Analysis of the Impact of Mobile Marketing on Passenger Experience and Satisfaction at the Airport

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Abstract—The availability of new airport applications help passengers manage their time at the airport in an efficient way, inasmuch as these applications provide real-time information. The results of this study confirm the fact that the multifunctionality of the mobile marketing tool favours the effectiveness of the processes carried out by passengers at the airport. The main objectives of this research are focused on analyzing the basic concepts about mobile marketing and mobile applications, and assessing the impact of this tool in the levels of user satisfaction and improvement of the image/perception of the airport thanks to the app. This study will help to achieve a better understanding of the interaction between the airport and passengers through the use of smartphones.

Index Terms—Mobile marketing, app, satisfaction, security, image/perception, cross selling.

I. INTRODUCTION

The new dynamics in liberalized markets, such as the opposition of the airlines and the regulatory authorities to raise aviation taxes, the pressure the governments exert on the airports to be self-sufficient, and the emergence of several clients that demand new airport services, are forcing airport managers to develop new strategies aimed at creating a real competitive advantage through the examination of differentiation factors with the mobile marketing tool. [1] state that this process involves the participation of the airport and other agents in the airport activity. Aligning the goals of the competitive strategies with the planning of the infrastructure in order to ensure the sustainability and success of the entire ecosystem of companies that coexist at the airport is thus vital. Mobile application usability studies are mainly focused on the effects of the mobile device employed, the application's design and the user, but less on the conditions of use [2]. The airports resort to mobile marketing in order to improve the experience and satisfaction of passengers at their facilities. However, we must take into account that moving this theory to practice is no easy task, especially in the said infrastructure, where companies coexist in microenvironments and carry out different and demarcated activities.

For the most part, we agree with the aforementioned authors in that airports should plan their marketing strategies by focusing on airlines although this is highly debatable. At the moment, the interoperability between airports-airlines-passengers is non-existent. An airport's value chain needs to be organized hierarchically. The first link in the chain is the passengers and without them, we could not link the second piece: airlines; the airport is the last piece locking the chain. Airports have not been able to communicate directly with passengers in order to offer them the services or products available in the establishments inside the terminal for less than a decade. As stated by [3] one of the main aims is to integrate airports' e-commerce strategies with the app allowing passengers to buy duty free products through their phones for home delivery, for example. This however will have to wait until airports and concessionaires have implemented appropriate e-commerce systems. If you are a concessionaire and you want to build an e-commerce platform, you have to create one that both airport and partners can connect to not one just for yourself. It should be interoperable with, for example, airline and airport apps, so other people can use your inventory. Thus, having an airport app today improves both passengers' experiences and commercial revenues through smartphones since passengers are offered personalized products and services according to their needs. Among the airports that are efficiently using apps, one finds that these apps are generating significant revenue figures, and these apps are only bound to increase. The challenge for airports and concessionaires is to continue providing better information and viability for e-commerce [4].

II. THEORETICAL FRAMEWORK

A. The Mobile Marketing Tool

The literature review demonstrates that there is a recent interest in analyzing this tool, due to the fact that many researchers and associations such as Mobile Marketing Association (MMA) disagree on the definition and focus of this concept. However, most authors such as [5] and [6] conceptualize mobile marketing as a tool in this activity, where they can develop their own designs, advertising and marketing campaigns. We must therefore point out in this research that apps are software programs designed for mobile devices and are seen as a tool in mobile marketing. The intention is to obtain a great media coverage and promote a relevant interactive process through the use of advertisements, offers, discounts, prizes, etc., thanks to the user's experience with the mobile device. Apps are being transformed into sales channels, where distribution is the key to enter the channel and enables the sale of products and services.

B. Mobile Marketing as a Communication Tool

The following hypotheses refer to the information supplied to passengers or customers through this tool. This is the most researched aspect within the mobile device information field. Mobile marketing provides information in the right moment and place, interaction and instant feedback [7]. Users who find relevant information for them or for other users and deliver concrete actions regarding the electronic data transmission do not only carry out these actions: they go further and search information about the brand, take part in the advertising and/or visit its store [8]. Several of the most important airports in the world use mobile marketing as their communication tool in order to keep passengers updated about the flights, check-in and control points, baggage, boarding gates, etc. Moreover, this tool has a virtual store where they can buy products or services depending on their needs. Therefore, we will explain the following hypotheses:

H1. The information offered by the app through the mobile marketing tool impacts the passenger security/control at the airport in a positive way.

H2. The information provided by the app improves passengers perception of the image of the airport infrastructures.

C. Security in Mobile Devices

Another aspect of the suggested measurement model is security/control. This has garnered special attention among researchers about security in electronic commerce over the last years due to the lack of physical contact between companies and customers [9]. Mobile devices favour or increase social and personal experiences at the same time that they protect the security and privacy of users [10]. Actions performed through this tool are customized in terms of messages and their recipients, thus providing security to customers [11]-[12]. Therefore, we suggest the following hypotheses:

H3. The security and control provided by the mobile marketing tool to passengers at the airport favour the increase of cross-selling.

H4. The mobile marketing tool provides with security and control to passengers, thus contributing to WOM.

D. Cross-Selling through the Mobile Tool

In our suggested model we explain how cross-selling relates to how the airport uses the marketing mobile tool as a sales channel in order to meet the passengers' requirements. It seems obvious that airport operators, like retailers, have to take into account their customer mix and the facilities they own in order to meet the needs and preferences that concern the maximization of opportunities of the generated revenues and the return of investments as far as possible [13]. As a result, marketing has become a core activity at many airports, and one that is considered to be vital for success [14]. An airport has many customers but two of the most important are airlines and passengers, and the marketing techniques used for the two types of customer vary [15]. Once the literature provided by these authors on cross-selling has been reviewed, we will suggest the following hypotheses:

H5. The use of apps as sales channels provide more information about the products and services.

H6. Cross-selling through apps increases the levels of passenger satisfaction.

H7. Mobile marketing as a cross-selling channel impacts the WOM in a positive or negative way.

E. Review of the Conceptualization of Satisfaction

Concerning the focus of this reference field, the conceptualization of satisfaction can be addressed from two different approaches: an approach based on a specific transaction or an approach regarding a global or accumulated satisfaction [16]. Satisfaction is considered a post-decision evaluative judgement and/or an emotional response made by customers regarding a determined purchase or occasion of consumption [17]. If airports want to get effective results in terms of global passenger satisfaction and be competitive, they must develop strategies and actions aimed at achieving a better positioning and delivering superior customer value. We suggest therefore the following hypothesis regarding this stage:

H8. A high level of passenger satisfaction has a positive impact in the promotion of WOM.

F. The Impact of the Image/Perception in Interactive Media

The mobile marketing tool provides companies with a new bilateral environment between the brand and customers. This virtual space offers companies the possibility to design coherent strategies and guarantee customers a complementary, successful and consistent experience with the brand. In other words, mobile marketing should not be seen as an isolated aspect in terms of the general image of the brand: it must be brought into line with the management of other communication tools developed by the company. A simple image of an airport seen on a smartphone can be considered a relevant factor in the global evaluation of the services provided by the airport itself. A planned and well managed corporate image can result in an useful marketing strategy that helps retain their customers and attract new ones [18]. The image of a product or service impacts directly or indirectly customer's satisfaction. According to [19], this image is formed of two main components: functional components and emotional components. The passenger's perception is another aspect of the scale of this research study, which we have merged with the image/perception construct due to the limited time available to passengers when asked to fill in the surveys. Given this obstacle, we designed a survey that could be filled in the shortest possible time. We will assess how it impacts the rest of the variables and the effects it has on the levels of satisfaction. [20] showed that the perceived usefulness, the ease of perceived usefulness, the perceived cost and enjoyment impact customer's satisfaction in terms of m-services. The perception that technology is accessible and ease of use determines its usefulness, which in turn impacts the intention to use m-services. We have drawn the following hypotheses concerning the image/perception construct:

H9. The level of perception of the image of airports will impact the level of passenger satisfaction in a positive or negative way.

H10. The image/perception of the app through the mobile marketing tool improves passenger security and control at

the airport.

H11. The perception of a good commercial image of airports will impact cross-selling in a positive way.

III. METHODOLOGY

The methodology followed in this paper was focused on using databases and bibliographic sources to find information gather by other authors, institutions, and agencies on the topic addressed herein. Additionally, structural equation models were applied to the models performed, and they were analyzed with the PLS program version_2.0 Smart-M3. Besides, to perform the multicollinearity analysis, SPPS version_2.0 was used since it allowed us to reach different conclusions from the primary objectives of the study. The survey was in Dutch and it consisted of two parts: The first where 31 items measured on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). The likert scale was chosen as it was best suited for the respondents. The method is relatively fast and allows a subject to establish an estimated quantitative questionnaire of this magnitude [21]. The second part of the questionnaire gather the socio-demographic aspects which made it possible to outline the characteristics of the app users. The following information was asked: gender, age, level of studies, monthly income. The questionnaire was reviewed afterwards by marketing experts to address any problems that might adhere to the metric, the specificities of the investigation, and the framing of the questions. The information received by users via an app gives them a sense of security and control that allows them to move more freely about the airport, which in turn improves cross selling in the commercial areas inside the airport. Once the target population was established (*Schiphol Amsterdam Airport* app users), the surveyed designed to validate the theoretical model was carried out for three months (August 1- October 31, 2014), during which 106 surveys were completed. Thereafter, a quality control test was performed to ensure that the responses were reliable, that they met the quality needed for the research, and that the surveys were completed accordingly; only three questionnaires had to be discarded because they were incomplete. Therefore, the final sample was comprised of 103 valid questionnaires, under the assumption of a simple random sampling for an infinite population with $P = Q = 0.5$, with a confidence level of 95% ($Z = 1.96$) and a sampling error of +/- 9.7%.

A. Assessment and Validation of the Formative Index and Reflective Indicators

This section is mainly focused on describing of the findings derived from the established objectives of this research: the analysis concepts about mobile marketing and mobile applications, and assessing the impact of this tool in the levels of user satisfaction and improvement of the image/perception of the airport thanks to the app.We will proceed to explain the five formative constructs: information; cross-selling; image/perception and WOM, as well as the reflective constructs such as satisfaction and security/control.Table 1 and 2 provides a summary the assessment and validation of the formative index and reflective indicators in this study.

TABLE I: SUMMARY OF THE VALIDATION OF FORMATIVE INDICES

Validation of Formative Indices		Weights	t-student
Image_Perception (max_corr.= 0,335; max VIF= 1,2 (T=0,84); max CN=18) R^2=0,19			
P5Image-per	The use of this mobile app improves the perception and image I have of this airport.	0.315	1.900
P6Image-per	The development of this app has improved the image and branding of this airport.	0.234	1.510
P8Image-per	People who use this app have more prestige.	0.653	4.883
P10Image-per	I like to receive relevant information regarding flight schedules and delays before my flight on this mobile app.	0.483	3.676
Information (max_corr.= 0,295; max VIF= 1,1 (T=0,91); max CN=14) R^2=0,15			
P12Informa	I was able to easily access the desired content.	0.604	2.855
P13Informa	I was able to easily understand the options presented.	0.637	3.193
Cross Selling (max_corr.= 0,383; max VIF= 1,3 (T=0,763); max CN=14) R^2=0,34			
P20Crosselling	The use of the mobile app offers more information when buying products and services in the airport.	0.442	3.462
P22Crosselling	The mobile app offers me products and services that interest me and I would go ahead and bought, thus, saving me effort and time.	0.425	3.033
P25Crosselling	I intend to buy new products and services through this mobile app.	0.434	3.535
WOM (max_corr.= 0,394; max VIF= 1,2 (T=0,80); max CN=16) R^2=0,46			
P26WOM	I say positive things about this app to other people.	0.670	5.014
P27WOM	I encourage family and friends to use this mobile app.	0.404	2.649
P31WOM	I frequently talk about the products and services offered by this mobile app to people I know.	0.267	1.911

In the analysis of the scales that concern satisfaction, the four variables meet the reliability requirements due to the fact that the results of the four loadings are equal to or greater than 0.6. Concerning the convergent validity or intern consistency (Pc), this is greater than 0.7, whereas the average variance extracted (AVE), as shown in the Table 2, is greater than 0.50. The analysis of the security/control construct results in the six variables meeting the thresholds concerning the validation of reflective indicators, which were established by the authors of the literature reviewed. The results of the six loadings show that they are greater than or equal to 0.6, the convergent validity (Pc) is greater than 0.7, and the average variance extracted (AVE) is greater than 0.50. The results of the six loadings show that they are greater than or equal to 0.6, the convergent validity (Pc) is

greater than 0.7, and the average variance extracted (AVE) is greater than 0.50.

TABLE II: ANALYSIS VALIDATION REFLECTIVE INDICATORS

Validation Reflective Indicators		Loads
Satisfaction Pc (0,86) and AVE (0,50)		
P1Satisfa	Overall, I am satisfied with the service I received from this application.	0.704
P2Satisfa	I have an enjoyable feeling while using this application.	0.808
P3Satisfa	The use of this mobile application has been a good experience.	0.610
P4Satisfa	Overall, I am satisfied with the way in which the information, products, and services of the airport have been managed through this mobile app.	0.662
Security-Control Pc (0,80) and AVE (0,51) R^2=0,19		
P14Se_cont	I think I can trust this mobile app.	0.675
P15Se_cont	This mobile app is concern with the interest of its users.	0.836
P16Se_cont	When this application designs its commercial offer, it takes into account the wants and needs of its users.	0.705
P17Se_cont	This mobile app gives real information.	0.716
P18Se_cont	I am pleased to use this mobile app given that it provides me security, and control of my time within the airport.	0.686
P19Se_cont	Once the security control area is past and in the boarding area, being informed by the mobile app gives me peace	0.644

IV.   RESULTS

To sum up, and taking into account previous analyses, we can conclude that the suggested model properly explains and predicts that the implementation of the mobile marketing tool in the airport infrastructures impacts passenger satisfaction in a positive, functional, economic and efficient way. The contract of the stated hypotheses in this research study concerning the Path Diagrama relationships are shown in Table III, whereas the illustrated model of the stated hypotheses is shown in Fig. 1.

The analysis of the results lead us to accept hypothesis 1: the information provided by the mobile marketing tool impacts passenger security in a direct and positive way (β = 0.181; $p < 0.05$). Thanks to the results derived from H2, we can accept it: the information provided by the app favours the perception of the image that passengers have regarding the airport. Thus the data obtained reveals that the results are positive (β = 0.432; $p < 0.001$). The results show that the security/control provided by the mobile marketing tool to passengers have a significant and positive impact in cross-selling   (β = 0.365; $p < 0.01$).We thus accept the validity of H3. For this matter, the results obtained are in line with the literature reviewed in this study. Furthermore, the security/control supplied by mobile marketing to passengers is also significant, reaching a positive and significant impact

in the WOM (β = 0.210; $p < 0.01$). H4 is thus validated. Hypothesis 5 is then rejected due to the fact that there is not a significant relationship between the use of apps as sales channels and obtaining more information about products and services. The estimated coefficient is positive but not significant (β = 0.103; t = 0.954). Moreover, cross-selling through the mobile app is not vinculated to the increase of the levels of passenger satisfaction. A proof of that is the path coefficient obtained in hypothesis 6   (β = 0.121; t = 0.508), being it positive but not significant at all. H6 is then rejected.

In contrast, in H7 the mobile marketing tool is considered a sales channel, thus showing a very high exponential experience and impact level in the results of the path coefficient concerning the impact in WOM   (β = 0.490; $p < 0.001$). H7 is then accepted. Therefore, a significant association between satisfaction and e-WOM is not observed in H8 *(β = 0.150; t = 1.292)*. This hypothesis is then rejected. It is important to point out the rejection of the three hypotheses previously mentioned, as the evidence concerning the obtained coefficients in these hypotheses is limited. The level of perception of the image of the airport impacts the level of passenger satisfaction, as shown in the obtained results (β = 0.316; $p < 0.001$) with a positive sign and an assessed significance. H9 is then accepted. The results obtained in H10 are also justified: the image of the app contributes to the improvement of the perception of passenger security and control at the airport (β = 0.325; $p < 0.01$). The results confirm the significant positive effect of this marketing strategy. Finally, these are the results from H11: the impact of the commercial image impacts cross-selling in a positive way. The hypothesis is accepted due to the fact that a significant relationship between both constructs is shown, resulting in   (β = 0.261; $p < 0.01$) and thus confirming the existence of a relationship that we mentally deduced and quantitatively discussed.
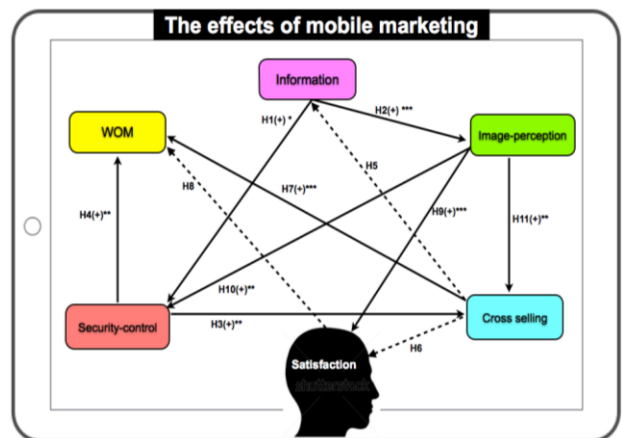

Fig. 1. Research model.

Several managerial implications emanating from the results may ve derived. Mobile marketing is a tool comprised in the variety of products owned by companies or airports in their marketing strategies. Airports are required to be where their customers are, in the form of the media and mobile devices. They must therefore see the app as only one tool in their mix of marketing strategies. Authors such as [22]; and [23] explain that mobile marketing provides

companies with an infinity of attributes aimed at increasing the levels of passenger satisfaction, as it improves the user experience in their environment. In this research study we found ourselves in line with the said authors. In this research study we will be in line with authors such as [24] and [12], thus believing that the future success of mobile marketing is based on the design of relevant and customized offers, which could vary depending on the stage in the travel process.

Note: The accepted and significant hypotheses are highlighted with a bold arrow. Significant hypotheses: * $p <$ 0.05, **$p < 0.01$ and ***$p < 0.001$ (5%; 1% and 0.1%, or level of trust of 95%; 99% and 99.9% respectively for a one-tailed t-student test). The relationships highlighted with a discontinuous arrow are not validated in this study.

Nevertheless, despite the fact that the literature reviewed in this research concerning the cross-selling construct is in favour of the use of apps as sales channels aimed at providing more information about the products and services, our results lead us to believe that apps cannot be seen as sales channels that provide more information in contrast to the offers displayed. These undoubtedly surprising results lead us to believe that smartphones are not the most adequate mediums to advertise products and services, probably due to their small screens, to the lack of consolidation of purchasing activities in mobile devices, to the cost implied by the feedback of information and images in the app, to the lack of adaptation of the website to all kinds of screen resolution in mobile devices —also known as Responsive Web Design—, and to other inconveniences that make the app an inadequate medium to advertise the products and services of airports and companies. Although authors such as [25] believe that online transactions in mobile devices and the information regarding their products and services are the future of the new business model in the tourism field. In this research study we supported the arguments provided by these authors: the structure and development of mobile websites and apps need to be improved in order to improve the contents and images displayed in these mediums, aimed at providing users with more information and a better experience. Airports consider this tool the ideal medium to transfer the boarding processes and the sale of products and services, thus increasing their commercial revenues. The new airport apps have become one of the many products offered in the business portfolio of airports. 54% of the respondents confirm this. 19% of the respondents consider apps as communication products and tools. In other words, the 73% of users that have used the app see it as a product.

Moreover, we have studied how the mobile marketing tool provides passengers with security and control, thus having an impact in WOM. Our results are apodictic: the security/control provided by mobile marketing to passengers impacts the WOM. [26] explain that e-WOM has more impact due to its speed, convenience, greater reach and absence of face-to-face human pressure. The instant and rapid diffusion of the e-WOM are thus characteristics used by companies, enterprises and services to correct their errors and respond to the negative comments as quick as possible. Listening to customers and immediately addressing their complaints are then vital in order to protect customer loyalty. The complaints and claims give companies the opportunity to improve their services and maintain their customers, as those

who complain are also showing their interest. Besides, the perception of the image of the airport will have a positive or negative impact in the level of satisfaction. In this research we state that satisfaction is influenced by the environment, the image, the experience, the expectations, etc. We explain that image can be considered a premise in customer satisfaction. Ultimately what will impact positively in passengers will be the good brand image of the airport app, the contents and images provided by the said app, and the image of the service supplied at the airport and at the corresponding companies that coexist in the airport microenvironment.

V. CONCLUSIONS

According to the literature reviewed in this research project, we conclude that maximization is considered a decisive factor in the level of perceived passenger satisfaction in order to attract and maintain a certain repetition in the number of users or tourists. The results obtained regarding the satisfaction/WOM construct do not show the existence of an influence between the level of satisfaction and a positive impact in the WOM. These undoubtedly surprising results lead us to believe that airports do not attach much importance to developing creative ideas aimed at involving the audience in the spread of positive feedback that could become viral. The experiences or contents provided in the airport app might not be adequate or motivating to users. This way, their opinions would not be positive.

Contrary to expectations, apps used as cross-selling channels do not increase the levels of passenger satisfaction. The results obtained do not show evidence that proves that cross-selling impacts the levels of satisfaction thanks to the apps, thus supporting other research lines such as the ones followed by authors like [27], who described one of the disadvantages in mobile marketing and that undoubtedly affects global satisfaction: the initial distrust felt by some customers, which acts as a brake to online sales. This distrust can be caused by: the characteristics of the product, the veracity of the information provided concerning the article, the treatment of personal information, the fraudulent use of credit cards, the refund procedures, and the correct delivery of the product in terms of time and condition. The results obtained guarantee that the fact that users are informed via the app impacts passenger security/control in a positive way. There is no doubt that the fact that customers can have all the necessary information in their mobile devices provides them with security and self-control over their thoughts and movements, thus favoring their will to move around the airport terminal in a smooth way, improving their waiting times, and reducing the stress levels. Furthermore, the information provided by the app favours the passenger's perception of the image of the airport infrastructure. The results obtained are conclusive: it has been proven that the information provided by the app significantly favours the perception of the image of airports. In addition, communication is part of the transparency used by airports, aimed at enabling passengers to access to relevant information, thus improving their experience at the terminal.

Concerning the security/control supplied by the mobile marketing tool to passengers at the airport, it has been proved that it favours the increase of cross-selling. The results obtained are conclusive, as they show that the security/control provided by mobile marketing to users increases sales. One of the main keys to the success of this security and cross-selling correlation is the fact that mobile marketing is customized and non-intrusive. In this study, we have presented the tool mobile marketing as a cross-selling channel, it impacts the WOM in a positive or negative way. For this matter, the results show that the correlation of the app as a cross-selling channel exists and that it significantly impacts the positive or negative comments in the e-WOM. Moreover, a certain complementarity between these two constructs is observed according to the positive or negative experience of passengers and their evaluation of the products or services purchased, which will determine the comments about the app written in their reviews or in the "Read comments" tab on the website. Moreover, we assessed the effects of mobile marketing concerning the perceived image of the airport. Firstly, we considered that the image/perception of the app through mobile marketing improved passengers security/control at the airport. We believe that the image represents a certain simplification of a vast number of cognitive and emotional associations concerning an area. It is a product of the human mind aimed at summarizing and simplifying the vast and complex information about the area that individuals have. The results obtained in this research guarantee that the image/perception of the app improves the passenger security/control within the airport. Passengers who used the app and were given a good perception of the global image of the airport will probably feel more secure and calm when they move around and enjoy its facilities. This way, airport managers have the opportunity to increase the conversion rate of potential clients through their app. To sum up, we have the opportunity to increase revenues according to the image we spread. Furthermore, we suggest that the perception of a good brand image of the airport will have a positive effect in cross-selling. We should not forget that the perception obtained through mobile devices and through the brand image of the company are vital in the perception of the client, as he/she will impact their perception concerning the value of the rest of products and services. If their perception is positive, customers will probably recommend the app to their closest friends, thus becoming our allies. On the contrary, they will probably increase the negative WOM and become our enemies. The results obtained validate the relationship between the two constructs, which are usually complementary. A good image has a positive impact in sales, and these results reaffirm our literature review concerning the two variables. We must point out that the consequences resulting from the connection of the two constructs show the existence of an affective and emotional empirical interrelation in the mental processes carried out by individuals when they purchase a product or service.

Finally, these advantages clearly contribute to the increase of the levels of passenger satisfaction due to the fact that the app provides an added value to users' experiences. The interactive connection provided by apps to information sources demanded by passengers or people visiting the airport to bring or wait for their relatives enable them to manage and plan the amount of time they spend within the airport terminal in a more effective way. The retrieval of useful information provides users with an increased freedom of movement and enjoyment of the establishments at the airport terminal. The tendency of airport apps is to transform users into prosumers, and that these prosumers could develop their own products, services or even plan their journey that they will end up making. Users are offered a greater level of convenience, freedom and selection when making decisions. From the airport or the establishment's perspective, apps reduce costs and the passenger traffic processes at the terminal are addressed in a shorter period of time.

VI. IMPLICATIONS FOR MANAGEMENT

Today, airports are competing among each other to attract more airlines and passengers to improve commercial revenues. Airport apps as mobile marketing tools are offering a wide range of opportunities to both passengers and airports. Apps are the best solution if airports want to improve the passenger experience as well as differentiate themselves from their competitors. More attention to the measurement of experiences should be given in future research on airport apps. Among the airports that use them effectively, mobile apps are already an important revenue generator; and that role is set to grow in the future. For airports and concessionaires the challenge will be to continuously improve their data and e-commerce capabilities and brand image.

In this research study we have considered that the mobile marketing tool is important for companies but cannot be a panacea for all the concerns associated with the relationship between companies and customers. We would not be objective if we stated that this tool can be seen as an utility knife that solves all the problems encountered. Mobile marketing is a tool comprised in the variety of products owned by companies or airports in their marketing strategies. Airports must take into account other communication tools developed by them when managing apps in their marketing strategies in order to improve the passenger experience and satisfaction.

VII. LIMITATIONS AND FUTURE RESEARCH

The first limitation emerged in the measurement of the variables. Despite our effort in trying to define as precisely as possible our constructs, and measuring them by following a careful process while developing the items, some of them could be improved, e.g., the formative and reflexive indices of cross selling and information. We could have delve more into the disassociation analysis of the image-perception variable scales since a separate analysis of these variables could have provided more ample information on the correlation with other constructs. In this study we have analyzed an app as a selling channel, and [12] have argue that online transactions via mobile devices, as well as the product and service information that is offered through them, is the new business model of the future in the tourism sector.

Yet, according to [28], there are still barriers that impede the use of mobile device for buying.

Therefore, it is important to take into account the factors pushing users to either adopt new systems of electronic payments or adopt new buying habits that provide them security [29]. Consequently, our study could be extended further in order to analyze more secure mobile payment systems already present in the market, for example, Apple Pay, Google Wallet, Bitcoin, and QR also known as two-dimensionals, etc., to promote shopping online on mobile devices. Many studies and reports are indicating that 2015 will be the year in which mobile payment systems finally takes off. The market wants to be taken over by big corporations, financial entities, telecommunication providers, etc.; they already dominate other sectors and are only trying to apply new technologies to either change the way we handle money or are trying to digitalize money [30].

TABLE III: CONTRASTING THE STATED HYPOTHESES THROUGH THE PATH DIAGRAMA RELATIONSHIPS

Hypothesis Number	Relationship	Path Coeff.	Sample Mean	Standar Devitacion	Standar Error	t-student	Results
H1	Informa —> Sec_Con	0.181	0.202	0.124	0.123	1.659	Validated
H2	Informa —> Image_per	0.432	0.443	0.080	0.080	5.254	Validated
H3	Sec_Con —> Crosselling	0.365	0.317	0.120	0.120	2.572	Validated
H4	Sec_Con —> WOM	0.210	0.224	0.099	0.099	2.308	Validated
H5	Crosselling —> Informa	**0.103**	0.110	0.110	0.110	**0.954**	**Rejected**
H6	Crosselling —> Satisfa	**0.121**	0.066	0.123	0.123	**0.508**	**Rejected**
H7	Crosselling —> WOM	0.490	0.480	0.084	0.084	5.628	Validated
H8	Satisfa —> WOM	**0.150**	0.128	0.094	0.094	**1.292**	**Rejected**
H9	Image_per —> Satisfa	0.316	0.381	0.098	0.098	3.684	Validated
H10	Image_per —> Seg_Con	0.325	0.295	0.097	0.097	2.821	Validated
H11	Image_per —> Crosselling	0.261	0.314	0.131	0.130	2.425	Validated

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