The present and the future of m-banking according to spanish bank customers

El presente y el futuro de la banca por móvil según los usuarios españoles de banca
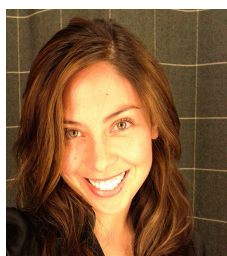
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1. INTRODUCTION

New technologies are in a continuous development and their use has become fundamental for companies and customers in order to achieve the completions of their objectives. By the end of 2014, there will be almost 3 billion Internet users (ITU, 2014). New technologies are completely changing the company-client relationship, combining different channels and providing a possibility for more interaction between them. In the next years, e-commerce will be characterised by m-commerce, the marketplace, the social commerce and the fusion of the offline and online channels (ONTSI, 2014a). Examples for this are banks. During the last years, banks have changed their way of providing services from office to implementing automated teller machines (ATMs), telephone and Internet for the traditional banking services. But, the last implemented channel, whose demand has increased with the growing usage of smartphones (Shaikh and Karjaluoto, 2014), is the mobile banking (m-banking). The mobile cellular subscription in the world will reach a penetration rate of 96% by the end of 2014, while the mobile-broadband penetration will

EXECUTIVE SUMMARY

The new technologies application in the banking sector recently has shown a great improvement through the introduction of new channels in a multichannel environment. One of the channels lately implemented is the mobile banking. Employing data from 2008 bank clients, we present a description of the Spanish mobile banking customer, outlining his/her perception and preferences regarding the mobile banking services, proposing practical recommendations for the banks, which converts this study in unique and relevant in Spain.

RESUMEN DEL ARTÍCULO

La aplicación de las nuevas tecnologías en el sector bancario ha mostrado grandes avances últimamente, introduciendo nuevos canales en el entorno multicanal. Uno de estos canales recientes es la banca por móvil. Utilizando datos de 2008 clientes de banca, presentamos una caracterización del consumidor español de banca por móvil, describiendo su percepción y preferencias respecto a los servicios de este canal, proponiendo recomendaciones profesionales prácticas, lo cual hace que este estudio sea único y relevante en España.

reach 32% by the same date, which means that the penetration rate has doubled in only 3 years (ITU, 2014). In Spain 22.9% of the online buyers do over 60% of their total expenditure through m-commerce (buying products or services using a mobile phone or tablet) (ONTSI, 2014a), the electronic banking services are used by 33% of the Spanish and the smartphone penetration reaches a rate of 53.7% (ONTSI, 2014a). All of the aforementioned data indicate a rising potential in the m-banking sector.

In this research we study the m-banking users, providing information about their wants, requirements, motives and difficulties when it comes to m-banking services as an additional channel in a multichannel environment. For this reason, we have treated a database of 2008 Spanish bank clients.

During the last years, banks have changed their way of providing services from office to implementing automated teller machines (ATMs), telephone and Internet for the traditional banking services

There are not many studies in the literature that explore m-banking as part of a multichannel environment and even less attention is put on the m-banking customer. Concretely in Spain, to the extent of our knowledge, there is no research that explores the mobile banking clients characterising them basing on their real experience with m-banking. Thus, our objective is to study m-banking according to m-banking customer practices, preferences and opinions, and help banks by providing some general characteristics to describe their m-banking clients. That is why this work will contribute both to the literature, with its uniqueness, and to the managerial world, giving quantitative evidence for the banks that have already implemented mobile commerce activities or want to implement them in future.

This paper is structured as follows: first, we provide a theoretical background regarding the multichannel environment, m-banking and m-banking customers; then, we expose the results of our analysis, and finally, we interpret them in the conclusion, offering managerial contribution for the participants in the mobile commerce and the banking sector.

2. MULTICHANNEL AND M-BANKING CUSTOMER

Nowadays, although there still are companies that act through one channel, the number of companies that are multichannel active is constantly increasing. *A multichannel service provider objective is to distribute resources across the channel mix, to satisfy customers and maximise profits* (Montoya-Weiss et al., 2003, pp. 448). As

new technologies are improving, customers are choosing to buy through diverse channels, using a variety of media, approaching the same services without time or place limitations. Both customers and companies can benefit from multichannel strategy adoption, since the sense of it is to use and organise the channels in order to fulfil their needs. As the main objective of any company is a long-term customer, they need broad and updated information about the preferences of their clients so they can accomplish their expectations, which in the case of the m-banking sector, is more critical, because of the absence of personal contact with clients in the m-commerce context. It is useful to adopt a multichannel activity, since multichannel customers spend more money than single-channel customers and this increases profitability, influences customer experience and enriches customer satisfaction (Weinberg et al., 2007).

In a multichannel environment, the customers can obtain banking services through a variety of media and new technologies, such as office, telephone, call centres, ATMs, websites and/or mobile applications. When using more than one channel for maintaining a relationship, the purchasing opportunities come to be greater, since not in all channels are offered the same services and with the identical conditions.

In accordance with the technological development, the literature has shown a rising interest in studying the adoption of the new technologies in multichannel activities. In the case of the banking sector this research started with the implementation of the ATMs, characterising it regarding the technology and the human interaction (Ricard et al, 2011). With the growth of the Internet adoption, the marketing literature explores the online banking, highlighting the channel usefulness, its ease of use, money and time saving, the convenience of using it anytime and its compatibility with other channels (Ozbay et al, 2011; Mzoughi and M'Sallem, 2013). Subsequently, mobile banking is the evolutionary step that comes next to Internet banking. It has been considered an extension of Internet banking, although it offers certain advantages that complement the online channel, such as immediacy, provision of time-critical information, ubiquity, localisation, location-free access, immediate reaction and instant connectivity, which gives a customer possibility to interact with the bank via portable device (Laukkanen and Pasanen, 2008; Akturan and Tezcan, 2012; Zhang et al, 2013).

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M-banking is defined as *a product or service offered by a bank for conducting financial and non-financial transactions, using a mobile device, namely mobile phone, smartphone or tablet'* (Shaikh and Karjaluoto, 2014, p.3). This gives a different perspective to see the bank, implementing the usage of portable devices for performing the same financial or non-financial tasks and obtaining the offered services. M-banking is advantageous to banks, mobile operators and customers, as all are participants in the process of service supply. In fact, mobile banking is one of the most value-added and important mobile services currently available (Laukkanen and Pasanen, 2008). Banks now have an innovative opportunity to build long-lasting and mutually rewarding relationships with new and existing customers, by offering them a choice of personalised mobile services, such as m-banking (Riivari, 2005). In this sense, the knowledge of m-banking users´ characteristics and their perceptions and motivations becomes essential for managers from financial organizations to take advantage of this new channel.

Regarding m-banking customers, there is scarce number of studies that have analysed them, along with their likes, dislikes, perceptions or preferences concerning the m-banking, using a real bank database of clients. A review of the literature regarding the mobile banking adoption highlights the significance of the demographic description of the clients of m-banking and the subjective norms (Laukkanen and Pasanen, 2008; Crabbe et al., 2009; Teo et al., 2012). Others study the social and cultural factors (Alafeef et al., 2011), the risk, perceived benefits, perceived usefulness and attitudes (Koening-Lewis et al., 2010) or the trust and satisfaction (Lee and Chung, 2009) in the m-banking adoption. Attending previous literature regarding the bank customers´ characteristics, it is indicated that young, employed, high educated and high income people adopt electronic channels in their service encounters, which logically supports the general assumption that people with those demographic characteristics could be more receptive to use m-banking (Karjaluoto et al., 2002; Laukkanen and Pasanen, 2008). In addition, studies from different contexts found that m-banking perceived benefits (location free, efficiency, amount of information and cost effective) are the main factors encouraging people to adopt this channel (Yang, 2009). In contrast, m-banking perceived shortcomings are perceived risk, unsuitable device, complexity and lack of information (Cruz et al., 2010).

There is relevant body of literature in marketing that recognises the importance of the mobile channel as a business opportunity in the Spanish banking sector (Gil et al., 2009; Aldás et al., 2011), though to the best of our knowledge, previous studies have barely analysed the Spanish m-banking customers basing on a real database of bank clients. One of the few studies about Spanish mobile costumers is the Liébana-Cabanillas et al. (2014) study, which finds that demographic characteristics (i.e. gender) of the user generates differences in perception, attitude, trust and intention to use new mobile payment systems for completing a transaction. However, there is still not any research providing information regarding the mobile banking customers considering several of their characteristics, opinions and attitudes. Therefore, trying to fill in the gap, in our research we provide information about the Spanish m-banking users, proposing advices for the banks that already use or are planning to use the m-banking channel. To reach that aim, we will study the preferences and experiences of the m-banking customers, in order to offer a guide to firms regarding how to adapt and even personalise the offer to their m-banking clients. We consider that the mobile device (smartphone or tablet) has a central role in the usage of the m-banking and it is a dominant technology for the companies functioning nowadays (San-Martín Gutiérrez and Carpio, 2012). Besides, it provides the customers with certain benefits (no time and space restrictions, utility, personalisation and ubiquity) and experiences (entertainment and sociability) that no other device can offer. Some of these characteristics are fundamental for the mobile phone usage (San-Martín et al., 2015), which is a crucial issue for m-companies´ progress and especially in a relatively new channel, as the mobile banking is.

3. M-BANKING CUSTOMERS´ GENERAL CHARACTERISTICS

As we have already mentioned, for the purpose of this study we treated with a sample of 2008 bank clients from different Spanish entities. The information was gathered online during the months of October and November of 2013 (**Table 1**). We completed a descriptive analysis. As a result, we are first presenting the demographical description of the sample and some general information of the two basic groups of customers, followed by a description of the m-users´ perceptions and practices concerning m-banking, to finally close up with the m-users preferences for the future use of m-banking channel.

Table 1. **Fact sheet**

CHARACTERISTICS	QUESTIONNAIRE
Population statistics	Bank users of both genders, 25-70 years old, residents of municipalities with over 10,000 inhabitants
Geographical field	Spain
Sample size	2008
Sampling error	±2.23% (confidence level of 95.5%)
Execution	October - November 2013

As we can see from the demographical characteristics of the sample (**Table 2**), the average Spanish m-banking user is male at age of 25 to 34 years, with a university education and employed. The reason for this may be that young and employed people have both interest and financial possibility (31.9% of the users earn more than 1800€/month) to afford and accept this new technology. 90% of the m-banking users have a profile at some social network and they connect to m-banking basically from home or work. Our mobile banking customer demographic description shows similarities with the typical Spanish Internet user (age range of 35-44, employed, high education level and high income, greater than 1600€) that exploits electronic banking services (ONTSI, 2014b).
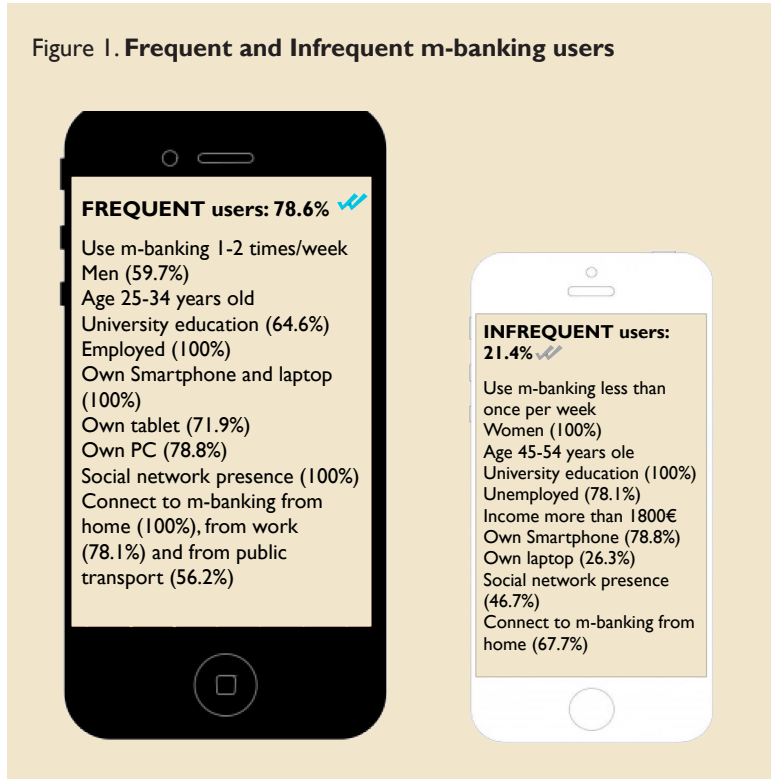
Furthermore, in order to be able to extract more information about the common m-banking customer, we made some analyses using crosstabs and Chi^2 test to determine that the segmentation criteria (in our case the frequency of m-banking use) was statistically significant. We are accordingly presenting two groups of customers, *frequent users and infrequent users*. The frequent users of m-banking are young employed men with university education and who show propensity to use new technologies. The infrequent users are mature unemployed women with university education, high income and less propensity towards new technologies. Following there is an explicit presentation of basic description of the two groups of customers (**Figure 1**).

Table 2. **Sample characteristics**

DEMOGRAPHICAL CHARACTERISTICS		%
Gender	Man	57.5
	Woman	42.5
Age	25-34	46.9
	35-44	33.0
	45-54	15.2
	55-70	4.9
Education	Primary or less	1.7
	Secondary	7.0
	Bachelor	19.1
	University degree	72.2
Occupation	Employed	83.3
	Unemployed	16.7
Income	Less than 900€	16.7
	900 to 1200€	20.1
	1200 to 1500€	18.5
	1500 to 1800€	12.8
	More than 1800€	31.9
Owning device (own more than one type of device)	Smartphone	95.5
	Other mobile phones	17.6
	Tablet / iPad	56.5
	Laptop	84.2
	PC	62.0
Social network presence	Yes	90.0
	No	10.0
Usually connect to m-banking from (can connect from different places at a time)	Home	85.5
	Work	61.4
	Public transport	34.4

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Figure 1. **Frequent and Infrequent m-banking users**

FREQUENT users: 78.6%

Use m-banking 1-2 times/week
Men (59.7%)
Age 25-34 years old
University education (64.6%)
Employed (100%)
Own Smartphone and laptop (100%)
Own tablet (71.9%)
Own PC (78.8%)
Social network presence (100%)
Connect to m-banking from home (100%), from work (78.1%) and from public transport (56.2%)

INFREQUENT users: 21.4%

Use m-banking less than once per week
Women (100%)
Age 45-54 years ole
University education (100%)
Unemployed (78.1%)
Income more than 1800€
Own Smartphone (78.8%)
Own laptop (26.3%)
Social network presence (46.7%)
Connect to m-banking from home (67.7%)

3.1. CUSTOMERS´ PERCEPTIONS AND PRACTICES IN THE M-BANKING CHANNEL

Our results show a solid usage of the m-banking channel. 42.4% of all the bank operations are done through the m-banking channel. Almost 11.8% of the m-banking users have five to ten years of experience with the same bank whose m-banking services they use once or twice a week (78.6%).

10% of the m-banking customers believe there are tasks that can only be done through the m-banking channel (**Table 3**). In the opinion of m-banking users, some of the operations that can be performed only through the m-banking are: depositing a check (32.2%), applying for a personal loan (23.7%) or mortgage (20.3%), trade in stock market (18.6%), hire insurance (16.9%) or consider credit conditions (16.9%).

Regarding the satisfaction with the m-banking channel, 50.7% of the m-banking customers show high satisfaction with m-banking services and even 60.1% of them state that in the last two years the

Table 3. **Tasks that can be done through m-banking as an exclusive channel[i]**

THE TASKS THAT M-USERS CAN ONLY BE DONE BY M-BANKING	%
Deposit a check	32.2
Apply for a personal loan	23.7
Apply for a mortgage	20.3
Trade in stock market	18.6
Hire an insurance	16.9
Perform a simulation of credit conditions	16.9
Acquiere state / region debt	13.6
Buy tickets	13.6
Hire mobile alerts system	11.9
Deposit / withdraw money	11.9
Open / close an account	11.9
Hire a term deposit	11.9
Request / activate / cancel a credit card	10.2
Phone top up	10.2
Solve problems / process claims	8.5
Check balance / transactions	8.5
Make a transfer	5.1
Pay bills / taxes	5.1
Set up a direct deposit of bills / taxes	5.1
Information about the commercial supply of products / services	1.7

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level of their satisfaction with m-banking services increased. 54.4% state that m-banking services are relevant for their relationship with the entity and they would very probably recommend m-banking to others (52.2%). However, there still are important aspects that banks should have in mind for future mobile channel improvement. In this sense, it is important to analyse which are the motives that make these pioneer m-banking customers to use the mobile phone for banking services.

In the next table (**Table 4**) we are exposing the motives that encourage m-banking users toward the m-banking channel. The non-stop service (71.9%), the convenience and practicality (61.1%), and the fast (52.2%) and free of charge offer (50.2%) seem to be the greatest motivators for m-banking usage.

Table 4. **Motives for m-banking usage[i]**

MOTIVES FOR M-BANKING USAGE	%
Non-stop 365 days / 24 hours	71.9
Convenience, practicality (ubiquity, accessibility)	61.1
Speed of use and operation; saves time	52.2
Free of charge	50.2
Ease of use	39.9
Allows self-managament / self-sufficient	38.3
I like it because it's innovative, modern and contemporary	29.2
Reliability (it functions well)	27.8
As a complimentary channel to other channels	19.4
Because of the apps that you can download for financial issues	15.3
Security	14.4

Although there are several reasons why customers choose m-banking, there are some traits that m-banking users think should be enhanced (**Table 5**). In this sense, one of the most important issues is having the possibility for performing more tasks (46.7%). Furthermore, customers suggest the development of more applications (22%) and improvements in interface (18.9%), security (18.7%), greater information (16.3%) and disclosure (11.3%) are the most relevant aspects to enhance in m-banking.

Table 5. **M-banking progress[i]**

ASPECTS THAT M-BANKING SHOULD IMPROVE	%
Possibility for performing more tasks, like via Internet banking	46.7
Develop more apps (for ex. locators)	22.0
More intuitive interface	18.9
Higher security	18.7
More information regarding the app use	16.3
Greater disclosure and distribution of the channel, its functions and possibilities	11.3

Attending the results of the performed factor analysis (**Table 6**), the overall m-banking picture is seen to be very positive. Specifically, this factor analysis shows that the m-banking users' general opinion regarding the m-banking channel is split in two factors. The first extracted factor gathers perceptions about the m-banking general view and the second one is composed by more practical m-banking attributes. Therefore, m-banking users clearly distinguish between the m-banking functional and more general m-banking characteristics. Furthermore, the results show higher variance percentage (68.7%) for the first factor, which describes the holistic perception of m-banking, than for the second one, that relates it to users´ functional perception (12.9%), which refers to the fact that the mobile banking is better explained by its global (holistic) attributes than by its functional
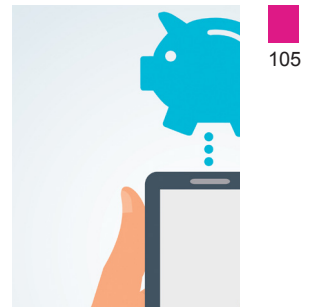
Table 6. **Customers' perceived m-banking attributes**

FACTOR	VARIABLE	LOADINGS	VARIANCE %
F1 Holistic Perception	V1. Fast	.895	68.712
	V2. Simple	.892	
	V3. Comfortable	.887	
	V4. Accessible	.885	
	V5. Secure	.788	
	V6. Modern	.755	
	V7. Practical	.655	
F2 Functional Perception	V8. Resolution / efficiency	.886	12.940
	V9. full operability	.882	
	V10. Importance / relevance	.830	
	V11. Free of charge	.820	
	V12. Simplicity	.810	
	V13. Non-stop 365 days / 24 hours	.804	
	V14. Accessibility	.733	
	V15. Speed	.729	
	V16. Privacy	.706	
	V17. Convenience	.590	
	V18. Freedom / independence	.441	
Correlation Matrix Determinant			0.000
Bartlett's sphericity test			0.000
KMO sample adequacy measure			0.934

ones. To summarize, on the one hand, clients recognise m-banking functional attributes such efficiency, operability, importance etc. On the other hand, they have in mind specific holistic adjectives to describe m-banking channel as fast, simple, modern or practical.

Additionally, we compared the two groups of users identified in Figure 1 (frequent and infrequent users) according to their perception of the m-banking attributes and all of the differences are statistically significant. The frequent users in comparison to the infrequent users, value to a greater extend both m-banking holistic and functional attributes.

On the one hand, the frequent users perceive mobile banking as secure (74.8%), comfortable (73.7%), simple (73.6%), fast (73.3%), accessible (72.7%), modern (65.6%) and practical (57.7%).

In the same way, more frequent users value the functional m-banking attributes, such as full operability (77.7%), efficiency (77.6%), relevance (77%), free of charge (76.6%), simplicity (76.5%), non-stop service (76.4%), accessibility (76%), speed (76%), privacy (75.9%), convenience (75.3%) and independence (74.5%).

On the other hand, infrequent users perceive mobile banking as practical (42.3%), modern (34.4%), accessible (27.3%), fast (26.7%), simple (26.4%), comfortable (26.3%) and secure (25.2%). Besides, they give importance to functional attributes, such as independence (25.5%), convenience (24.7%), privacy (24.1%), speed (24%), accessibility (24%), non-stop service (23.6%), simplicity (23.5%), free of charge (23.4%), relevance (23%), efficiency (22.4%) and m-banking full operability (22.3%).

In **Table 7** we can observe the advantages and the disadvantages that m-banking presents in comparison with the other three channels: office, ATM and Internet banking. For each channel we present the four most important advantages and disadvantages regarding the clients' opinion. The advantages of m-banking that mostly stand out are the convenience, the practicality and the schedules. As for the disadvantages, money unavailability is seen as the major weakness, but there is high percentage of customers that are not aware of any disadvantage of the m-banking channel (14.7% in office comparison, 18.3% in ATM comparison, 37.5% in Internet banking comparison). For example, 65.6% of the customers consider that the schedules are an advantage of m-banking in comparison with the office, while as a relevant disadvantage they see the money unavailability (40.4%). When comparing m-banking to ATM, the main m-banking advantage is considered to be the convenience (54.8%)

and the main disadvantage is, again, the unavailability of money (57.7%). The convenience is a confirmed advantage for m-banking when compared with Internet banking (45.5%), while 37.5% of the m-banking customers find no m-banking disadvantages in this sense.

Table 7. **M-banking vs. other channels**[i]

M-BANKING VS.	ADVANTAGES	%	DISADVANTAGES	%
Office:	Schedules	65.6	Money unavailability	40.4
	Convenience	55.4	No personal contact	31.2
	No queues	53.0	No counselling	29.1
	Practicality	36.2	No disadvantages	14.7
ATM:	Convenience	54.8	Money unavailability	57.7
	Practicality	33.8	Insecurity	55.4
	No queues	32.8	No disadvantages	18.3
	Privacy	22.0	I don't know	9.4
Internet banking	Convenience	445.2	No disadvantages	37.5
	Practicality	32.8	I don't know	18.6
	Ease of use	25.8	No counselling	17.8
	Schedules	25.4	No personal contact	15.5

When customers started using m-banking, they stopped using some of the other three channels and because of some specific reasons. In the following **Table 8** it can be observed that the most frequently abandoned channel is the office, while the least abandoned one is the ATM. 74.1% of the m-banking clients that restraint the office services point out the office schedules as the motive for them not using this channel after starting the usage of the m-banking services. M-banking customers mention that they mostly abandon Internet banking (54.4%) and ATM (56.3%) because of the increased speed and agility of m-banking. The results from the regression analysis (Table 9) show that mobile channel accessibility (54.2%) and its higher privacy (24.7%) significantly influence the office channel leaving. In the case of Internet banking the reason is the schedules of this channel (15.2%) and for the ATM services, its schedules (29.6%) and the obsolete ATMs (29.6%), are the significant motives for abandoning those channels. Continuously, the presented motives explain the abandonment of the respective channels after starting the use of m-banking.

Table 8. **Motives for abandoning other channels after starting the usage of m-banking[i]**

ABANDONED CHANNELS	MOTIVES	%
Office (40.5%)	Schedules	**74.1**
	Increased speed/agility in other channels	**68.9**
	There are channels with more accessibility	**54.2**
	Higher privacy in other channels	**24.7**
Internet banking (12.8%)	Increased speed/agility in other channels	**54.4**
	There are channels with more accessibility	**31.6**
	Higher privacy in other channels	**17.7**
	Schedules	**15.2**
ATM (11.5%)	Increased speed/agility in other channels	**56.3**
	There are channels with more accessibility	**49.3**
	Higher privacy in other channels	**33.8**
	Schedules	**29.6**
	Old/obsolete ATMs	**29.6**

Table 9. **Regression analysis**

ABANDONED CHANNELS	MOTIVES	REGRESSION ANALYSIS		
		BETA COEF.	SIG.	R^2
Office (40.5%)	Schedules	.000	1.000	**.696**
	Increased speed/agility in other channels	.000	1.000	
	There are channels with more accessibility	.544	.000	
	Higher privacy in other channels	.408	.000	
Internet banking (12.8%)	Increased speed/agility in other channels	.000	1.000	**.820**
	There are channels with more accessibility	.000	1.000	
	Higher privacy in other channels	.000	1.000	
	Schedules	.905	.000	
ATM (11.5%)	Increased speed/agility in other channels	.000	1.000	**.309**
	There are channels with more accessibility	.000	1.000	
	Higher privacy in other channels	.000	1.000	
	Schedules	.556	.000	
	Old/obsolete ATMs	.560	.000	

3.2. THE CURRENT AND THE POSSIBLE M-BANKING TASKS

In this section we are making a comparison between the present and the future use of the mobile banking channel. We can observe that there are differences in the m-banking usage today and tomorrow.

From the actual current usage of m-banking (**Table 10**), we can see that nowadays the operations performed through m-banking are those related to checking balance (30.3%), making transfer (19.7%), hire mobile alerts system (10.1%), buying tickets (8.4%) or paying bills/taxes (8.3%).

As for the future use of the m-banking services (**Table 11**), 76.6% of the m-banking customers will continue checking their balance, 68.7% of them will carry on transfers through the m-banking channel and 54.5% will remain hiring mobile alerts systems. However, there is a certain possibility of replacing m-banking with Internet banking in some cases, as the latter is the second preferred channel by the m-users for carrying out the usual tasks. Therefore, 31.5% of the m-banking clients will use the Internet banking for paying bills and/or taxes, and 28.6% of them will use the same channel for buying tickets. An interesting data is that 49.4% of the m-banking customers are not sure of the channel they will use in future for topping the phone up, and tasks such as problem solving or money withdrawal/deposit are not between the m-banking operations in future. For whichever task performance the less considered channels for future use are the office and the ATM.

Table 10. **Tasks actually done through m-banking[i]**

TASKS PERFORMED THROUGH M-BANKING	%
Check balance/transactions	30.3
Make a transfer	19.7
Hire mobile alerts system	10.1
Buy tickets	8.4
Pay bills/taxes	8.3
Phone top up	6.6
Informacion about the commercial supply of products/services	5.4
Set up a direct deposit of bills/taxes	5.4
Request/activate/cancel a debit/credit card	3.7
Solve problems/process claims	3.3
Deposit/withdraw money	2.9

Table 11. **Future channel use for m-banking tasks**[i]

TASK	CHANNEL	%
Request/activate/cancel a credit/debit card	Continue in m-banking	62.9
	Internet banking	25.8
	I don't know	12.9
	Office	8.1
	ATM	4.8
Check balance/ transactions	Continue in m-banking	76.6
	Internet banking	27.8
	I don't know	13.4
	Office	7.3
	ATM	3.8
Make a transfer	Continue in m-banking	68.7
	Internet banking	30.7
	I don't know	13.6
	Office	7.5
	ATM	3.0
Pay bills/taxes	Continue in m-banking	51.0
	Internet banking	31.5
	I don't know	16.8
	Office	13.3
	ATM	7.7
Set up a direct deposit of bills/taxes	Continue in m-banking	56.3
	Internet banking	20.8
	I don't know	19.8
	Office	14.6
	ATM	2.1
Phone top up	Continue in m-banking	49.4
	Internet banking	37.1
	I don't know	19.1
	Office	12.4
	ATM	2.2
Hire mobile alerts system	Continue in m-banking	54.5
	Internet banking	32.9
	I don't know	17.5
	Office	2.8
	ATM	2.1
Buy tickets	Continue in m-banking	53.4
	Internet banking	28.6
	I don't know	27.8
	Office	7.5
	ATM	2.3
Information about the commercial supply of products/services	Continue in m-banking	54.9
	Internet banking	25.6
	I don't know	24.4
	Office	14.6
	ATM	3.7

However, the general opinion of the m-banking users is that in five years from now, m-banking will have much more importance in the customer-bank relationship (67.2%) and that it is on its way to be the most used channel (14.3%).

In the following tables the results commented previously can be observed.

4. CONCLUSIONS AND IMPLICATIONS

To the best of our knowledge, there is not any other study in Spain that provides mobile banking customer research with such a big database of bank users. We consider this as the main contribution of our research and we provide some guidelines that banks could implement in their global performance and in the mobile channel especially.

As Balasubramanian et al. (2005) state, a customer that is satisfied with one channel, will probably also use another channel in a multichannel environment. When banks adopt a multichannel strategy, they have to manage the distribution of the new channel, in our case m-banking; but, it is recommended that they likewise pay attention on the synergy of channels, such as m-banking and Internet banking for example, or m-banking and ATM (being this the least abandoned channel). In accordance to Barrutia and Echebarria (2005), at European level m-banking can be a strategy for gaining in market share, but also in customer relationship, by introducing new differential attributes from the information society culture to banking business, such as an appreciation of the lifetime value of customers. According to our results, customers describe m-banking with adjectives such as fast or simple, besides being comfortable, accessible, secure, modern or practical, all of which show a positive image of m-banking.

M-banking is an important part of a multichannel banking environment since the implementation of new technologies in the banking sector is increasing (42.4% of all operations are done through m-banking). Customers recognise several advantages of m-banking (schedules, convenience, practicality, ease of use, privacy, no queues), giving a positive general image of this recent banking channel (11.8% of m-banking users have experience of 5-10 years). Besides, almost all of the m-banking users (95.5%) own a smartphone and a big part of them owns a laptop (84.2%) and a tablet (56.5%). This can be seen as a channel preference because of channel and device experience. As Bhatnagar and Ghose (2004) state, when the customers´

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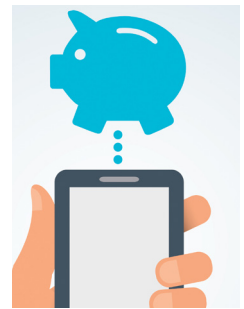
experience with the product/service increases, they furthermore don´t feel the need to establish an offline contact with it before its online purchase. What is obvious here is that the m-banking customers do use new technologies and are comfortable with it, opening a way for stronger implementation of m-banking services.

M-banking is currently used for operations such as checking balance, making transfers, hire mobile alerts system, buying tickets or paying bills/taxes, which is as well the future of mobile banking along with some other tasks, such as credit/debit cards related operations, setting deposits, additional services information, and phone topping up. The clients reiterate the three most important incentives that drive them to use this channel, which are the non-stop service, the convenience and practicality of the m-banking and its speed in the tasks processing. However, there still are important aspects that banks should have in mind for future mobile channel enhancement, because customers´ choice depends on both functional and psychosocial benefits (Frambach et al., 2007). Therefore, in order to maintain the positive image of the m-banking channel, the banks should improve some aspects such as the possibility for performing more tasks (like in Internet banking), developing more apps (locators), more intuitive interface and higher security, and provide more information regarding the app use and greater disclosure and distribution of the channel´s functions and possibilities. In accordance with Barrutia and Echebarria (2005), cyberspace and mobile are creating a new kind of banking in Spain. This study suggests that banks should not limit themselves on responding to latent consumer demands (i.e. checking balance and transactions), but they have to go beyond by anticipating future needs or even by creating needs (i.e. electronic money availability in m-banking). For instance, money unavailability is the main disadvantage perceived by costumers in m-banking versus other bank channels (i.e. office and ATM). Thus, it could be a differential characteristic to add perceived value to the m-banking versus offline banking and to mitigate the m-banking disadvantages perceived by customers. An example of this is the *yap app* which let customers to transfer money from one mobile phone to another.

It is interesting to point out that the tasks perceived that can be done through m-banking as exclusive channel are really different from the actually performed tasks by users nowadays. This fact as well highlights the importance to develop studies based on databases that reflect the real client behaviour. Accordingly, m-banking clients

find no disadvantages of Internet banking when comparing it to m-banking, which suggests that customers may see m-banking as an extension of Internet banking. According to Borreguero and Peláez (2005), the need to adapt existing channels to a new mobility context is obvious. Hence, aspects such as ease of use, non-stop service, convenience, practicality or speed, are similar to Internet banking attributes. But, on the other side, clients relate m-banking to efficiency, full operability, relevancy and accessibility, which are features that describe particularly this channel. This description has to be taken in consideration, since it identifies and distinguishes the m-banking channel. M-banking customers mainly value channels´ schedules, increased privacy and more accessibility, characteristics that do significantly influence customers in abandoning other channels while they continue using m-banking. As a matter of fact, mobile channel accessibility mostly influences the office channel leaving, while in the Internet banking case the schedules are the reason for it. For abandoning ATM services, the obsolete ATMs are shown to be the most important motive. Therefore, banks should be aware of these preferences of their clients and try to fulfil them by providing them more information about the advantages and the ease of using m-banking, enhancing this channel to take a bigger part in the banking service offer, since part of the bank clients are not aware or do not have the necessary knowledge for m-banking implementation. Attending Bigné et al. (2007) study, the Spanish consumers experience in e-commerce has a significant influence on the m-commerce adoption. In this sense, m-banking could reach new clients by using differential value added marketing strategy for e-banking users segment. In this sense, it is interesting to remind that our results show that differential m-banking attributes versus Internet banking´s, mentioned by Spanish clients, are greater speed/agility, more accessibility or higher privacy. A future possible strategy can be to offer the e-banking costumers free access to Wi-Fi when they access to a bank app or free of charge m-banking transactions between m-clients of different banks.

Kang and Johnson (2013) affirm that high perceived utility in the m-channel leads to higher willingness to m-shop. However, they also say (p.92) that *customers who are willing to m-shop may accept and not seriously consider the disadvantages of the m-distribution utility due to the well-known drawbacks of the mobile web shopping format*. Nevertheless, banks should not disregard the weaknesses

of the channel and should pay a special attention on m-banking characteristics such as the money unavailability and the lack of personal contact and counselling. In this case, they could try to inform their clients better of the advantages the m-banking owns and tend to fortify them, or maybe offer less services that involve the implementation of some of the subjects mentioned as a disadvantage. Furthermore, as it can be deduced from the m-banking usage and evolution analyzed in our study, the security is a critical issue of this channel. It is a common matter in the online banking (Fonseca, 2014; McNeish, 2015) and it appears also as a problem in the mobile banking (Lin, 2013; Shin et al., 2014). This is logically expected, since mobile banking is relatively new channel and it is unknown for new customers how is the m-banking security achieved, therefore scepticism can appear. Consequently, it has to be taken seriously. In the case of Internet banking, there are certificates that are proving the accomplishment of privacy and security terms. In the m-banking channel it can be done with a personal digital certificate, that can be provided for free for online banking users, such it is done in Korea, for example (Shin et al., 2014). The only condition is the m-banking customer to own a biometric phone (a phone that allows fingerprint or voice recognition) on which the certificate will be saved and will be used for client´s authentication when using mobile banking. Specific anti-virus and firewall protection software can as well be helpful in this situation.

One of the possibilities for encouraging m-banking usage is to offer apps usage tutorials, reviews and recommendations from experienced customers, promotions or other marketing tools, especially for women at age between 45 and 54 years (*infrequent users* in our case), since this is a group that shows less activity in the m-banking channel. It would be useful if companies launched marketing campaigns to raise the infrequent users´ awareness regarding some m-banking holistic characteristics such as security, comfortability, simplicity and speed, and other more functional ones like m-banking full operability, efficiency, relevance, free of charge etc. Banks can also offer electronic money disposal, in order to fight against the money unavailability disadvantage, and make possible m-banking chat tool, for example, to fill this gap of lack of personal contact.

Banks should maintain the good rhythm in providing m-banking operations such as checking balance and making transfers, and strive to strengthen others, like depositing or withdrawing money, solving problems or processing claims, and debit/credit card issuing

subjects. Finally, they should have in mind the increasing rate of smartphone and tablet penetration and see it as a probability of future faster spreading of m-banking and its functions. It is recommendable to stimulate users´ perception of the m-banking practicality and modernity. This way they will moreover reassure the continuity of the *frequent users* in the channel.

In order to prevent the clients´ channel migration, the banks should pay a special attention on those tasks that could lead to channel abandonment, such as hiring mobile alerts systems, phone topping up or commercial information for example, and try to improve the service offer and maintain the m-banking users. On the other hand, banks should not forget the tasks with a good flow, of course, such as checking balance, making transfers and credit/debit card issuing matters. The banks must do their best in strengthening the bond with their clients and even try a personalized publicity in order to offer their services in a substantially enriched and customized manner. Consequently, banks should implement new technologies´ banking (Internet and mobile banking) as soon as possible, since the future use of office and ATM is shrinking.

One *limitation* of this study can be seen in the fact that we are using a Spanish database, which makes impossible to generalise globally our conclusions. On the other side, although Spain is a country with experience in e-commerce, m-commerce is still in its early stages. Therefore, not all companies have the same level of implementation of new technologies, and since customers use different interfaces from different entities, the objectivity of the results could be distorted. Furthermore, the groups of users are described by customers´ demographic characteristics and their m-banking perception. For *future research,* it would also be interesting to analyse users´ behaviour or motivation differences, to see if there are differences between the banks that offer m-banking services, and we could likewise improve the study by comparing the four channels and all of their functions. Finally, in the future it would be enriching to analyze the influence of demographics on m-banking adoption.

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NOTAS

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i. The percentages do not sum 100%, since the questions could have been answered by the interviewee with multiple responses.