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Adoption vs acceptance of e-commerce: two different decisions

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Abstract

Purpose – The main objective of this paper is to compare the differences that exist between the adoption of e-commerce by potential purchasers and the acceptance of the channel (re-purchase decisions) by experienced e-customers. Therefore, the paper seeks to test the influence of online shopping experience on electronic purchase decisions.

Design/methodology/approach – The conceptual model, an extended technology acceptance model (TAM), is tested using structural equation modelling techniques. In addition, the variations that exist in e-customer behaviour are checked using a multi-sampling analysis.

Findings – The findings show that the influence of self-efficacy and usefulness increases as the consumer gains online shopping experience. The motivations that lead a potential e-customer to make a purchase are not the same as those that influence an experienced customer. The paper demonstrates the evolution of customer behaviour and the need to differentiate the perceptions of consumers depending on their level of experience.

Practical implications – The analysis of e-customer behaviour is a key issue for the development of e-retailing. Better knowledge about the evolution of consumer behaviour allows a better management of the e-customer-firm relationship (e-business). Firms should bear in mind the relevant perceptions of e-customers for each decision.

Originality/value – Despite the importance that researchers have attached to studying e-shopping behaviour, not many papers have considered the existence of different types of decision. In fact, the majority only consider an initial stage of e-commerce and do not analyse the evolution of e-customer behaviour and the differences observed with respect to acceptance. The paper fills this gap.

Keywords Internet shopping, E-commerce, Consumer behaviour

Paper type Research paper

Introduction

The growth of the internet as a shopping medium has revealed the evolution of the behaviour of e-customers as they acquire e-purchasing experience (Gefen *et al.*, 2003; Yu *et al.*, 2005; Hsu *et al.*, 2007). We base our argument on the fact that, in offline commerce, the motivations that lead a potential customer to make a purchase are not the same as those that influence an experienced customer. Likewise, some studies on information technologies (IT) have found that the perceptions that influence adoption may have different effects on individuals' subsequent decisions (Tornatzky *et al.*, 1983)

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because experience may modify their behaviour (Venkatesh and Morris, 2000; Gefen *et al.*, 2003).

Despite these differences, very few works have conducted a separate analysis of the perceptions related to adoption and the perceptions related to "post-adoption" or acceptance (Karahanna *et al.*, 1999; Vijayasarathy, 2004). Most of them consider that, because of the limited development of the new channel, very few e-customers had made several purchases and that, thus, there were hardly any behavioural differences between adoption and acceptance (see Chen *et al.*, 2002; Ahn *et al.*, 2004). Their main objective was to discover the motivations that led to adopting the internet as a purchasing channel compared with the offline market (Chen *et al.*, 2002; Klopping and McKinney, 2004).

Nevertheless, in recent years, e-commerce has grown enormously, so we believe it is necessary to address these studies from a different perspective. Therefore, the main objective of our study is to demonstrate that the beliefs and attitudes presented in the adoption stage of e-commerce can vary with respect to the motivations underlying the "post-adoption" stage (Karahanna *et al.*, 1999; Gefen *et al.*, 2003; Yu *et al.*, 2005). We therefore distinguish between two decisions: the adoption of e-commerce (the decision by potential e-customers to make the first purchase) and channel acceptance (re-purchase decisions by those who have carried out at least one purchase, who we call experienced e-customers). We consider e-customer experience as a moderating variable of other perceptions, modifying their influences upon final behaviour.

With our results, we will show that firms that wish to triumph in this new channel should differentiate their customer enticement and loyalty strategies according to the internet shopping experience of the customers.

We use an extended technology acceptance model (TAM) (Davis, 1989; Davis *et al.*, 1989) because of its high explanatory power in technological behaviour and e-commerce (Ahn *et al.*, 2004; Shih, 2004; Shang *et al.*, 2005). Furthermore, we incorporate other perceptions which will allow us to explain the individual's behaviour (adoption and acceptance) more accurately. Based on previous research, these perceptions are internal motivations related to the TAM – i.e. self-efficacy and attitude.

The consumers making up the study sample are frequent internet users (as in Miyazaki and Fernández, 2001; Park and Jun, 2003), and have been divided into two groups:

(1) inexperienced or potential e-customers; and

(2) experienced e-customers.

In the following section, we provide the theoretical analysis and formulate the hypotheses. After that, we present the methodology and the empirical studies. The paper ends with a discussion of the results and the managerial implications.

Conceptual background

Technology acceptance model

The technology acceptance model (TAM) is an adaptation of the theory of reasoned action (TRA) (Fishbein and Ajzen, 1975). It focuses exclusively on the analysis of IT user behaviour and establishes a priori two key perceptions:

(1) ease of use; and

(2) usefulness (Davis, 1989; Davis *et al.*, 1989).

Perceived usefulness (PU) is the degree to which a potential user believes the use of a specific tool will improve his/her performance, and perceived ease of use (PEOU) is the perception that using a specific technology will not require additional effort (Davis, 1989).

Recently, researchers have included other new concepts, either as antecedents of PEOU and PU or as intermediaries between these two variables and the final concept (intention or intensity of use). The factors considered are very varied and we can highlight those that are internal motivations, such as self-efficacy or attitude (Chen *et al.*, 2002; Bruner and Kumar, 2005).

Perceived self-efficacy (PSE) is defined as the belief that one has the capability to behave in a certain way (Bandura, 1977; Lee *et al.*, 2003). In the case of e-commerce, to be able to carry out an efficient action, the individual must feel capable of handling and controlling the IT during the purchase (Chau and Hu, 2001). Self-efficacy exerts a significant effect on other perceptions such as ease of use and usefulness, thus indirectly determining the final behaviour (Yi *et al.*, 2006; Wu *et al.*, 2007).

The following hypotheses have been formulated to verify the effect of self-efficacy:

H1. Perceived self-efficacy positively affects the perceived ease of use of e-commerce.

H2. Perceived self-efficacy positively affects the perceived usefulness of e-commerce.

Attitude (ATT) is another concept which is widespread in models that study the acceptance of new technologies. It has also been included both in one of the original formulations of TAM (Davis *et al.*, 1989) and in later studies (Chen and Tan, 2004; Schneberger *et al.*, 2007/2008). In all of them, attitude has played an intermediary role between perceptions and final behaviour (Ahn *et al.*, 2004; Yu *et al.*, 2005).

According to Winter *et al.* (1998), individuals who have a positive attitude towards computers make greater use of them because of their lower anxiety before, during and after using them. In the case of e-commerce, PEOU and PU explain the user's attitude. Furthermore, attitude determines the final behaviour (Ahn *et al.*, 2004; Vijayasarathy, 2004). We have therefore formulated the following hypotheses:

H3. Perceived ease of use positively affects attitude towards e-commerce.

H4. Perceived usefulness positively affects attitude towards e-commerce.

H5. Attitude towards e-commerce positively affects the intention to make an electronic purchase.

All these relationships can be observed in the model presented in Figure 1.

Adoption versus acceptance of e-commerce

The main objective of our paper is to compare the differences that exist between the adoption of e-commerce (by potential purchasers) and channel acceptance or re-purchase decisions (experienced e-customers). The reason for this differentiation is that the e-purchasing experience of the latter may have a moderating effect on their perceptions about e-commerce (Igbaria *et al.*, 1995; Sun and Zhang, 2006).

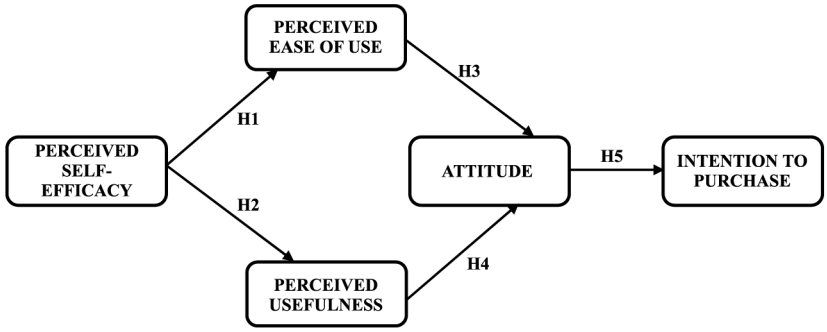

Figure 1.
Proposed model

The use of an IT during a certain time facilitates the acquisition of direct information which increases experience, causes differences in behaviour and alters the initial perceptions of the user (Lu *et al.*, 2003). Thus, we consider that the formulated relationships change as the e-customer acquires purchasing experience.

Self-efficacy perceived during the purchase of a product from a web site is conditioned by the increasing skills that are obtained from experience (Koufaris, 2002) and "training" (Webster and Martocchio, 1993; Compeau and Higgins, 1995). Taylor and Todd (1995) consider that the perception of control is greater for experienced users. Self-efficacy is more important in the stage following the initial online purchase because, in this phase, individuals must feel confident of their capacity to make frequent online purchases and not only occasional transactions, as in the initial purchase phase. Therefore, the effect of perceived self-efficacy in e-commerce on ease of use and usefulness increases once individuals have acquired greater experience of e-shopping:

H6. The effect exerted by self-efficacy on perceived ease of use is greater for the acceptance of e-commerce than for its adoption.

H7. The effect exerted by self-efficacy on perceived usefulness is greater for the acceptance of e-commerce than for its adoption.

The perceived ease of use of e-commerce has a significant and similar weight for all frequent internet users, independently of whether they are experienced e-customers (Gefen *et al.*, 2003; Yu *et al.*, 2005). In other words, when the principal reason for using the internet is to purchase a product, individuals are already familiar with the medium and there are presumably no significant differences between potential and experienced e-customers. Thus, we have formulated the following hypothesis:

H8. The effect of perceived ease of use on attitude does not change as the e-customer acquires experience.

The literature offers distinct opinions about the influence of perceived usefulness, depending on the previous experience of individuals. Some authors find no significant differences between the behaviour of experienced and potential users (Thompson *et al.*, 1994; Venkatesh and Davis, 2000). Other researchers argue that PU acquires greater weight as individuals gain knowledge of an IT (Karahanna *et al.*, 1999) and/or become

experienced e-customers (Gefen *et al.*, 2003). A third group maintains that this relationship is stronger for inexperienced users (see Taylor and Todd, 1995, for IT; Yu *et al.*, 2005, for e-commerce). After a review of the literature, our study considers that, for the case of e-commerce, the fact that consumers make repeated online purchases means that the initial effect of usefulness on attitude has been reinforced by their shopping experience. Thus, we formulate the following relationship:

H9. The effect of perceived usefulness on attitude is greater for the acceptance of e-commerce than for its adoption.

Finally, the effect of attitude on the intention to purchase online decreases as customers acquire experience (Karahanna *et al.*, 1999). This is because more experienced users base their behaviour more on their past experiences than on attitude. Initial attitude, based on suppositions, is less "accessible in memory" and, thus, has ultimately less effect upon repeat purchasing behaviour than on first purchases (Gefen *et al.*, 2003):

H10. The effect of attitude on purchase intention is less for the acceptance of e-commerce than for its adoption.

Methodology

We carried out a CATI survey in Spain using a random sampling method, according to age and gender quota, to guarantee population representativeness. Pre-tests were carried out in order to correct possible defects and to foresee any doubts and problems that might arise during the process of information collection.

A total number of 2,615 telephone calls were made, of which 1,260 people were considered frequent internet users. After the refining process, a total of 805 valid cases were obtained. Of these, 580 (72.05 per cent) were potential e-customers who had no previous experience in e-commerce, whilst 225 (27.95 per cent) corresponded to experienced e-customers.

All the variables were measured using a seven-point Likert scale. The items included in the survey were those which have most commonly been used in previous TAM studies.

Validation of the measuring scales

In order to guarantee measurement reliability and validity, a confirmatory factor analysis (CFA) was estimated for each sample (experienced and potential customers).

We progressively eliminated indicators that failed to satisfy one or more of the criteria proposed by Jöreskog and Sörbom (1993):

- significant factorial regression coefficients; and
- standardised coefficient higher than 0.5 and explanatory coefficient ($R^2 < 0.3$).

All the indicators of our study achieved acceptable values, so we tested the measures of fit of the measurement model. The values obtained from this exceed the optimal levels (Table I). The last step was to study the reliability and validity of the constructs (Gerbing and Anderson, 1988).

The reliability of the scales was tested using Cronbach's α and composite reliability coefficient (CRC). In all cases, the results achieved exceeded the recommended limit of

Factors	Cronbach α	CFC	Interval	
Adoption (potential e-customers)				
PSE	0.670	0.756	PSE-PEOU	(0.540-0.740)
			PSE-PU	(0.624-0.768)
PEOU	0.876	0.917	PSE-ATT	(0.503-0.671)
			PSE-INT	(0.415-0.583)
PU	0.833	0.862	PEOU-PU	(0.401-0.573)
			PEOU-ATT	(0.368-0.548)
ATT	0.840	0.887	PEOU-INT	(0.319-0.479)
			PU-ATT	(0.776-0.892)
INT	0.802	0.828	PU-INT	(0.565-0.693)
			ATT-INT	(0.576-0.704)
Absolute fit				
GFI	0.924			
RMSR	0.056			
RMSEA	0.060			
Incremental fit				
NNFI	0.927			
CFI robust	0.951			
IFI	0.941			
Parsimony fit				
Normed χ^2	3.071			
Acceptance (experienced e-customers)				
PSE	0.670	0.765	PSE-PEOU	(0.579-0.823)
			PSE-PU	(0.608-0.844)
PEOU	0.615	0.889	PSE-ATT	(0.585-0.813)
			PSE-INT	(0.326-0.618)
PU	0.725	0.854	PEOU-PU	(0.331-0.559)
			PEOU-ATT	(0.391-0.639)
ATT	0.729	0.906	PEOU-INT	(0.220-0.496)
			PU-ATT	(0.876-0.980)
INT	0.608	0.860	PU-INT	(0.516-0.740)
			ATT-INT	(0.521-0.745)
Absolute fit				
GFI	0.890			
RMSR	0.059			
RMSEA	0.067			
Incremental fit				
NNFI	0.912			
CFI robust	0.960			
IFI	0.937			
Parsimony fit				
Normed χ^2	2.004			

Table I.
Confirmatory factor analyses

0.7 (Nunnally, 1978) and 0.6 (Bagozzi and Yi, 1988), respectively. As for convergent validity, the standardised loadings exceeded 0.5, and they were also significant at the 99 per cent confidence level (Steenkamp and Van Trijp, 1991). Discriminant validity is established by calculating the confidence interval between different factors and verifying that 1 is not included in any of them (Table I).

Testing hypotheses

Structural model analysis

We tested the proposed conceptual model for both samples using structural equation modelling. The results indicate that the data fit our conceptual model acceptably (Hair *et al.*, 1999) (Figures 2 and 3).

The five initial hypotheses are supported in potential e-customers since all their coefficients are significant and positive (Figure 2). Nevertheless, the perceived ease of use is significant at a slightly lower level than 95 per cent, and its effect on attitude is less than that exerted by PU (0.087 versus 0.807). We find that the global importance on the intention to make the first purchase is 0.413 for self-efficacy and 0.540 for usefulness.

In the case of experienced e-customers, only four of the five hypotheses initially proposed are satisfied, as ease of use loses its importance in the acceptance process (Figure 3). Thus, we can say that, apparently, e-customers who are already familiar with the internet as a purchase channel forge their attitude, firstly on the basis of the usefulness they perceive, and secondly on the basis of self-efficacy. The global effect on the intention to continue acquiring products through the electronic channel is 0.456 for self-efficacy and 0.573 for perceived usefulness.

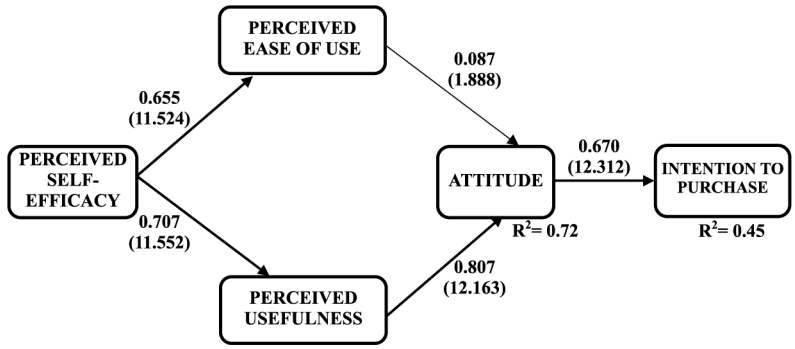

Figure 2.
Standardised solution for adoption (potential e-customers)

Notes: GFI = 0.936; RMSEA = 0.068; NNFI = 0.94; CFIR = 0.965; IFI = 0.952; Normed χ^2 = 2.62

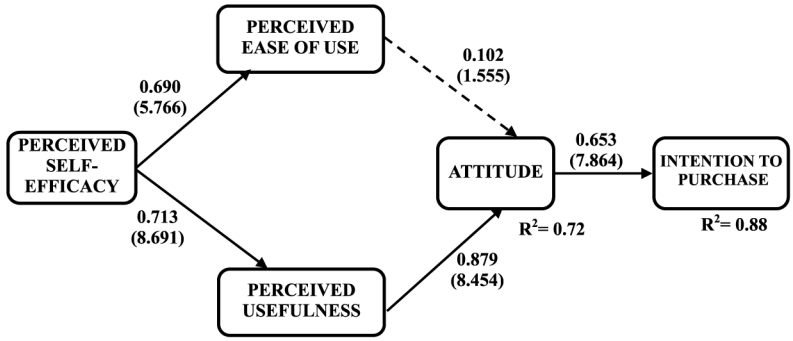

Figure 3.
Standardised solution for acceptance (experienced e-customers)

Notes: GFI = 0.898; RMSEA = 0.078; NNFI = 0.928; CFIR = 0.966; IFI = 0.942; Normed χ^2 = 2.36

Analysis of the differences between adoption and acceptance of e-commerce

The next step was to test the differences between the two samples (*H6* to *H10*) by a multi-sample analysis and Lagrange multiplier test.

From the results obtained (Table II), we see that there are significant differences between adoption and acceptance behaviour. With regard to the influence of self-efficacy on perceived ease of use and usefulness, both relationships show greater importance as the individual gains experience in the electronic market (acceptance phase). Therefore, *H6* and *H7* are satisfied.

The influence of ease of use on attitude does not present any significant differences, proving to be a stable perception regardless of the number of online purchases carried out. On the other hand, perceived usefulness significantly increases its effect on attitude during the acceptance phase. *H8* and *H9* are satisfied.

Finally, the effect of attitude on purchase intention decreases as individuals gain experience. However, this variation does not reach a significant value, so *H10* is rejected.

Discussion

The main objective of this work has been to demonstrate that the beliefs and attitudes present in the first stage of e-commerce (adoption by potential e-customers) vary with respect to those in the "post-adoption" or acceptance stage by experienced e-customers. The experience derived from online shopping gives rise to an evolution of e-behaviour, so we have tested what differences exist between the two groups.

The results show that self-efficacy is an essential perception for the development of e-commerce, as it exerts a positive and significant effect on the two fundamental perceptions of the TAM, namely PEOU and PU. These results are similar to those obtained by the decomposed theory of planned behaviour (Taylor and Todd, 1995) and the social cognitive theory (Bandura, 1977). Self-efficacy drives individuals to behave more efficiently, carrying out new actions which they would have considered risky if they did not have this confidence in themselves. In addition, self-efficacy fosters the adoption of e-commerce and progressively increases its importance as the user gains experience and reaches the acceptance stage.

Ease of use has only a very weak influence on adoption and is rejected at the acceptance stage. It is worth highlighting the stability of PEOU in both samples. This is because all the individuals analysed are regular users of the internet, which helps decrease the barrier of complexity of e-commerce in both samples. Probably, if this study had included individuals without experience with the internet, PEOU would have obtained greater importance and significant differences would have arisen

Relationship	Hypotheses	χ^2	Probability	Result
H6. PSE → PEOU	Acceptance > adoption	4.822	0.028	Satisfied
H7. PSE → PU	Acceptance > adoption	5.153	0.023	Satisfied
H8. PEOU → ATT	Acceptance = adoption	0.713	0.398	Satisfied
H9. PU → ATT	Acceptance > adoption	4.736	0.030	Satisfied
H10. ATT → INT	Adoption > acceptance	1.622	0.203	Not satisfied

Notes: GFI = 0.924; RMSEA = 0.05; NFI = 0.924; CFI = 0.948; IFI = 0.948; normed $\chi^2 = 2.97$

Table II.
Differences between adoption and acceptance

between groups. These results are coherent with the initial formulation of the TAM proposed by Davis (1989), who tested his model on a sample of users "unfamiliar with the systems used in the study". His results showed that PEOU lost its significance once the users had acquired experience and knowledge of the system (after 14 weeks using the IT). Consequently, ease of use is no longer a crucial perception in the study of e-behaviour when the user has extensive knowledge of the technology.

PU, on the other hand, is important for both samples and presents significant differences between them. As the user gains experience and accepts the internet as a purchasing channel, PU becomes stronger, motivating an increase in the number of exchanges. During the adoption stage, this belief is based primarily on suppositions or indirect experience with IT, so it is susceptible to change. Nevertheless, when the individual has purchased through this channel, post-adoption PU is based on information concerning his/her past experience (Gefen *et al.*, 2003). This type of usefulness is more enduring and predicts behaviour better than a belief formed by pre-adoption suppositions. Therefore, its relationship with attitude is stronger for experienced customers than for potential e-customers.

These results differ from those obtained by Taylor and Todd (1995), who consider that usefulness is more important for users without experience. However, these authors had already acknowledged that their result was contrary to their initial expectations, which defended that users with experience would better appreciate the efficiency that they could achieve through IT.

Finally, attitude exerts a very important effect on intention in both groups, with no significant difference between them. This result is coherent with other works which show that there are hardly any significant differences in the attitude and behaviour of experienced and potential users of an IT (Cale and Eriksen, 1994; Prescott and Conger, 1995). The fact of having had previous positive experiences with e-commerce means that experienced e-customers base their intentions more on these experiences. However, the evolution of this relationship is not significant.

Conclusions and implications

The conclusions obtained have important implications for future research and for the business sector. Our TAM approach, comparing different stages of e-commerce (adoption and acceptance), is an interesting variation with respect to the traditional approach in the literature; it allows us to narrow the increasing gap in the initial formulation of this model, by adapting it to the changes in e-purchasing behaviour.

As for the research implications of this paper, we should like to highlight three important contributions that are improvements with respect to how e-commerce and IT acceptance are usually studied.

First, our results show the importance of differentiating between e-customers according to their level of experience in the e-market. E-purchasing experience exerts a moderating effect on certain perceptions that have traditionally defined attitude and intention to buy. Thus, to study e-commerce correctly, future research must distinguish between the adoption and acceptance decisions, since it should focus on different perceptions depending on the stage to be analysed.

Second, previous research about TAM has usually been based on the idea that PEOU and PU are the most important determinants of behavioural intentions with respect to new IT. Our paper has demonstrated that the influence of PEOU ceases to be

important in the post-adoption stages. Consequently, we consider that future research based on TAM should adapt the basic structure proposed by Davis (1989). The perception that loses importance as the user acquires experience (i.e. PEOU) should be kept in the background of the proposed model, while the perceptions that increase their importance should be emphasised.

Lastly, our results indicate the importance of the individual's perceptions about IT based on human aspects, such as perceived self-efficacy, compared to variables connected with the characteristics of the IT. The former increase their importance as the users accumulate experience and the IT evolves, so they should be considered fundamental in an extended version of TAM. The latter lose importance once the user becomes experienced. Additional research is still needed to test if these patterns are found in other variables, such as trust for the first group and security for the second group.

With regard to managerial contribution, our results demonstrate that firms need to be aware that the e-commerce acceptance process goes through different stages where the consumers do not grant the same importance to the factors that influence their purchase decision. Firms wishing to compete in the e-market must know which type of e-customer they are targeting and adapt their marketing strategy depending on whether they wish to win over new customers or if, on the contrary, they wish to retain already existing ones. This differentiation will allow the firms to build stronger relationships with their customers, foster their retention, and therefore their loyalty, which is the cornerstone to the success of an e-business. To carry out only strategies concentrated on the first buying decision of the potential e-customers is not a winning strategy, because this e-business would be developing a short-term mind-set that will be detrimental to their long-term viability.

The first winning-over stages must focus on informing the potential e-customers of the advantages and properties of e-commerce in general, trying to get the individuals to feel efficient and capable of correctly conducting any type of e-exchange. This strategy will increase the confidence of the potential e-customers towards the new purchasing channel. Later, their behaviour does not remain stable over time. This is because the initial perceptions of e-customers are mainly based on suppositions and indirect experience. When they compare these initial perceptions with their own purchase experiences, they tend to evolve.

Once new e-customers have been won over and the adoption phase has been surpassed, the firm should concentrate on how to maintain favourable and long-lasting relationships with e-customers. These long-lasting relationships are the key driver of firm profits. The firm's efforts to improve self-efficacy and usefulness must be even greater at this stage because these will now be the characteristics most valued by the e-customer and will increase e-purchasing intention. Any firm wishing to compete in the e-market must invest in the efficacy of its web site, which will help improve the e-customer's perceptions and, therefore, his/her interaction with the firm.

Since customers' perceptions evolve as they acquire purchasing experience, firms should create dynamic web sites that can adapt to the changes in the users' preferences and needs. Some web site features that are appreciated in the first purchases may lose their importance as the user gets to know the channel and his/her loyalty level grows. Therefore, these features need not occupy such a prominent position in the web site for an experienced customer. Static web sites that do not consider the evolution of their

customers' needs will fail to satisfy experienced customers who come to accept the internet as a shopping channel.

It is recommended for firms to target each market segment with a marketing strategy tailored to its necessities. The use of personalised accounts, capable of creating a differentiated profile and of customizing the webpage, will allow firms to know the importance that each customer attaches to the different types of information and services provided on the internet. As a consequence of this, we should differentiate between pre-first purchase and post-first purchase services. Firms must decide, first, how to incorporate them into their web sites, and second, which features to include in each type of service.

The former could be offered when the individual creates a new user ID. They attempt to minimise the customer's cognitive effort and to increase their familiarity with the channel. Web site mechanisms, such as availability of information or accessibility, will make users feel they have more control over the situation and, consequently, their self-confidence will increase. Pre-first purchase services allow firms to gain new customers, and are more a necessity than a source of competitive advantage. They are usually considered to be standard and inherent components of the internet, so they play a minimal distinctive role in influencing the repeat purchase intentions and in the differentiation of the firm from other e-businesses. These conclusions are in line with the proposals of other authors such as Otim and Grover (2006).

Lastly, it is important to offer post-first purchase services once the user has become an experienced e-customer in order to improve his/her evaluation of post-purchase outcomes. Issues of concern for experienced e-customers include the status of their order, the delivery time or personalised post-purchase attention, among others. These services will increase the perception of self-efficacy and efficiency even more, not only of the new channel, but also of the web site of the firms that offer them. Post-first purchase services are the most important to achieve e-customer loyalty.

With respect to limitations and future lines of research, our study analyses purchasing behaviour without specifying the type of product exchanged (tangible or intangible) (see Brown *et al.*, 2003). This characteristic may modify the user's behaviour and perceptions with respect to e-commerce. Therefore, future research must distinguish the type of product acquired.

A second limitation lies in the final endogenous variable used. Analysing future intentions has been common practice in TAM, which considered them to be an approximation to real use. Our work has chosen this endogenous variable as it is the only one that permits us to compare behaviour before and after the first online purchase. Future research should also include intensity of use and, thus, study a dual measure of technological behaviour.

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