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## ► To cite this version:

Jean-Eric Pelet, Panagiota Papadopoulou. Consumer behavior in the mobile environment: An exploratory study of m-commerce and social media. *International Journal of Technology and Human Interaction*, 2014, 10 (4), pp.36-48. 10.4018/ijthi.2014100103 . hal-04225162

**HAL Id: hal-04225162**

**<https://hal.science/hal-04225162>**

Submitted on 2 Oct 2023

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# **Consumer behavior in the mobile environment: An exploratory study of m-commerce and social media**

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## **Abstract**

Consumer behavior in the omnipresent mobile environment constitutes a challenge for m-commerce vendors, as they seek to understand factors that affect it, positively and negatively, and to integrate social media in their mobile strategy. This paper presents an exploratory qualitative study about the use of smartphones and social media, in the context of m-commerce. Our objective is to facilitate the understanding of consumers' perceptions and behavior in m-commerce and social media and explore the potential of social media for m-commerce purposes. The results of our qualitative analysis show that reputation, design aspects, such as ease of use, as well as privacy and security are important factors for m-commerce and social media adoption and use. Our qualitative results also reveal factors having a negative effect to m-commerce. Business opportunities enabled by social media for m-commerce and how these can be leveraged in this promising mobile context are also discussed.

**Keywords:** m-commerce; social media; interface design; ease-of-use; reputation, security, privacy, consumer behavior, mobile phones

## Introduction

The widespread adoption of smartphones as well as their continuous use, independent of time and place bolsters the surge of m-commerce. This emergent way of conducting commercial transactions refers to the one- or two-way exchange of value facilitated by a mobile consumer electronic device (e.g. smartphone), which is enabled by wireless technologies and communication networks (Mobile Marketing Association, 2013). Mobile transactions are increasing exponentially, with reports indicating a growth of 356% for sales via smartphones and tablets within one year (IMRG Capgemini, 2012).

Social media (SM) favour such progression in the way consumers behave with their smartphones. Defined as “a group of Internet based applications that builds on the ideological and technological foundations of Web 2.0 and allows the creation and exchange of user generated content” (Kaplan and Haenlein, 2010), SM offer positive marketing outcomes to companies in terms of customer equity (Kim and Ko, 2012). Facebook, Twitter as well as more recent SM which focus on images, video or sounds, i.e. rich media, such as Instagram<sup>1</sup>, Pinterest<sup>2</sup> or Snapchat<sup>3</sup>, are widely used globally, with the latter gaining increasing adoption compared to the other two. Their simple interface that easily shows important and recent information with brief content comprising images, short text or videos make them a powerful tool to enhance sales. Mobile devices and social media, as well as their combination, provide strong business opportunities for a vivid and effective communication with customers.

Consumer decision-making has fundamentally changed since the prevalence of smartphones in everyday consumer's life (Pelet, 2014; Pelet and Papadopoulou, 2013). With easy access to user reviews, expert opinions, price comparisons, and other emerging facilities, consumers are enabled to make thorough assessments of available products and services in an increasing number of categories. For marketers, this suggests a need for a totally new way of thinking about how to influence consumers. The challenge also holds for information systems developers, as m-commerce websites and social media have to be carefully implemented and used in order to become effective marketing tools. Therefore, these two groups of actors, marketers and information systems developers, have to work “hand in hand”.

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<sup>1</sup> <http://instagram.com/>: Instagram, launched in October 2010, is an online photo-sharing, video-sharing and social networking service that enables its users to take pictures and videos, apply digital filters to them, and share them on a variety of social networking services, such as Facebook, Twitter, Tumblr and Flickr.

<sup>2</sup> <https://pinterest.com/>: Pinterest, launched in March 2010, is a pinboard-style photo-sharing website that allows users to create and manage theme-based image collections such as events, interests, and hobbies.

<sup>3</sup> <http://www.snapchat.com/>: Snapchat, launched in July 2013, is a photo messaging application where users can take photos, record videos, add text and drawings, and send them to a controlled list of recipients.

Even though some studies have pointed out and elaborated on the key role that social media can play for marketing (Harris and Rae, 2009), several questions remain regarding their relevance and what they prescribe for m-commerce and information systems. The changes that occur in terms of customer relationship management (CRM) implied by organization's links with social media (see Berthon *et al.*, 2012; Fischer and Reuber, 2011; Hennig-Thurau *et al.*, 2010; Kaplan and Haenlein, 2010) question the ways in which social media contribute to leverage both customers and organizations benefits for m-commerce goals.

The aim of this paper is to investigate the use of m-commerce and SM on mobiles and how m-commerce can benefit from SM and location-based applications. We present an exploratory qualitative study on consumer perceptions and behaviour in using m-commerce, mobile SM and their combination. Based on the interviews conducted for the study, we seek to understand factors that affect m-commerce as well as the use of SM on mobile devices and for m-commerce. A discussion of our findings concludes the paper.

### **Smartphones and social media and: key components for m-commerce**

The evolution of mobile communications has triggered an increase in the use of mobile devices, such as mobile phones, fuelling mobile commerce (Venkatesh *et al.* 2003, Ngai and Gunasekaran 2007). Recent figures show an impressive growth of mobile devices use. Mobile phone adoption is widespread, especially in young population, with 75% of teenagers and 93% of adults aged 18-29 having a mobile phone. More than half (55%) of the latter group access the Internet wirelessly from their mobile phone (Lenhart *et al.*, 2011).

Differentiating mobile phone users from smartphones users, a recent study on smartphone adoption shows that 48% of all US mobile phone users own smartphones (Nielsen, 2012). In the USA, consumers have about equal access to mobile phones and personal computers. In the BRIC countries (Brazil, Russia, India, and China), there are almost four times as many mobile phone subscriptions as there are personal computers. In countries such as Italy and Germany, penetration rates of mobile phones exceed 100%, with some consumer owning more than one mobile phone (Kaplan, 2012).

Mobile users are increasingly accessing social networks using their mobile devices. A study by Adobe (2013) among mobile users in the USA, Canada, UK, France, and Germany found that most had accessed social networks using a mobile device, ranging from 94% for those 18-29 years old to 75% of those 50-64 years old. In fact, Facebook was the second most visited web site that was accessed by smartphones and was the top smartphone app in the USA in August 2013 (ComScore, 2013).

Adoption rates by audience segment for mobile technology differ depending on the application and need to be taken into consideration (De Marez *et al.*, 2007). Smartphone users under 50, those in higher-income households, and college graduates are more likely to use location-based services (Pew Research Center, 2013). Through location-based services, a consumer can receive a location-based alert about a special offer available for one hour only on his/her favourite wine when he or she is close to a wine retailer, assuming the consumer has opted in. This is facilitated by mobile technology's distinct capacity for targeting by both location and time (Ghose and Han 2011, Shankar *et al.*, 2010).

However, while location-based services may be attractive to marketers, permission from the consumer needs to be taken into consideration. In their study about success factors for mobile marketing, Scharl, Dickinger and Murphy (2005) reported that practitioner experts in mobile marketing deemed that permission-based campaigns are essential to the success of any mobile marketing communications strategy. Even with permission, marketers need to manage their mobile marketing such that the communications are not seen as too intrusive (Lamarre, Galarneau and Boeck, 2012). This applies equally to m-commerce. Unlike personal computers, mobile phones are very personal and constant companions to their owners (Shankar *et al.*, 2010), such that one's mobile phone could be the first thing one checks upon waking up and the last thing one checks before going to sleep. Because so many decisions related to shopping are made on the move, in various occasions such as in restaurants, airports, retail stores, and conferences or during discussions, smartphones can facilitate decision-making and purchases since people usually have them in their hands. The information search related to a product or service sometimes may lead to a purchase and sometimes may not, but can still be critical to a purchase.

At the same time concerns regarding privacy in m-commerce remain the same as in e-commerce, since they both involve transactions in an online environment. In the mobile context, privacy concerns could be considered as even higher risk, taking into account the use of SM, location-based applications and the information that is collected and can be available through them. Establishing trustworthiness remains very important for online companies in the mobile environment, and SM can help in this direction allowing for positive word-of-mouth. Thanks to their ease of use, social media can encourage shoppers to provide positive ratings and recommendations about the goods or services of a vendor on its public social media's page, an action which could be rewarded.

The speed of evolution of social media and mobile devices does not always allow companies to realize the implications of new consumer behavior trends or the challenges they face in the mobile web market. Thus, there is a need to carefully

examine and understand how mobiles and social media can effectively be used for m-commerce.

### **Integrating social media in m-commerce**

The potential benefits of m-commerce for generating sustainable profits need further exploration when used in conjunction with social media. To succeed in producing profits in the highly competitive m-commerce environment, organizations must not only develop the technical expertise and business strategy necessary for the creation of an effective “social media-m-commerce website” partnership but also create a satisfying user experience (Pelet and Lecat, 2011; Lecat and Pelet, 2011). In today’s competitive environment companies must quickly evolve and understand that consumer shopping in a digital world is not bound by the old buying habits, and so a new kind of collaboration between sellers and buyers is needed.

Whether m-commerce will surpass electronic commerce in growth and scope remains to be seen, with privacy being a central axis for its adoption. Using their mobile device for numerous activities consumers share information, without being as reluctant as when using a laptop for example. They also offer websites the possibility to locate them, and thus, vendors can target them more easily. This tendency and willingness of users to disclose information through SM and location-based applications seems to create a paradox in terms of privacy concerns in m-commerce.

People freely give out information, for example when they upload a picture from their mobile to their SM, in order to drive traffic to their website or to their SM’s page. This is so important that some SM such as Snapchat, Pinterest or Instagram use pictures as the basis of their business model. With their heaviest users being teenagers and young adults, most of them addicted to their smartphones and tablets, these SM seem important to take into account in an m-commerce strategy. They constitute promising platforms for customer engagement and retention which can help an m-commerce website and its products to be known in a target audience, representing opportunities for both consumer-focused and business-to-business companies. These SM allow an m-commerce website to connect directly with current and future consumers—developing a relationship that leads to sales, as consumers tend to buy from retailers they feel like they can relate to and “know” the brand: when you show the product as best as you can, providing good quality of image compression and fast downloading, customers tend to feel in a better situation with the seller since nothing is hidden.

Transparency on SM such as Instagram, Pinterest or Snapchat allows online vendors to build a relationship with their customers as well as driving traffic. Instagram can help to target a particular audience and engage the latter in a

conversation, in order to develop a relationship that can lead to very good word-of-mouth and to loyalty. In a highly saturated e-commerce world, savvy consumers tend to buy from retailers they know and trust and SM like Instagram can be used as a shortcut to build that feeling.

Given the early stage of research, commonly accepted prescriptions for the future of SM and m-commerce have not yet been established. In this direction, this paper attempts an exploratory qualitative approach of m-commerce and SM adoption and their joint potential.

### **Qualitative study**

An exploratory qualitative study has been conducted seeking to understand consumer perceptions and behaviour related to mobile devices, m-commerce and social media. Qualitative research is generally used to interpret meanings of a matter of interest or to gather further insight on the matter (Myers, 1997). In the attempt to gain an in-depth understanding of the topics under study and since, to our knowledge, research combining SM and m-commerce is scarce, an exploratory qualitative approach, with a survey-based method using short interviews seemed appropriate.

The main objective of this study is to investigate the use of m-commerce and the use of SM on mobile devices, and if and how users are influenced in shopping on m-commerce websites by using these social applications. In this direction and in an attempt to elicit data from consumers, the study has been conducted asking questions related to the following topics: use of social media on mobiles, use of mobiles for shopping, emotions and feelings felt following the visit of a mobile commerce website, factors affecting behaviour with mobiles and SM and perception an “ideal” m-commerce website. Questions were structured and open, allowing for short duration interviews. Every interview, the duration of which ranged from 20 to 25 minutes, was re-transcribed offering a verbatim of around 80 pages corresponding approximately to 6 hours of recording. We adopted a neutral attitude when interviewing the respondents so as not to influence their answers. Participants were questioned without being allowed to look at their mobile phone. This was to ensure that they answered only using their memory to access the information reinforcing their use of the combination of SM and m-commerce websites of their choice.

### **Participants**

Sample selection was primarily based on qualitative criteria, with a mix of age, gender and socio-professional background, in order to obtain a homogeneous sample. The sample comprises students aged 18-31 years, equally divided into male and female.

We used “theoretical sampling” also called “theoretical saturation” to attain the right number of interviewees. This method refers to the continuation of sampling and data collection until no new conceptual insights are generated. At this point, repeated evidence for conceptual categories were provided, using keywords (Bloor and Wood, 2006). We began interviewing students and, at some point, the interviewees’ answers were repeated so there was no more need to interview more. Therefore, following the criteria of data saturation (Mucchielli, 1991, p.114), we interviewed 21 students. Students are deemed suitable as a sample even if their use has often been questioned in terms of their appropriateness. They share many characteristics with the profile of mobile and Internet users’ population. As shown by several studies, Internet users tend to be young adults, with the Internet usage penetration within the age groups of 18–29 years rising up to 95% (Zickuhr, 2010; Pew Research Center, 2010). Hence, although our sample presents a bias towards younger subjects, it can arguably be acceptable as representative of Internet and mobile users. In addition, our study benefits from the use of students since they are considered as an important group of online consumers (Delafruez *et al.*, 2010) and are useful as a sample for empirical studies in m-commerce, in line with previous research (e.g. Kim *et al.*, 2008).

### **Methodology of the exploratory analysis**

Data were analyzed using a content analysis technique by coding the responses after transcription of the interviews. Due to the sensitivity of the subject matter and the possibility of interviewees having eventually difficulties expressing their emotions, the transcriptions were verbatim to enable accurate interpretation of responses (Jennings, 2005). Transcripts included speech hesitations, such as “ohhh” and “euhhh” where appropriate; paralinguistic features of speech were also recorded to help to qualify meaning (Gillham, 2005).

The qualitative data from the transcripts were analysed with a table in which all the questions extracted from the interview guide were written. A table file was used for each respondent. Rows in this table indicated the different themes or constructs emerged from the interview guide. If a construct appeared while reading the transcript of a respondent’s interview, a “1” figure was placed in a result column, in the row of the particular construct. Subsequently, we summarised the results from our respondents in order to have a cumulative understanding of the answers collected. We grouped the “result” columns of all our respondents in a final table, where each construct had at least a “1”. This corresponded to a set of 21 columns, either with “1” figures or empty. In this way, each construct had a score for each respondent’s table. Then the 21 respondents tables were concatenated in a summary one, enabling us to use the “1” columns to add rows and finally write the results obtained from the addition of “1” figures.



In order to apply the content analysis properly, coding must effectively be done by multiple coders who are oblivious of research questions, and inter-coder reliability must be checked to demonstrate consistency of coding (Miles and Huberman 1994). For this reason, two coders, blind to the research questions, were hired. Inter-coder reliability was checked to reinforce the reliability of this technique.

The interview transcripts were then coded and analyzed thematically using KH Coder<sup>4</sup>, a content analysis software program, in order to validate the results of the method based on matrices and tables used to condense the qualitative data. For this purpose, the texts of the interviews were concatenated into a single document. With the text thereby captured, the verbatim analysis was performed thanks to the “KH-Coder” software enabling to rapidly identify themes and their relations and calculate the co-occurrence frequency of themes. This method permitted us to compare the results from our tables with those obtained from KH-Coder. No significant differences were found between them, reinforcing the validity of our coding and analysis. It also enabled us to formulate assumptions linking answers and respondents profiles.

## Results and Discussion

In this section, we present and discuss the results of the exploratory qualitative analysis of the interview data, following the method explained previously. A summary of the results, with regard to the emerged categories of themes and related topics is presented in Table 1.

Principal themes	Constructs	Modalities / Common use	Evoked themes	Citation frequency among the 21 respondents	
Use of Mobile and Social media on Mobile	Mobile	Ownership	Iphone Blackberry Sony Ericsson, Samsung, Nokia, HTC	11/21	52%
				4/21	19%
				6/21	29%
	SM	Registration on	Facebook Youtube LinkedIn Twitter	18/21	86%
				6/21	29%
				6/21	29%
	Use of		Use them on their	4/21	19%
				8/21	38%

<sup>4</sup> KH Coder is a free software for quantitative content analysis or text mining invented by Koichi Higuchi. It is also utilized for computational linguistics. More information can be found here : <http://koichi.nihon.to/psnl/en/>

	mobile -	SM on Mobile	mobile		
			Facebook	17/21	81%
			Youtube	8/21	38%
			Contact their community (Facebook...)	10/21	48%
			Get in touch with people	3/21	14%
			Stay in contact with people	4/21	19%
		SMS  WWW	Sending short messages	9/21	43%
			Surf the Internet (look for information)	10/21	48%
		GPS	Finding “information when needed”	3/21	14%
			Global Positioning System (GPS) “ON”	9/21	43%
		Security	Risk to leave data on the mobile	1/21	5%
	Applications	Importance of choice	The choice of applications is important	2/21	10%
			Lot of offers	2/21	10%
			If I find useful information	4/21	19%
		Price	The price of an application is important	3/21	14%
Emotions and feelings <sup>5</sup>	Positive -	Emotions	Happy to save time	2/21	10%
			It brings “pleasure”	1/21	5%
			It brings “excitation”	1/21	5%
			Help to reach “happiness”	2/21	10%
		Feelings	Freedom	1/21	5%
			More comfortable than laptop	3/21	14%

<sup>5</sup> Emotions refer to affective states whereas feelings refer to interface perception from the user.

			Convenience Help “to not feel lonely”	4/21 2/21	19% 10%
	Negative	Slowness	Discourage users from re-visiting a particular website	5/21	24%
		Intuitivity	Website is not intuitive	3/21	14%
		Accessibility	Difficulty of access	3/21	14%
		Unreliability	I cannot read it on my mobile	2/21	10%
			It is dangerous for the security	2/21	10%
			Presence of advertisings	2/21	10%
			Offer of « bad products »	2/21	10%
Design issues	Human Mobile Interaction	Use	Don’t find it practical in comparison to laptop	2/21	10%
			Ease-of-use	6/21	29%
			Interactivity	2/21	10%
			Speed of use (quicker than laptop)	1/21	5%
			Intuitivity	2/21	10%
		Ergonomics	If it is practical	6/21	29%
			The website functions without problems on my mobile	4/21	19%
			Adapted for the screen of my mobile phone	2/21	10%
		Interface Aspects	Simplicity	4/21	19%
			Security	5/21	24%
			User friendly	3/21	14%
			Funny	1/21	5%
			Aesthetics	1/21	5%
			Design is professional	1/21	5%

M-commerce	Shopping	Use of mobile for shopping	Shop on m-commerce websites (music, train tickets)	2/21	10%
-	GPS	GPS and SM	Received an invitation for a commercial proposal	3/21	14%
			Contacted via Bluetooth with offers	1/21	5%
	Reputation	Recommandation from friends	A friend posted a link that I wanted to visit	2/21	10%
		Proposal by SMS	Received Sms offer/proposal	6/21	29%
		Popularity	It has been heard from friends	7/21	33%
	Other people have already tested it		3/21	14%	
	Privacy	Respect privacy	It respects our privacy	4/21	19%
			Many other people trust it and have it	5/21	24%
	Security	It looks safe It is safe Special system of payment	Presence of https	1/21	5%
			Recommended by friends for that	4/21	19%
			When there is a special safe paying system like paypal	3/21	14%

Table 1: Summary of results

### Use of mobiles

All respondents own a mobile and are registered on one or several social media, such as Facebook, Twitter, YouTube and LinkedIn. Their activities on their mobile vary as shown in Table 1. The most common use of mobiles is for surfing the Internet, followed by sending of messages (SMS) and use of the Global Position System (GPS). Respondents also use their mobile to go on Facebook and other SM, however, they do not seem to prefer to use mobile applications for social media.

When we asked respondents about what they think is important to use their mobile for apart from making calls and sending SMSs, most of them referred to the possibility to contact their community *“for Facebook”* (10/21). Respondents are also interested in using their mobile *“to get in touch with people”*, while others mentioned the possible *“use of the Internet”* either in general, or more specifically, with the intention to *“find information”*.

### **Use of social media on mobiles**

According to the interviews, social media help respondents to *“keep informed”* (4/21) and they are *“easy to use”* (2/21) as well as *“interactive”* (2/21). Respondents mentioned they were *“happy to save time”* (2/21) thanks to *“convenience”* (4/21) and finding *“information when needed”* (3/21). An *“easy”* use of their application (3/21), being *“funny”* (2/21), making them *“free”* (2/21), or helping them *“not to feel lonely”* (2/21) describes what respondents emotionally get with this type of application. SM on mobile also help them to reach *“happiness”* (2/21) and satisfy their *“curiosity”* (2/21), bringing *“pleasure”* (1/21) and *“excitement”* (1/21) to their everyday life.

According to the respondents, social media must be *“intuitive”*, for example permitting *“an easy access to videos on Youtube”* or *“handy, easier to use than the usual homepage you have”* (1/21). As respondents said, what would make them want to use social media on their mobile would be using social media on mobile to be *“funny”* (1/21), *“quick”* (1/21), *“pleasant”* (1/21), *“useful”* (1/21) and also the *“aesthetics”* (1/21).

Respondents were also asked to describe their experience and express their opinion about social media and location-based services on mobile, used by businesses to contact them. Only 3/21 respondents received an invitation for a commercial proposal issued from a business thanks to the combined use of their GPS and social media. 2/21 referred to an experience they encountered and mentioned for example: *“when I was on Facebook, a friend posted a link that I wanted to visit in order to take advantage of the same offer”*. Another one says *“I have an application regarding stores, so I receive sometimes discounts and then when I am in the shop when I want to use the discount rate, I just show the message”*. Thus, some respondents already benefit from the conjoint use of social media and GPS embedded on their mobile. Bluetooth was also mentioned by one respondent: *“I’ve been contacted via Bluetooth with offers when I was in shopping malls”*. In addition, respondents (6/21) referred to the use of SMS as a vehicle for being reached on their mobile. One of them said: *“I receive SMS which offers me something if I answer to the SMS”*. Among these commercial proposals, 4/21 of respondents accepted them.

### **Use of mobiles for m-commerce and social media**

Among the 21 respondents, mobile shopping does not seem to be common. Respondents mainly use their mobile to buy music for iTunes and train tickets. They don't find it practical to make purchases from their mobile, preferring to use their laptop mainly for convenience purposes or due to confidentiality concerns.

#### **Shopping on mobile vs computer**

When respondents were asked about their preference regarding using their mobile rather than their computer to shop online, several topics emerged as important: ease of use, convenience, speed and security. Three respondents answered: *"I feel more comfortable on a laptop"* and another one found it *"easier"*. For one respondent, *"it just doesn't come to my mind to use it for this kind of things like shopping"*. In addition, a respondent referred to the speed of use in favor of the laptop instead of a mobile explaining: *"I often have a better wifi connection with my laptop, so I don't want to waste time shopping with my mobile"*. As far as security is concerned, a respondent answered: *"I am afraid that it's more risky to give away my data on the mobile (credit card)"* and another one said that shopping on its mobile *"looks less secure"*.

On the other hand, other respondents replied that they would prefer to shop on their mobile rather than their laptop. Two respondents found using their laptop for shopping *"less convenient"*. The speed of use has been mentioned too since the mobile *"seems quicker"*, and also offers the *"feeling of freedom"*. As it can be noted, perceptions of convenience, ease-of-use and speed can vary and be either positive for mobiles or positive for laptops, with respect to their use for shopping.

#### **Reputation**

When respondents were questioned about what encourages them to trust particular social media/ application and not another, we observed that peer recommendations represent an important reason. Thereby, when *"it is popular"* (6/21) especially into the network of the respondent, when the *"social media / m-commerce"* application *"has been heard from friends"*, 7/21 respondents seem more interested in the m-commerce website. Reputation is thus fundamental in the mobile market world. If *"other people have already tested it"*, *"when many other people trust it and have it"* and *"the people who use it and how often they use it"* seem to be important for respondents. Reputation is also a factor for revisiting a mobile website, according to *"the clients they have"* (2/21). The m-commerce website *"must be well-known"* by 2/21 respondents in order to remain loyal to it.

## Privacy and Security

Privacy and security concerns were found to be present in the mobile. *"If it respects our privacy when sharing info"* (4/21) while allowing to *"stay in contact with people"* (4/21), respondents are inclined to install a social media application or visit an m-commerce website. *"Security"* is important for 4/21 respondents and if *"it looks safe (presence of https)"* (1/21). Like for e-commerce, *"when there is a special safe paying system like Paypal"* (3/21) respondents accept to try to use a new m-commerce website. Security and privacy are considered necessary, as the *"security/privacy level is high"* in ideal m-commerce websites for 4/21 respondents, with a *"secure website"* being important for m-commerce for 3/21 respondents.

## Design

Topics linked to the human-mobile interaction also emerged: 3/21 respondents evoke the *"ease of use"* as a condition for m-commerce. An *"appealing"* interface (2/21) with *"simplicity"* (5/21) and *"user friendliness"* (3/21) creates trust, with the latter, in particular, being mentioned as a factor making an m-commerce website ideal. In addition, *"professionalism"* (2/21) and the fact that the *"design is professional"* (1/21) seem important aspects for m-commerce. Speed is also essential as respondents would trust a website if *"it's fast"* (1/21), while they would also remain loyal to a *"fast website"* (2/21)..

Similarly, factors related to ergonomics encourage users to re-visit a particular website on their mobile: *"if it is practical"* (6/21), *"if the website functions without problems on my mobile"* (4/21), if it is *"easy to load"* (4/21) and if the mobile website is *"adapted for the screen of my mobile phone"* (2/21). This is reinforced by 5/21 of the respondents who said that the m-commerce website should be *"easy to use on a mobile phone"* in order to remain loyal to it. Loyalty will also be based on a *"good structure"* for 1/21 respondent, on differentiation from other websites, being *"something new"* for 1/21

## Products and Service

The website usefulness in terms of the offered service and products was also deemed as important. As respondents mentioned, they would revisit an m-commerce website *"if I find useful information"* (4/21) or if the website contains a *"lot of offers"*. Other respondents based their judgment on the service received: *"if I am satisfied"* is foremost the necessary condition for 4/21 respondents, while if I am *"happy with the service"* is mentioned by 3/21 respondents. A *"fast delivery"* is important for 2/21 and if *"I received the goods I bought on time"* for 1/21. M-commerce website applications that offer benefits to the user such as 2/21

respondents say they *“have advantages using it”* will encourage the customers to remain loyal to an m-commerce website.

The products offered on the m-commerce website were also found to be an important factor, affecting loyalty. A website with *“many products”* or a *“large variety of products”* (3/21) and *“good products”* and *“prices lower than in a shop”* (2/21) drives respondents loyalty.

### Negative factors

On the other hand, some respondents are negative towards m-commerce and social media, as they *“don't trust them at all”* and *“don't give much information to them”* (2/21). Several factors seem to discourage users from re-visiting a particular website on their mobile. The most commonly mentioned relates to the *“slowness”* of the mobile website (5/21). If the *“website is not intuitive”* (3/21) or if the user has *“difficulty of access”* to it (3/21), it doesn't help to be used for m-commerce transactions. Once again, ergonomics appear as an important concern since a *“not user friendly”* application will hinder the use of the mobile website for 2/21 respondents. *“If I cannot read it on my mobile [...] it discourages me”* reported 2/21 respondents. Other factors were related to unreliability of the m-commerce website (2/21), and *“if it is dangerous for the security”* (2/21). In addition *“advertisings”* (2/21) or offers of *“bad products”* was also mentioned as negative elements discouraging the revisiting of an m-commerce website by 2/21 respondents.

Finally, two respondents were negative towards loyalty, stating that *“I cannot imagine being loyal to any m-commerce website”* without specifying on which aspects they are against being loyal. This shows the importance of free web analytics tools, also included in recent social media, enabling vendors to determine which of their contents drive the most click-throughs in their m-commerce website. The efficient measurement of the reach of the content of the m-commerce website and social media associated with it can help m-commerce vendors understand mobile consumer behavior and adapt to it.

## Conclusion

This paper presented an exploratory qualitative study examining consumers' perceptions and behaviour regarding the use of mobiles for commercial transactions as well as the combination of social media and m-commerce. Our analysis shows that there is a growing use of SM on mobiles and a positive disposition towards m-commerce, especially when it is combined with SM. The most important factors that affect m-commerce and SM adoption and use can be summarized to interface design aspects, such as ease of use, ergonomics, professional appearance and speed, reputation from others that use them and privacy and security. Having highlighted positive as well as negative factors related



to the adoption of SM for m-commerce purposes, we believe that this research helps to improve the academic and practical understanding of how m-commerce and SM can be used in the mobile context, and how SM could be leveraged if not reinforced for m-commerce. We have thereby underlined the suggestions of Harris and Rae (2009) regarding the key role they could play for marketing purposes.

It seems important for companies engaging in m-commerce to exploit the potential of SM in order to become known, increase their customer base and provide more interactive communication, gaining customer trust. Social media magnify the advantage of good service on an m-commerce website, as satisfied customers become brand advocates, however, at the same time, customers will also tell others about a negative experience on SM. This is why SM must be taken into account when planning an m-commerce strategy. Consumers can be fast and effective to punish those who are slow to respond to questions or fail to deliver their purchases on time, for example. Marketers that stumble stand to lose business to rivals and become vulnerable to negative social buzz or negative e-Word-of-Mouth (e-WOM). Another approach, which could possibly address the issue of privacy concerns, could be the use of personal or private data during a short period of time only. The general rule of Internet sharing thanks to SM, merely lies on the fact that if one puts something on the web, it will be there forever – even if it is deleted later. It could be reassuring to know that the content uploaded on SMs will not remain there for ever and will be automatically deleted soon after it has been viewed. One of the unique key factors of success about Snapchat for example, is this “self-destructing” feature of photos. A few seconds after photos have been viewed, they disappear. This feature could be used by companies incorporating SM in their business model for promotional purposes. When a company promotes a product for a short period of time, a consumer chatting with a friend by sending photos can use this feature where the photo is instantly deleted seconds after it has been opened by the recipient to add some pressure on the scarcity of a product for example. Even if it is still possible to capture content and save it permanently, m-commerce companies could efficiently use SM in this way to gain profit, and to increase customer trust and feeling of privacy.

Our understanding of SM adoption for m-commerce has taken into account the insights from existing and future consumers and some pre-existing knowledge associated with SM-related business practices. The results of this exploratory study are indicative of the theoretical as well the managerial implications of this topic, especially the joint use of m-commerce and SM. Our data collected using interviews indicate that the critical links between the SM and customers will not be achieved without a deep understanding that trust, sharing tools to reinforce the reputation of an m-commerce asset and ease-of-use reveal to be key factors of success. This learning approach is essential during the adoption stage, at which SMBs should test actions on several media and monitor social activity in response

to them. There is enormous potential for combining SM with the company website as a *mode of sale* referral and relationship development so long as customer requirements are seen as paramount. In line with previous studies seeking to understand the changes that occur in terms of CRM, (see Berthon *et al.*, 2012; Fischer and Reuber, 2011; Hennig-Thurau *et al.*, 2010; Kaplan and Haenlein, 2010), we suggested ways in which SM could contribute to reach m-commerce objectives, by taking into account ease-of-use and design, reputation from other users and privacy/security. The respect of these constraints should bring positive marketing outcomes to companies in terms of customer equity, in line with Kim and Ko (2012).

However, our research barely opens this prescriptive agenda and is not without limitations. Even though the sample size could look small, we thoroughly followed theoretical sampling to attain the right number of interviewees. Nevertheless, only two users actually admitted to purchase via m-commerce. This could further be seen as a limitation. The infancy of m-commerce suggests that a solution to gather and mine data about m-consumption is yet to be found. Analysing comments and advice given by consumers on websites, twitter feeds, social media pages or forums in relation to a particular product, brand or service, could serve as a first step to understand with more precision what is shared by customers. Active m-commerce users browse and purchase a few items on the mobile web but many brands still do not have the proper interface and many consumers still prefer a bigger screen. As a result, it is not easy to link user comments from SM, or advice from peers to their browsing and purchasing history.

Further research is needed, firstly to interview more customers via mobile devices in order to use the “theoretical saturation” technique not only to SM and smartphones users but also and overall to existing m-customers. It would also be interesting to extend this study and its results with a confirmatory study, examining the factors affecting consumer perceptions and behaviour as well as the interrelationships among them. Studying the differences that pertain between shopping via smartphone, tablet, glasses or watches as mobile devices embedding SM should also bring interesting findings to the literature. Finally, the efficacy of simultaneously employing geographical and contextualized targeting strategies in a mobile context could also be the topic of future research focused on the combined use of SM for m-commerce purposes.

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