

# Effects of Cultural Background on Internet Buying Behaviour: Towards a Virtual Global Village?\*

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**Abstract.** The article identifies the combined influence of the Web Experience (or online experience) components on the online consumer's behaviour from three different angles: (1) The relative importance of the online experience factors in choosing an online vendor, (2) the actual effect of these factors on the vendor choice and (3) the influence of personal and behavioural characteristics on the virtual shopping behaviour. The results identify early symptoms of an emerging behavioural convergence among Internet users of different cultures and nationalities, suggesting that cultural and behavioural differences in the physical world could have limited influence on people's behaviour in the virtual marketplace. This outcome could suggest the emergence of a global virtual village, an issue worth of further scholastic research but also an issue of particular importance for global Web vendors and web site designers.

**Keywords:** Web experience, Internet Marketing, cultural differences, buying behaviour, Web Marketing, marketing strategy.

## 1 Introduction

The Web Experience has been defined as a four stage process describing the successive steps of an online transaction [1]: Encountering the online retailer's home page, selecting a product from the online catalog, completing the order form and accessing customer service and support. The Web Experience has been also described as "the consumer's whole perception about the online company resulting from his/her exposure to a combination of virtual marketing tools" [2]. This perception is likely to have a substantial and direct effect on the buying behaviour of the online consumer. It embraces several elements, under the control of the online marketer, affecting the process of searching, browsing, finding, selecting, comparing and evaluating information as well

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as interacting and transacting with the online firm [3]. The online customer's perceptions and actions are influenced by design, events, emotions, atmosphere and other visual or psychological cues but also by the web site's usability and the information becoming available during interaction. There is plenty of recent research about such - controllable by the online marketer - factors influencing the online customer's behaviour and the way these factors contribute to the online experience. [4] proposed a taxonomy summarizing the findings of studies published in 48 research papers between 1997 and 2003. This taxonomy identifies five groups of parameters (Usability, Interactivity, Trust, Aesthetics and Marketing Mix) as dimensions of the controllable Web Experience. There is plenty of evidence that the large majority of wired consumers consider by now the web as their primary source of information when searching for products, services, news, weather, travel directions or entertainment: according to a recent BurstMedia survey 57.1% of all US web users over 18 years old use the Internet as their primary source of information about products and services they intend to buy<sup>1</sup>. This percentage is even higher (69.2%) among the most affluent consumers, with income of \$75.000 or more. In the background of these developments it is not surprising that marketers increase their efforts to attract audiences to their web sites, something evident in the substantial increase of online marketing budgets.

The main objective of this paper is to analyze the impact of web experience on virtual buying behaviour. Based on the background literature as a starting point, we propose a model to study the significance of the constructs analyzed. Moreover, a number of personal variables have been included in the model in order to observe their influence on Web Experience.

## 2 Research and Hypotheses

Research on the impact of WE-related factors on the online consumer's behavior far has been conducted mainly within culturally homogenous markets; cross-cultural comparison of the actual online behavior is an issue that has so far received limited attention. Considering however the global reach and effects of the Internet it is interesting to examine whether the cultural background of online consumers has any influence on the way the Web Experience factors affect online buying behavior. A rule of thumb followed by most global corporations operating web sites in several countries or geographical areas is that full customization of national web sites is the proper policy to follow. Yet there is no concrete evidence so far that this is the right strategy. International Marketing text books, based on research findings from comparison of consumer behavior in different cultures [5] place special attention to inter-cultural differences and their impact on international marketing strategies [6; 7; 8; 9]. While markets become global and more transparent, a variety of new Information and Communication Technologies (ICT) are getting increasingly accessible to consumers and producers all over the world. The issue of cultural diversity has entered a new round of academic debate focused on the effects of widely available ICT on the global consumer. This is by no means a new issue; Marshall McLuhan looking to the influence and spreading of the mass electronic media worldwide proposed the concept of Global Village back in 1964 [10]. Several academics and practitioners have embraced

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<sup>1</sup> MarketingVox, April 20, 2006.

the global village notion arguing that globalization and new technologies has lead to cultural convergence and more homogenous consumer behavior patterns across countries and cultures. [11] and [12] reject the notion of cultural convergence arguing that disparities in consumption patterns in different countries have not been reduced as a result of new technologies and therefore cultural differences should be given special attention in designing global market entry strategies. Most attention in this dispute is focused on convergence at consumption patterns on macro or micro level but limited attention has been paid to the question whether the global adoption of new ICTs and most notably the adoption of the Internet, have lead to convergence or divergence of the actual consumer buying behavior patterns at a global scale. The objective of this study is to address this issue by studying the online consumer behavior in two European countries with different and distinct cultural background, namely Spain and Netherlands. In that respect the following hypotheses are formulated:

H1: The influence of the Web Experience elements (a: Usability, b: Interactivity, c: Trust, d: Aesthetics, e: Marketing Mix) on online shopping behavior of Spanish and Dutch consumer is similar.

Personal consumer attributes (involvement, motivation, experience, ability to Internet adaptation, and so on) affect the purchase process and final decision [13; 14]. [15] included three personal variables (i.e. the motives to shop online, the level of experience in Internet use and online shopping) in their online behavior model. Regarding the motivation variable, they observed neither influence of shopping motives on the way people experience the different web factors nor the choice of a virtual vendor. However, they observed a positive influence of the experience as personal variable. Based on that work and the literature supporting the argument of cultural convergence and homogenous consumer behavior patterns across countries and in order to analyze the influence of these two specific internal variables (i.e. motivation and experience –years of Internet experience and familiarity with online shopping, according to [15]–) on users' preferences, the following hypotheses are proposed:

H2: The online buying behavior of Spanish and Dutch consumers is not influenced by online shopping motivations (a: Motives towards online shopping) and likewise nor influenced by personal characteristics (b: Years of Internet experience; c: Familiarity with online shopping).

### 3 Method

The study was conducted by means of an identical survey among undergraduate students at two Universities in Spain (204 students) and The Netherlands (85 students) based on simulating a virtual shopping activity in the computer lab. Subjects were instructed to carry out a specific online shopping task: searching for information, finding and “buying” a digital camera meeting a number of technical and economic specifications (e.g. up to a fictitious budget of 300 Euros including price and postal costs). After completing the task participants were asked to fill in an online questionnaire. The instructions were explained at the beginning of the experiment by supervisors. The conditions regarding searching, choosing the vendor and the

camera brand and type were as realistic as possible; the participants were free to buy the product in any online shop anywhere in the world provided that this was able to be delivered in their country. There were no limitations on the number of web sites visits or search methods used. The camera had to be new and the total time available was 90 minutes; this time was sufficient as pre-testing indicated. During the shopping, subjects had to create two lists of vendors: “Favorites” and “No favorites” according to their experience during the interaction with the online shops and were asked to complete the online ordering procedure but stop before confirming the purchase. The survey was divided in two parts. The first part (Questionnaire I) was meant to identify the participants’ demographics and attitudes towards online shopping, their previous experience with the Internet (buyers/no buyers) and their main motives for shopping or not shopping online. Once this step was completed, each participant had to proceed with the online shopping activity and fill in the rest of the questionnaire (i.e. Questionnaires A, B, and C). The form A was about the Web site they “bought” the camera, form B was about the web site from the top of the Favorites list. List C was about the web site where participants would never buy the camera from, for whatever reason. The lists A, B and C were identical. Participants had to indicate whether they agree or disagree with statements related to their experience from interacting with each of these three websites on 25 individual features relevant to the five Web Experience factors identified earlier (e.g. “It is convenient to buy products in this online shop”, “the shop offers excellent customer service”, “the site offers adequate guarantees for the safety of online transactions”, “the site’s design is superb”, “the site offers a wide deep product assortment”...). The answers were given in a five-point Likert scale with values ranging from 1 (fully disagree) to 5 (fully agree). The surveys and the whole process were tested with preliminary surveys, meant to identify potential problems in the scenario and the questions. The dependent variable related to online shopping behavior was measured as dummy variable (i.e. buy or not buying) which indicates the consumer’ shopping preferences towards virtual vendor.

#### 4 Descriptive and Statistical Results

A comparative overview for the main descriptive characteristics for the samples in both countries is presented in table 1.

**Table 1.** Demographic and Personal characteristics of survey participants

	<b>Spain</b>	<b>The Netherlands</b>
<b>Gender</b>	Female: 63% Male: 37%	Female: 29% Male: 71%
<b>Age</b>	18-22	20-25
<b>Experience with the Internet (more than four years)</b>	34%	84%
<b>Purchasing using the Internet</b>	31%	77%
<b>Amount spent yearly (between 50-100€)</b>	15%	21%

**Table 2.** Consumer’s purchase preference from web experience factors

Dependent variable (buy/not buying)		Consumer Preference	
Hypotheses		H1 (a, b, c, d, e)	
Countries comparison		SPAIN	NETHERLANDS
Nagelkerke		.34	.31
Hoshmer Lemeshow		14.99 (8)	48.89 (8)
WE Factors – H1 (Independent variables)	a: Usability	1.29 (.15)*	.74 (.22)*
	b: Interactivity	.19 (.13)	-.27 (.20)
	c: Trust	.55 (.11)*	.24 (.18)
	d: Aesthetics	.47 (.12)*	.11 (.20)
	e: Mk Mix	.54 (.13)*	.55 (.22)*
Legend:			
· Proxies of standardized regression parameters are presented in the cells.			
· Asterisk (*) indicates statistical significance on 5% level (i.e. confidence level: 95%).			
· Between brackets are the standard errors.			

**Table 3.** Influence of personal characteristics on consumer’s purchase preference

Dependent variable (buy/not buying)		Consumer Preference			
Hypotheses		H2a		H2b,c	
Countries comparison		SP	NL	SP	NL
Nagelkerke		.46	.33	.35	.48
Hoshmer Lemeshow		7.95 (8)	34.57 (8)	9.80 (8)	11.06 (8)
WE Factors (Independent variables)	Usability	1.82 (.37)*	.74 (.22)*	1.34 (.15)*	1.07 (.26)*
	Interactivity	-.56 (.28)	-.28 (.20)	.18 (.13)	-.36 (.21)
	Trust	.96 (.21)*	.23 (.18)	.58 (.12)*	.35 (.20)
	Aesthetics	.72 (.26)*	.12 (.20)	.47 (.12)*	.16 (.22)
	Mk Mix	.71 (.25)*	.56 (.21)*	.55 (.13)*	.72 (.25)*
Main Motive – H2 (Independent variable)	a: To find better prices **	-.15 (.40)	-.76 (.39)*		
Experience – H2 (Independent variable)	b: Years of Internet usage			-.11 (.07)	-.26 (.09)*
	c: Familiarity with online shopping			-.18 (.22)	.11 (.31)
Legend:					
· Proxies of standardized regression parameters are presented in the cells.					
· Asterisk (*) indicates statistical significance on 5% level (i.e. confidence level: 95%).					
· Between brackets are the standard errors.					
· Double asterisk (**) indicates that “to find better prices” is the motive to buy online with the highest impact. So, the rest of the identified motives are not reported in this table. In both countries that variable has been the most selected reason by participants.					

The three websites chosen by users in the lists A, B and C were analyzed on the basis of the responses on 25 statements per web site describing the participant’s perception on various WE characteristics. In order to test the hypotheses, a factor analysis was carried out to reduce the number of WE items. A binomial logistic regression was executed with the five WE factors per website as independent variables and the

purchasing behavior as the dichotomy explained variable (i.e. buy/not buying). The users' buying preferences regarding the WE elements and the influence of their personal characteristics can be seen in tables 2 and 3.

Based on the results of the previous analysis the hypotheses proposed were evaluated. The arguments are showed in the following paragraphs.

**H1: The influence of the Web Experience elements (a: Usability, b: Interactivity, c: Trust, d: Aesthetics, e: Marketing Mix) on online shopping behaviour of Spanish and Dutch consumer is similar**

A comparative analysis between both countries shows differences and similarities on the importance of WE elements on consumer decisions in the choice of an e-vendor (table 2). The **Usability** and **Marketing Mix** elements have a positive and significant influence on consumer decisions in both countries. Therefore, H1a and H1e are not rejected. Regarding this point, it is important to notice the behavior of statistical coefficients –beta parameters– in both cases. Specifically, regarding the Marketing Mix factor, the behavior in both parameters is similar (Spanish .54 versus Dutch .55). The analysis of the Spanish data indicates that the Usability factor has a higher influence than in the case of the Dutch data (i.e. Spanish 1.29 versus Dutch .74). These results indicate that the usability elements are more relevant for the Spanish population, probably due to a lower experience with the Internet than in the case of Dutch users (table 2). This could suggest that Spanish people appreciate more the easy navigation through web sites. As to the **Trust** and **Aesthetics** factors, these are significant influencers in the case of the Spanish study but no significant in the case of Dutch consumers; H1c and H1d should be rejected because the effect of these factors on the two groups is quite dissimilar. According to descriptive data (table 2), the majority of Spanish participants have no much previous experience in the use of the Internet and online purchase whereas for Dutch participants the percentages are higher (i.e. 84 versus 34, and 77 versus 31, respectively). Consequently, we can conclude that Web Experience elements like Aesthetics and Trust are considered as less relevant by more experienced web shoppers (i.e. Dutch consumers). Subjects less skilled in the use and purchase on the Internet need more positive cues and information to be provided by online stores –such as high presentation quality, good atmosphere, safety in e-transactions, transparent guarantee policy, and so on– in order to choose an e-vendor. The more cautious behavior of the Spanish consumer is in line with findings about cultural behavior: According to Hofstede's cultural dimensions classification [16; 17; 18] the “uncertainty avoidance” variable is higher in Spain. This could explain the need of having more web stimulus and patterns for efficiently completing the purchase task in case of Spanish online users. Additionally, in both cases (Trust and Aesthetics factors), the regression parameters are higher in the Spanish study (Trust: .55 versus .24; Aesthetics: .47 versus .11). This fact additionally confirms the explanation about the higher impact of both of these Web Experience factors on the Spanish sample. Regarding the **Interactivity**, in both countries the effect of this factor on the choice of an online vendor is limited. Moreover there are no significant differences between the two populations; according to regression parameters, in both cases the Interactivity factor is not significant for the e-vendor

choice. On the basis of this analysis the H1b is not rejected. In this case, according to statistical coefficients (table 2) it is interesting to point out the difference of the values of that factor between the two populations. In the Spanish case we can find a direct relationship between Interactivity elements and consumer's preferences while in the Dutch study the relationship is indirect (.19 versus -.27). These results indicate the low impact that web elements related to Interactivity factor (possibility to interact with personnel or other users buying in the online store, etc.) have on Spanish users. In the case of Dutch users, the effect of that factor is negative leading to the interesting conclusion that these shoppers are choosing web sites that are not interactive in the sense described. These effects are again in line with Hofstede studies [16; 18] indicating that the "individualism" cultural dimension in The Netherlands is higher than in Spain. Furthermore, unlike the rest of WE factors –specifically, Trust and Aesthetics–, more experienced Internet users seem to consider the inclusion of web elements allowing for interaction with the shop's staff as unnecessary and consequently they prefer that the stores put more attention to other web characteristics and tools directly related to Usability and Marketing Mix. According to the above results it can be argued that differences between distinctive cultural groups in the physical world are reflected in some aspects of the behavior of these groups as online consumers. Yet the differences are much smaller than one would expect on the basis of the Hofstede framework of cultural dimensions and probably have to some degree to do with the differences in experience of the Internet as buying channel. This could lead to the tentative conclusion (requiring further research) that the global virtual community tends to establish similar patterns of reaction to Web Experience elements and similar behavioral patterns in searching and purchasing through the Internet.

**H2: The online buying behavior of Spanish and Dutch consumers is not influenced by motivation for engaging in online shopping and also nor influenced by personal characteristics (Years of Internet experience and Familiarity with online shopping).**

**H2a: Motives towards online shopping of Spanish and Dutch consumers will have the same effects on their online buying behavior.**

As for as the "motives towards online shopping" (table 3), the variable related to "to find better prices" was chosen by the majority of participants in both studies as the main reason for shopping online. Yet the inclusion of this variable in both models, Spanish and Dutch had no substantial effect on way people make online consumer decisions. This fact indicates that actual behavior is not similar to the perceived one. Looking more closely to the actual results, we observe some important differences. In the case of Spanish study, the motivation factor is not significant within the model but improves the results if we compare the five factors before and after its inclusion in the model (see statistical coefficients of WE factors in tables 2 and 3). On the other hand, in case of Dutch study, although the motivation variable has a significant effect within the model, it does not produce any improvement to WE results. So, in both cases its effect is nil. As a result, the H2a is not rejected.

**H2b: Years of Internet experience of Spanish and Dutch consumers will have the same effects on their online buying behavior.**

**H2c: Familiarity with online shopping of Spanish and Dutch consumers will have the same effects on their online buying behavior.**

Regarding the independent variables “years of Internet usage” and “familiarity with online shopping” these show dissimilar results between both countries (table 3). In the Spanish case, both variables have no significant direct or indirect effect on the appraisal of the WE factors. Moreover, the differences between the beta coefficients before and after their inclusion in the model are not considerable (see comparison between statistical coefficients in tables 2 and 3). In the Dutch study, the effect of “familiarity with online shopping” has not significant effect on WE factors. The “years of Internet usage” as experiential variable is significant and has a higher indirect effect than in the Spanish study. In the Dutch study the experience with the Internet diminishes the role of web elements in online retailing. In fact, the inclusion of these internal variables in the model improves the results in all WE factors mainly in the Usability and Marketing Mix elements but in a negative direction (beta coefficient -0,26). According to the descriptive data (table 1) the experience with the Internet use by Spanish participants is lower than in the Dutch case (i.e. 34% versus 84% with more of four years of experience). In that context, the H2b and H2c could not be accepted. In fact, in the Dutch population we observe that the longer people have been using the Internet and the longer they shop in virtual stores, the more critical they become (i.e. they are more difficult to be satisfied) towards the Usability and Marketing Mix elements of web sites, while these personal variables do not show significant effect on the appreciation of the other three factors (i.e. Interactivity, Trust, and Aesthetics). In this sense, it is also relevant to mention that the “uncertainty avoidance” cultural dimension [17; 18] could exercise some influence in the shopper’s behavior: Spanish people prefer to avoid the uncertainty of online shopping. Furthermore, according to the indirect effect shown in the data (table 3), the Spanish consumer prefers to be more intensively exposed to web experience elements in the online stores in order to carry out a purchase more efficiently. Finally, regarding the general variable called “experience” (i.e. years Internet usage and familiarity with online purchase) we can notice a different behavior in each study. In case of the Spanish study, the “familiarity with online purchase” has a more substantial impact on the consumer’s preferences in choosing a virtual vendor than the “years of Internet usage”, but the inclusion of this general variable does not improve the result model. In contrast, in Dutch study, the variable with more influence on e-vendor choice is the “years of Internet usage”. In both studies, the general variable “experience” affects the consumers’ preferences in a negative way: More experienced users with the Internet consider that more important web experience elements are the Usability and Marketing Mix and in the second place, Trust, Aesthetics, and finally, Interactivity. Based on this point, the H2b and H2c could be not rejected.

## 5 Conclusions and Issues for Further Research

This paper presents a comparative study on the influence of Web Experience factors on consumer’s buying behavior in two countries with different cultural backgrounds:



Spain and The Netherlands. The results indicate that in both countries the factor Inter-activity does not play any substantial role on the choice of an e-vendor. The Spanish study shows that four of the five WE elements clearly influence the online shopper's preferences, in line with previous findings. The Dutch survey indicates that only two of the WE factors (Usability and Marketing Mix) have a substantial effect on online shoppers' preferences while the effect of Trust and Aesthetics is much more limited than the effects of these factors on the Spanish consumer. A possible explanation with regard to the different effect of the factors Trust and Aesthetics between for the two markets could be cultural and behavioral differences between consumers. Dutch consumers are more individualistic and characterized by less risk aversion in comparison to Spanish consumers [17; 18]. With regard to online shopping motivation, years of Internet usage and experience with online shopping, these personal factors do not seem to affect the online buying behavior of either the Dutch or the Spanish consumers. The study underlines a number of interesting issues as a basis for further research into inter-cultural differences in virtual buying behavior. Expanding the research to more European and International cultures is necessary considering the increasing significance of the Internet as a global marketing platform. Online vendors and web designers should be aware of the effects of cultural differences when designing global virtual stores for different cultural segments and different customers (e.g. different languages, different products, etc.). In conclusion, the study identifies some differences but also a lot of similarities in the way online experience factors affect e-users from Spain and The Netherlands. One could expect that increasing globalization and adoption of the Internet worldwide will decrease rather than increase these differences in the future. Further research is necessary for defining the different effects of Web Experience on the behavior of online buyers of other types of products where image or design is very important (clothes, apparel, autos etc) customized products or intangibles on cross-cultural contexts.

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