	F1_Near_Verbal	1,58333 <sup>*</sup>	,18714	,000	1,0483	2,1184
F2_Near_Pictorial	F3_Far_Verbal	,33333	,18714	,372	-,2017	,8684
	F4_Far_Pictorial	1,70000 <sup>*</sup>	,18714	,000	1,1649	2,2351
	F1_Near_Verbal	1,25000 <sup>*</sup>	,18714	,000	,7149	1,7851
F3_Far_Verbal	F2_Near_Pictorial	-,33333	,18714	,372	-,8684	,2017
	F4_Far_Pictorial	1,36667 <sup>*</sup>	,18714	,000	,8316	1,9017
	F1_Near_Verbal	-,11667	,18714	,942	-,6517	,4184
F4_Far_Pictorial	F2_Near_Pictorial	-1,70000 <sup>*</sup>	,18714	,000	-2,2351	-1,1649
	F3_Far_Verbal	-1,36667 <sup>*</sup>	,18714	,000	-1,9017	-,8316

\*. Mean difference is significant at 0.05 level

Similarly, with regards to targeting far distances, the results shown in Table 2.suggest that the marginal means of far-distance x verbal message are statistically, significantly larger than those of

far-distance x pictorial message ( $p < 0,001$ ), indicating that pictorial message at far distance results in a lower patronage intention likelihood.

**Figure 3. Patronage Intention Means**



As shown in Figure 3, the estimated marginal mean effects results visually support that when targeting mobile users located at far distances, a verbal mobile advertising message would deliver the higher benefits than a pictorial mobile advertising for consumers to purchase the promoted product, therefore, supporting H2.

In summary, we draw on the contextual marketing perspective to hypothesize how different combinations of mobile targeting (spatial distance; message content) determine consumer patronage intention. Further, we demonstrated how spatial distance and message content simultaneously affect consumers patronage intention. Indeed, our results showed that spatial targeting for consumers located at proximal distances (versus far distances) from a promoted product/event and simultaneously accompanied with a pictorial mobile advertising message of the promoted product/event would be more effective in garnering consumers' patronage intentions. Further, as it was expected, spatial targeting for consumers located at distal distances (versus near distances) from the promoted object or event and simultaneously accompanied with a verbal mobile advertising message would be more effective in garnering consumers' patronage intentions. Thereby, our findings offer important implications to both theory and practice, as discussed below.

## V. Contributions

## **1. Contributions to Research**

The current study has important methodological and substantive implications for researchers and consumer psychologists and it has the potential to contribute to the social media mobile advertising fields and the construal level theory literature in multiple ways. First, this study is grounded in psychological distance and construal level theories, which may enrich our knowledge about consumers' decision-making processes. Further, we integrated construal level theory with shopping experience aspects (intention to patronage), thus extending knowledge in both domains.

This study provides researchers with a framework to explain and develop the shopping experience in the presence of ubiquity technologies in particular the social media mobile advertising. In this sense and from a theoretical point of view, analyzing this wealth of data regarding the consumers shopping experience in a context where the intersection of key factors such store patronage intention, different level of psychological distance dimensions (spatial distance, message content) and finally the supportive presence and use of mobile advertising will help in modelling the space-time behaviour of consumers during their shopping experience and could in a positive way be considered as a good tool for forecasting and solving potential future problems related to different mobile shopping features and applications. Further, our experiment provides insights to the research questions and accordingly will offer to other researchers interesting opportunities to replicate the experiment for other contexts.

## **2. Contributions to Practice**

In the current research, we offer a new set of perspectives and directions to be considered by the designers of handheld and ubiquitous mobile technologies and by shopping content and stores. Further, since mobile shopping services is in its early stage and the functions and features of mobile shopping services will be evolving in the future, examining the interaction between different construal level will help mobile carriers to be well positioned by developing new data value added services and applications in order to meet differences in consumers desire. In other words, it will be very interesting if mobile shopping services' provider will take into account jointly different levels of spatial distance (low vs. high) and different mobile advertising content (pictorial vs. verbal) to balance and personalize consumers' needs.

## **VI. Limitations and Directions for Future Research**

As with most research, the current study has several limitations. However, these limitations suggest potential avenues for future research. First, the results found here may be obviously different given another mobile social media setting, and may be limited due to the convenient nature of the

samples. Second, the somewhat artificial nature of the lab setting of this research detracts from external validity. Third, the mobile advertising short message service respondents may represent a biased sample. In other words, a potential bias would be the over-sampling of participants at near distance and who received a verbal mobile advertising message (coupon) and the under-sampling of participants at far distance and who received a pictorial mobile advertising message (coupon). To overcome this bias, we sampled an equal number of participants located at each of the two distances from the aperitif's location (near vs. far).

Despite these limitations, the study here contributes to the social media mobile advertising literature by offering interesting results and valuable managerial implications. Moreover, consumers decisions regarding whether to make a purchase decision after they received a mobile promotions may be associated with many other factors, such as income level and occupation status. Thereby, future researches could replicate our study in a field experiment and investigate the impact of these factors on mobile advertising users patronage intention. Furthermore, since space and time are interrelated, the exploration of the joint effects of spatial and temporal targeting for mobile advertising users is needed to hence understanding of users purchase behaviour.

Finally, consumer privacy concerns might be relevant issues for social media mobile advertising. Thus, future research may investigate how privacy concerns and personalization can be integrated in mobile targeting and social media to gather its advantageous at the same time as avoiding its disadvantages (Luo et al. 2013).

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