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# The effect of culture in forming e-loyalty intentions: A cross-cultural analysis between Argentina and Spain



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**Abstract** In order to increase their markets, many companies are starting e-commerce internationalization processes that involve dealing with cultural differences among countries. Although most firms start internationalization strategies to similar countries, previous research has mainly focused on understanding expansion to countries with a great cultural distance. This study analyzes the relevance of culture in the formation of e-loyalty intentions in Argentina and Spain, two countries with slight cultural differences. Specifically, culture is proposed as a moderator of e-service quality and satisfaction effects on e-loyalty intentions. Results confirm that the influence of e-service quality on e-loyalty intentions is greater for Argentinian consumers (a little more individualistic, masculine, and less pragmatic culture compared to Spain). Besides, a greater influence of satisfaction on e-loyalty is found for Spanish consumers (a more pragmatic, collectivistic, and feminine culture compared to Argentina). The introduction of socio-demographic control variables, i.e. gender, age and education level, support the moderation effect of culture. According to these results, marketers should note that e-loyalty formation process differs across cultures, even between similar cultures. Further implications for international marketing strategies are widely discussed.

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## Introduction

In addition to the increasing globalization (Martín Armario et al., 2009), the current economic depression in many countries is favoring business' internationalization. There are more and more companies that find external markets as a solution to compensate the failing of internal demand. For instance, around 40% of Spanish SME (Small and Medium Enterprises) expect a revenue increase in their exports in the next three years, so that exports will represent up to 40% of SME total revenues (Oxford Economics, 2013). Using online channels constitutes a suitable internationalization strategy due to e-commerce related benefits and its unavoidable growth year by year (transactions' value of \$1 trillion for first time in 2012, eMarketer, 2013). However, internationalization of commercial activities is not an easy task, given the considerable uncertainties and barriers associated with operating internationally (Clark and Pugh, 2001; Jiménez Castillo et al., 2013).

The analysis of the determinants of consumer intentions in a service internationalization context is quite novel. Indeed, researchers started to dedicate great efforts to this topic (e.g. Brady et al., 2001), especially after the appearance of e-commerce (Knight, 1999). Focusing on internationalization by online channels, previous research has confirmed that e-commerce adaptation to markets with high cultural differences is crucial to achieve success (e.g. De Mooij and Hofstede, 2002). Previous literature also suggests that the influence of cultural aspects is greater in the service industry (Riddle, 1992) and that the factors that determine consumer choices in a service environment are context specific (Pucik and Katz, 1986). Nevertheless, it should be noted that companies, especially SME, initiate their internationalization processes by exporting to culturally more proximal markets (Clark and Pugh, 2001). Trade with consumers from similar cultures could involve many advantages such as relying on well-established culture-based trade areas (e.g. Commonwealth, Latin America, South-west Asia), sharing the same language, better understanding consumers' habits and values, or reducing uncertainty (Clark and Pugh, 2001). Despite the interest of analyzing exchange between markets with similar cultures, research studying internationalization has mostly focused just on commercial exchange between culturally distant countries (e.g. Puja and Yukti, 2011). Our study aims to fill this gap of extant literature by analyzing to what extent the differences in the e-loyalty formation process between similar cultures may affect to internationalization success. Specifically, a company initiating exportation to a culturally near country may use its already existing system (e.g. using the same website design, offering the same products), but the perceptions and reactions to this commercial strategy may differ between national and international consumers. Our research proposes that consumers' response and behaviors toward the same commercial strategy may differ between cultures, even when cultural differences between markets are small. To expand knowledge on this insight, our research focuses on e-commerce development between Spain and Argentina; that is, Spanish online firms expanding their activities to Argentina or vice versa. The selection of these two countries is based on their cultural

similarities (e.g. Hofstede, 2001) and their close commercial bonds. For example, Argentina ranks third in sales to and fourth in purchases from Spain among Latin-American countries (ICEX, 2014), many companies have investments and operate online in both countries (e.g. Santander Bank), and new collaborative institution such as the CEAES (Cámara Empresarial Argentina en España) has been created to promote commerce between Argentinian and Spain in both ways.

With the aim of providing practical implications for management, our research focuses on e-commerce loyalty determinants, and analyzes to what extent their influence may be moderated by culture. Nevertheless, it should be considered an exploratory research given the lack of theoretical or empirical works devoted to investigate the effect of culture in e-commerce companies operating in countries with slight cultural differences, as it is the case of Spain and Argentina. Specifically, we propose that cultural differences between these countries affect the relationships between three key variables in consumer behavior in the online context: e-service quality, satisfaction and loyalty intentions (e.g. Harris and Goode, 2004). Previous literature (e.g. Bloemer et al., 1998; Cronin et al., 2000; Harris and Goode, 2004; Lai et al., 2009) offers contradictory results with respect to the relationship between these constructs, suggesting that the relevance of the antecedents of loyalty may depend on differences between markets (Oliver, 1999). To clarify this aspect, some authors have analyzed the relationships between these variables conducting cross-cultural studies in the offline context (e.g. Puja and Yukti, 2011). In the online context, previous studies already suggest that either cultural differences as a whole (e.g. Jin et al., 2008; Kassim and Abdullah, 2010), either specific cultural dimensions such as individualism (Steenkamp and Geyskens, 2006), uncertainty avoidance, or long-term orientation (De Mooij and Hofstede, 2002) affect e-loyalty formation process. However, the vast majority of these works are theoretical (e.g. De Mooij and Hofstede, 2002) or focus on highly distant countries in terms of culture dimensions like the United States and South Korea (e.g. Jin et al., 2008), or the United States and India (Puja and Yukti, 2011).

In sum, our research contributes to the emerging body of literature on online internationalization by investigating to what extent slight cultural differences between two Spanish speaking countries with close commercial bonds (Spain and Argentina) may affect online consumer behavior. Specifically, we propose that cultural differences moderate the effects of e-service quality and satisfaction on loyalty intentions. Thus, this research aims to help e-marketers in their decisions to whether invest in e-service quality or in consumers' satisfaction to increase e-loyalty depending on markets' culture. This may be of great interest since the empirical evidence indicates that companies use to expand their businesses in the Latin American market by introducing just minor adaptation of their services to the different cultures (Brenes et al., 2013).

The remaining of this article is structured as follows. First, we review literature examining the relationships between service quality, satisfaction and loyalty, in order to better understand the role of culture in this framework. Then, the hypotheses formulation section describes the

baseline model and the expected moderating effects. After that, the methodology section explains the data collection process and the analyses of our empirical cross-cultural study, which is followed by results presentation. Finally, this research discusses the main conclusions, provides several managerial implications for international e-commerce management, and ends with its limitations suggesting further research lines.

## Literature review

### The relationships between e-service quality, satisfaction and loyalty intentions

Service quality, customer satisfaction and loyalty intentions are three key variables in marketing. While satisfaction and loyalty have been included in well-known theories such as Expectation-Disconfirmation Theory (e.g. [Oliver, 1980](#)) or relationship marketing (e.g. [Ganesan, 1994](#)), service quality is a dominant issue in the service management literature (e.g. [Cronin et al., 2000](#)). The importance of these variables in the online context resides in the fact that they help guarantee the success of a company, in spite of the increasing competition worldwide (e.g. [Harris and Goode, 2004](#); [Flavián et al., 2006](#)). E-service quality is one of the most important aspects that consumers consider when evaluating an online service ([Chen et al., 2013](#)). Specifically, e-service quality refers to "the extent to which a website facilitates efficient and effective shopping, purchasing and delivery" ([Zeithaml et al., 2002](#), p. 11), and it has been considered as a multidimensional construct formed by elements such as efficiency, privacy, fulfillment and system availability ([Parasuraman et al., 2005](#)). According to this perspective, efficiency refers to the ease and speed of the access and use of the site; privacy is the degree to which the site is safe and protects customer information, fulfillment refers to the extent to which the site's promises about order delivery and item availability are fulfilled; and system availability represents the correct technical functioning of the site ([Parasuraman et al., 2005](#)).

In turn, satisfaction (or dissatisfaction), according to the Expectation-Disconfirmation Model ([Oliver, 1980](#)), is the result of a comparison between expected and perceived performance ([Homburg et al., 2002](#)). Therefore, satisfaction has been widely used in previous literature to study post-usage behaviors ([Bhattacharjee, 2001](#)), because it is an overall evaluation of all the aspects that compose a relationship ([Flavián et al., 2006](#)).

Loyalty intentions in the online context refer to the customer's intention or predisposition to visit and purchase from the same website again ([Casaló et al., 2008](#)). Following the four distinct and sequential stages of loyalty developed by [Oliver \(1997\)](#), these loyalty intentions might be considered as a conative loyalty that may finally lead the consumer convert intentions to action, because a behavioral intention anticipates that the consumer will behave in a specified way ([McKnight and Chervany, 2002](#)).

Due to their relevance, these variables have been related in previous works both offline (e.g. [Lai et al., 2009](#)) and online (e.g. [Chen et al., 2013](#)). In this way, service quality has been considered a key antecedent of customer

satisfaction (e.g. [Harris and Goode, 2004](#)), which in turn directly affects loyalty intentions (e.g. [Flavián et al., 2006](#); [Chen et al., 2013](#)). However, the link between service quality and loyalty intentions seems to be controversial. On the one hand, some works (e.g. [Anderson and Sullivan, 1993](#); [Cronin and Taylor, 1992](#)) support an indirect effect of service quality on loyalty and a quality-satisfaction-loyalty chain; for example, in the Chinese mobile communications market ([Lai et al., 2009](#)), the online books market (e.g. [Harris and Goode, 2004](#)) or the online Spanish market (e.g. [Cristobal et al., 2007](#)). On the other hand, other authors have considered and found a direct and significant effect of service quality on loyalty intentions (e.g. [Bitner, 1990](#); [Bolton and Drew, 1991](#)); for instance, in the bank industry ([Bloemer et al., 1998](#)) or the offline context ([Cronin et al., 2000](#)). These findings are in line with [Oliver's thoughts \(1999\)](#) suggesting that the relevance of service factors such as satisfaction and quality may be both market and context sensitive.

### The role of culture in forming loyalty intentions

Global marketers have to face relationships with consumers all over the world. At the same time, the development of the Internet has offered the opportunity to interact with them in the online channel. Since the relevance of loyalty antecedents may vary depending on the characteristics of each market ([Harris and Goode, 2004](#); [Oliver, 1999](#)), it is essential to investigate the influence of such factors under different cultures in order to develop web sites adapted to country specific cultural characteristics.

This concern is not new in the offline context, where several studies have already analyzed the effects of the antecedents of loyalty on countries with great differences such as India and USA ([Puja and Yukti, 2011](#)). For instance, [Furrer et al. \(2000\)](#) and [Laroche et al. \(2004\)](#) confirmed that the relevance attributed to service quality and satisfaction may vary across cultural groups. In the online context, some cross-cultural studies have tried to analyze the impact of cultural dimensions and country characteristics too. For example, [Steenkamp and Geyskens \(2006\)](#) analyzed the role of individualism on websites perceived value, and [De Mooij and Hofstede \(2002\)](#) suggest that uncertainty avoidance or long-term orientation may be used to segment countries in an international online retailing strategy.

However, few cross-cultural studies have been conducted to analyze possible differences in the relationships among service quality, satisfaction and loyalty. [Table 1](#) shows the main works analyzing the direct or moderating influence of culture on these variables, especially considering cultural dimensions proposed by Hofstede (e.g. [Hofstede, 2001](#)). First of all, we observe that most of these works use well-known scales, like SERVQUAL, to measure service quality (e.g. [Furrer et al., 2000](#); [Dash et al., 2009](#)). Second, we distinguish two main research lines according to the cultural dimensions analyzed. Specifically, since culture represents an integrated system, some researchers focus on culture as a whole – considering Hofstede's dimensions all together – (e.g. [Kassim and Abdullah, 2010](#); [Pantouvakis, 2013](#)), while others just focus on the influence of specific dimensions (e.g. [Dash et al., 2009](#)). These works mainly suggest that

**Table 1** Literature review of the links between cultural dimensions and service quality, satisfaction and loyalty.

Study	Cultural dimensions	Countries	More relevant findings
<a href="#">Donthu and Yoo (1998)</a>	Hofstede's cultural dimensions	USA, UK, India, Canada	Consumers low on power distance, individualistic, high on uncertainty avoidance or short-term oriented have high overall service quality expectations
<a href="#">Furrer et al. (2000)</a>	Hofstede's cultural dimensions	USA, Switzerland, China, Singapore, South Korea	SERVQUAL dimensions are correlated with Hofstede's cultural dimensions
<a href="#">Tsoukatos and Rand (2007)</a>	Hofstede's cultural dimensions	Greece	Hofstede's cultural dimensions (measured at the individual level) are correlated with SERVQUAL dimensions.
<a href="#">Jin et al. (2008)</a>	Culture as a whole	South Korea and USA	The influence of e-satisfaction on e-loyalty is significantly greater in South Korea than in USA. Authors justify this link on the fact "that collectivism cultures tend to stick to the same service provider once satisfied" (p. 331)
<a href="#">Smith and Reynolds (2009)</a>	Cultural differences mainly based on individualism	African (East/West), Chinese, and English higher education students	Differences exist in the relationships between the antecedents (i.e. quality, satisfaction, affect/emotion) and loyalty across the three cultural groups
<a href="#">Kassim and Abdullah (2010)</a>	Culture as a whole	Qatar and Malaysia	Culture does not moderate the effect of satisfaction and service quality on loyalty intentions. However, culture moderates the effect of satisfaction on trust, being this influence higher for Qatari customers.
<a href="#">Dash et al. (2009)</a>	Power distance, individualism	Canada, India	Power distance and individualism cultural dimensions are correlated to SERVQUAL dimensions, both at the individual and the national level
<a href="#">Schoefer (2010)</a>	Hofstede's cultural dimensions	Chinese and English students	Individuals' cultural value orientations significantly influence the impact of the cognitive (i.e. perceived justice-based) and affective (i.e. emotion-based) antecedents to recovery satisfaction
<a href="#">Pantouvakis (2013)</a>	Culture as a whole	Austria, Germany, France, Belgium, USA, England, Dutch, Scandinavian countries, and other European countries	Culture moderates the link between satisfaction and loyalty

cultural dimensions are related to service quality (e.g. [Furrer et al., 2000](#)), but also that culture moderates the influence of the antecedents of loyalty (e.g. [Jin et al., 2008](#); [Smith and Reynolds, 2009](#)). Finally, most of previous studies focus on countries with high cultural differences, disregarding the relevance of service standardization in countries with little cultural differences. As well, there is a lack of works focused on Spanish speaking countries, which adds greater value to our research.

Therefore, this study aims to complement previous literature by analyzing the relationships between e-service

quality, satisfaction and loyalty intentions in two similar Spanish speaking countries with slight cultural differences (as it is the case of e-commerce between Spain and Argentina).

### The Hofstede's model of cultural values: comparing Spain and Argentina

The Hofstede's model (e.g. [Hofstede, 2001](#)) is probably the most accepted and employed framework to

explain cultural differences (e.g. Steenkamp and Geyskens, 2006; Olavarrieta, 2001). Following the original model, cultures may be distinguished according to four dimensions: power distance, individualism/collectivism, masculinity/femininity, and uncertainty avoidance. More recently, new dimensions such as pragmatism or indulgence have been added to the framework. Scales from 0 to 100 are provided for more than 70 countries for each dimension (data available at <http://geert-hofstede.com/countries.html>). In this way, each country has a position on each dimension, allowing the comparison to other countries.

Focusing the attention on the Hofstede's taxonomy, Argentina and Spain obtain similar values in most of the dimensions, with a greater difference in pragmatism (20 vs. 48 respectively), indulgence (62 vs. 44) and masculinity/femininity (56 vs. 42), as can be seen in Table 2. Looking at these figures, Argentina and Spain cultures are very similar, although Argentina is revealed as a little more masculine, less pragmatic and more indulgent society compared to Spain. Similarities between Spanish speaking countries are also clear in complementary frameworks based on Hofstede's (e.g. Smith and Dugan, 1996) or in alternative models such as the Seven Dimensions of Culture (Trompenaars and Hampden-Turner, 1997). However, these alternative frameworks usually provide much less information about the description of cultural values and the specific scores on these values for each country in the world, complicating culture comparison (e.g. Argentina vs. Spain).

Comparing both countries in Hofstede's description (The Hofstede Centre, 2014b,c), both cultures has a hierarchical society and a great concern for changing, ambiguous or undefined situations. However, Argentina society is a little more individualistic, has a very normative culture (exhibiting great respect for traditions and a focus on achieving quick results), a greater indulgence (with a willingness to realize their impulses related to enjoying life and having fun), and present more masculine elements (it has a higher need to excel and stand out, and show a stronger achievement orientation and assertiveness). In turn, Spain is a little more collectivistic, more pragmatic (Spanish people like to live in the moment), more restrained (with more social norms), and a more feminine country where consensus is a little more appreciated.

## Formulation of hypotheses

### Baseline model of e-loyalty formation

Satisfaction is a crucial variable in marketing literature. According to relationship marketing, satisfaction with previous interactions is a key determinant of the development of long-term oriented relationships (e.g. Ganesan, 1994; Bauer et al., 2002) since it may be seen as a standard point to determine the future behavior of the other party (Vázquez et al., 2000). Similarly, the Expectation-Disconfirmation Theory (e.g. Oliver, 1980) suggests that satisfaction reflects the degree to which previous expectations are met. Therefore, satisfied consumers will more likely continue the relationship with a company since the benefits they obtain are equal (or greater) to the expected benefits (Chiu et al., 2014). In sum, marketing literature suggests that a satisfied

consumer may be motivated to be loyal to the other party of the relationship (e.g. Anderson and Sullivan, 1993; Yoon and Kim, 2000), and this influence has been also supported in online context (e.g. Casalo et al., 2008). In addition, to complete this framework, several authors (e.g. Cronin et al., 2000; Fornell et al., 1996) have suggested the relevant role that service quality plays, especially in online environments (e.g. Cristobal et al., 2007; Harris and Goode, 2004), because it is a belief that helps consumers evaluate a given e-service and precede satisfaction that might be formed as a reaction to this evaluation (Chen et al., 2013). As well, some works have also established a direct link between service quality and loyalty (e.g. Cronin et al., 2000; Boulding et al., 1993; Bloemer et al., 1998). Investing in e-service quality and design might be an observable cue of the company commitment to the relationship with customers (Gefen et al., 2003), and therefore consumers might directly establish a preference for this company. Taking all these into account, we propose the following hypotheses that represent our baseline model to explain the development of loyalty intentions:

- H1. E-service quality has a positive influence on consumer satisfaction.
- H2. E-service quality has a positive influence on loyalty intentions.
- H3. Consumer satisfaction has a positive influence on loyalty intentions.

### The moderating effect of culture

Previous research already noted that the antecedents of loyalty may differ depending on market characteristics (Harris and Goode, 2004; Oliver, 1999). Similarly, Jiménez and San Martín (2014) found that consumers' country moderates the effect of the antecedents of purchase intentions. In order to improve the value of internationalization strategies' investments, marketers need to know whether and how to adapt their commercial web sites to the other culture, and demand useful and concrete guidance about how to proceed. More precisely, in order to achieve a high level of loyalty in a new market, managers have to decide whether to maintain the same web site and related services or to carry out an adaptation of the e-service. When the latter is possible, they can spend resources for the enhancement of e-service quality, or invest them in the improvement of customers' satisfaction. In our research context, we explore whether Spanish and Argentinian consumers differ in their loyalty intentions' formation, and to what extent e-service quality and satisfaction are relevant in each culture. As previously noted, Spain and Argentina have similar cultures, but present slight cultural differences according to the Hofstede framework that could help understand e-loyalty formation.

Attending to the definitions and operationalization of loyalty determinants in our research, e-service quality and satisfaction represent very different concepts. E-service quality reflects the user perception of the technical and managerial operations related to the functional attributes of the system (availability, efficiency, performance) (Parasuraman et al., 2005). On the other hand,

**Table 2** Cultural distance between Argentina and Spain.

Cultural dimension	Brief description	Score for Argentina	Score for Spain	Cultural distance
Power distance	Refers to how a society handles inequalities among people. In cultures with a large degree of power distance, people accept a hierarchical order without any further justification. In cultures with low power distance, people demand justification for inequalities of power.	57	49	8
Uncertainty avoidance	This dimension refers to the degree to which individuals of a society feel uncomfortable with uncertainty and the fact that the future can never be known.	86	86	0
Individualism (vs. collectivism)	In individualistic societies, individuals are expected to take care of only themselves and their immediate families. In collectivistic societies, individuals expect their relatives or members of a particular in-group to look after them in exchange for unquestioning loyalty.	51	46	5
Masculinity (vs. femininity)	A masculine society focuses on achievement and success; while caring for others and quality of life are dominant in a feminine society.	56	42	14
Pragmatism	This dimension refers to the priority of a society: to maintain some links with its own past or to deal with the challenges of the present/future. Low scores on this dimension describe a preference to maintain traditions and norms while viewing societal change with suspicion.	20	48	28
Indulgence	Indulgence refers to the extent to which people try to control their desires and impulses. While indulgent societies allow satisfaction of desires related to enjoying life and having fun, restraint societies are regulated by strict social norms.	62	44	18

Elaborated by the authors with values and information obtained from [The Hofstede Centre \(2014a,b,c\)](#).

satisfaction is conceived as an overall evaluation of all the outcomes and aspects that compose a relationship (Flavián et al., 2006); it would have an affective component based on the disconfirmation of expectations (Oliver, 1993), and it would be more related to hedonic factors (e.g. Jones et al., 2006). That is, relational, affective, and even hedonic aspects, which have a strong influence on people's well-being (e.g. Leung and Lee, 2005), may be participating in the consumer assessment of satisfaction.

Argentina and Spain differ in the masculinity/femininity dimension. Focusing on this dimension, while masculinity values include achievement and success, femininity ones are more related to the maintenance of long-term relationships and quality of life. In general, there is a consensus

to describe men and masculinity oriented cultures (i.e. Argentina in our case) as more focused on material success, task performance and services' utilitarian attributes (Furrer et al., 2000; De Mooij and Hofstede, 2002; San Martín and Jiménez, 2011). All these aspects are highly related to e-service quality since it favors the success of an interaction by, for example, minimizing transaction errors (Cristobal et al., 2007). Therefore, for more masculine cultures (Argentina), loyalty intentions may be more affected by e-service quality. On the other hand, women and femininity oriented cultures (i.e. Spain) tend to be more sensitive to affective cues and empathy, and attach greater value to long-term relationships (Furrer et al., 2000; Citrin et al., 2003; San Martín and Jiménez, 2011). Our satisfaction

variable reflects users' satisfaction with the relationship and the transaction experience, which seems to be more connected with the relevant aspects in femininity cultures. Thus, we expect that the effect of satisfaction on loyalty intentions will be greater for Spain, which is closer to femininity values in comparison to Argentina. In this respect, [García Sanchís and Gil Saura \(2005\)](#) already found that the effect of satisfaction on loyalty is greater in more feminine cultures.

Focusing on the pragmatism dimension, which is the greatest cultural difference between Spain and Argentina, no empirical evidence has been found about its influence on e-loyalty formation (probably because this dimension was added to the Hofstede's framework recently). However, pragmatism description by Hofstede provides some signals in favor of a moderation effect too. Cultures with a low score on pragmatism, as it is the case of Argentina, prefer to maintain traditions and norms while viewing change with suspicion, and would be more cautious about novelties. E-service quality would be a relevant cue to form loyalty intentions to e-commerce sites, which involves technological innovation and uncertainty, specifically for societies with a lower pragmatism (i.e. Argentina). In turn, more pragmatic cultures (like Spain in our case) tend to be more prepared for the future and value the present more than the past. Accordingly, pragmatic cultures might focus more on satisfaction as an overall evaluation of the relationship ([Flavián et al., 2006](#)) which is built up over time ([Oliver, 1999](#)) and takes into account all interactions between the parties, even the most recent ones. Therefore, satisfaction may be more relevant for more pragmatic societies (like Spain when compared to Argentina).

Individualism/collectivism slight difference between both countries could also have an impact on e-loyalty formation. We may note that Argentina is a little bit more individualistic than Spain, so people's self-image in Argentina may be more defined in terms of "I" rather than "we". According to [Steenkamp and Geyskens \(2006\)](#), people in individualistic societies place their personal goals ahead of others, and therefore may give a greater importance to e-service quality since this belief is more related to success, performance or achievement. As well, factual ([Okazaki and Alonso Rivas, 2002](#)) and tangible ([García Sanchís and Gil Saura, 2005](#)) cues that are much related to the dimensions of e-service quality (e.g. efficiency, service availability) has been proposed to be more relevant in individualistic cultures. On the other hand, collectivistic cultures show a greater degree of group behavior and thus may value more the affective result of the relationship with a company. In this way, [Smith and Reynolds \(2009\)](#) propose that for individualist cultures, cognitive measures (quality in our case) will be more effective than affective measures (satisfaction in our case) as predictors of behavioral intentions toward services; and the opposite for collectivistic cultures.

The remaining cultural dimensions suggest ambivalent or minor influences on e-loyalty formation. For example, Argentina scores higher in indulgence, which relates to the desires of enjoying life and having fun. This could be related to the satisfaction variable; but Hofstede describes Spain ([The Hofstede Centre, 2014c](#)) as "the country that has given the meaning of 'fiesta' to the world", or expresses that "Spanish people like to live in the moment", which suggest

that Spanish culture could also give a high value to satisfaction and the affective aspects of e-commerce. In addition, the differences in terms of uncertainty avoidance and power distance dimensions between Argentina and Spain are very small; thus, the possible influence of these two dimensions seems to be irrelevant.

Overall, we expect that e-service quality will be more relevant for the Argentinian culture (since it exhibits a higher preference for achievement or material reward for success and a higher caution toward innovations) whereas satisfaction will be more important in the Spanish culture (since it presents a higher preference for cooperation, caring for the others and affective relationships that focus on the present), and propose the following hypotheses:

**H4a.** The influence of e-service quality on loyalty intentions is greater for Argentinian consumers.

**H4b.** The influence of consumer satisfaction on loyalty intentions is greater for Spanish consumers.

### Direct and moderating effects of control variables

For the sake of completeness, we contemplate that other socio-demographic variables aligned with cultural values complete and help better appraise the potential findings of our research model. Indeed, literature from many fields and methodologies recommend the use of basic socio-demographic control variables to test their effect on dependent variables (e.g. [Sun and Zhang, 2006](#)). According to [Schwartz \(1999\)](#), comparing representative country samples is not enough in cross-cultural analyses, and it is necessary to control for demographic differences before confidently ascribe observed differences in values to the culture alone. Consequently, to clearly differentiate among the effects of culture and alternative explanatory variables influencing loyalty, we include gender, age, and education level as control variables in our model. We test both the moderating and direct effects of the three control variables on loyalty intentions.

It may be argued that the moderating effect of cultural differences could be masking moderating effects due to individuals' characteristics. First, gender is introduced as a control variable since it is the socio-demographic characteristic that could be more often confounded with the masculinity/femininity dimension among others. As well, age and education level are also introduced in the model as control variables given their link to other cultural values ([Schwartz, 1999](#)) and the practical importance, even in online environments, of these easily identifiable consumer characteristics ([Steenkamp and Geyskens, 2006](#)). Previous research indicates that age and education/occupation level may be interrelated with cultural values and need to be considered in cross-cultural studies ([Hofstede et al., 1990](#); [Naumov and Puffer, 2000](#)). In sum, the effects of gender, age and education level are controlled in order to better evaluate the specific influence of culture in our research model. To be precise, we include control variables as alternative moderators of e-service quality and satisfaction effects on loyalty intentions; this way we aim to evaluate whether the proposed moderating effects are due to cultural differences or to the specific characteristics of the individuals.

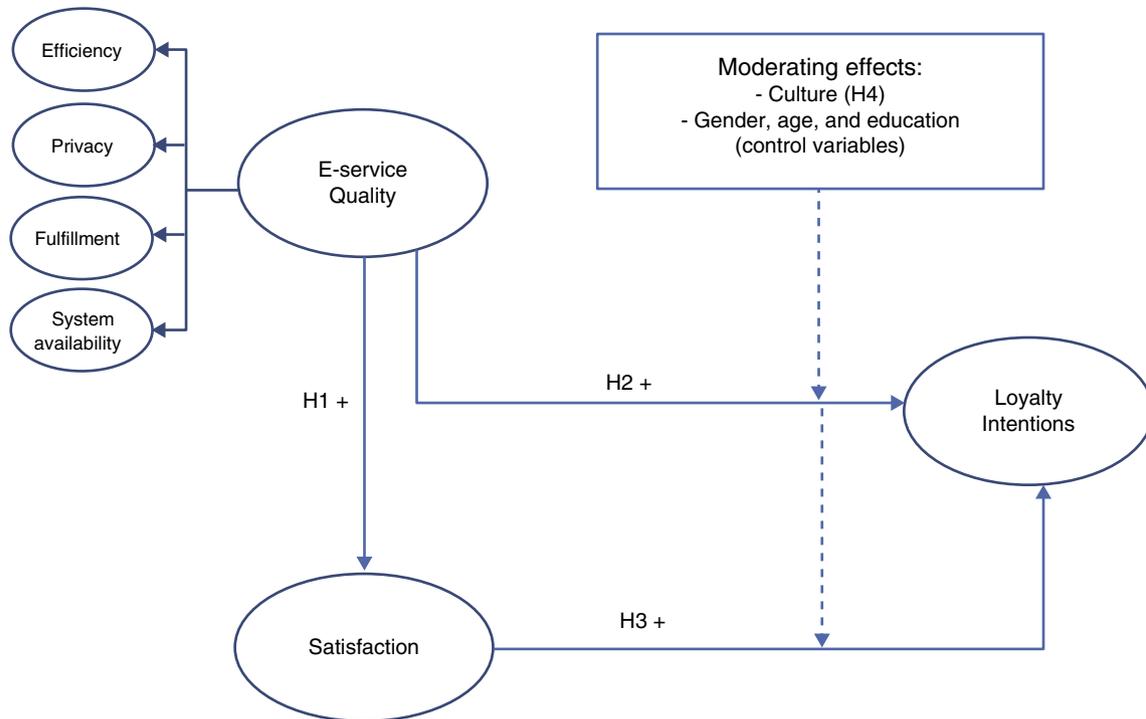


Figure 1 Proposed model and moderating effects.

To sum up, our proposed model can be seen in Fig. 1.

## Methodology

### Data collection

Data were collected from an online survey targeted to Spanish-speaking customers of e-services companies operating in both countries, Spain and Argentina. Specifically, the survey was addressed to Argentinian and Spanish users, responses of consumers from other nationalities were discarded a posteriori. Respondents had to select a web site they had transacted with at least one in the last year, offering e-services in Spanish, about which they have to answer the questionnaire. As well, we checked that the evaluated websites in each case operated at least in both countries through the same website. To collect data we published banners at well-known commercial and entertaining websites in both countries. Also, in order to increase the response rate, we place the survey link on international online social networks and forums, and send the link to people participating in previous similar studies through email lists in both countries. This method is consistent with common online research practices (e.g. Steenkamp and Geyskens, 2006) and cross-cultural studies (Kassim and Abdullah, 2010).

In total, the final sample was formed by 277 valid responses from users of commercial websites after removing repeated responses, atypical cases and incomplete questionnaires. The commercial websites evaluated by users belonged to categories such as retail stores, trips and tourism websites, e-banking, and other services. The need for evaluations of companies' websites operating in both countries resulted in a sample of 194 Spanish and 83

Argentinian users, probably because most of the companies operate in Spain as their principal market and in Argentina as a commercial business extension. We have compared the socio-demographic profile of our Spanish and Argentinian samples with the ones obtained in similar studies with broader samples conducted by relevant entities. In this line, Table 3 compares our sample characteristics with recent studies conducted by the consultancy comScore (2013a,b). In sum, the sample is quite well-balanced and we obtain similar profiles with just some differences in gender for Argentinians (a slightly greater proportion of men in our sample), and in age for Spanish (a little bit younger in our case).

Following Olavarrieta (2001), to better ensure the validity of the data collection method, we analyze the equivalence of cross-cultural data in terms of: (1) constructs, by using standard scales previously applied internationally (e.g. Kassim and Abdullah, 2010), (2) measurement, by checking that alpha values are over the .7 benchmark in both subsamples (Henseler et al., 2009), (3) sample, by means of sociodemographics comparison with the target population (see Table 3), and (4) data collection technique, by using the same self-administered online method.

### Measurement

To ensure content validity, measurement scales were borrowed from previous studies in the field to operationalize the constructs of the research model. Table 4 presents the scale items for all constructs. Some item scales needed to be adapted to our specific e-service context of analysis. Specifically, a four-item scale of satisfaction was borrowed from Janda et al. (2002) and Smith and Barclay (1997). Following

Table 3 Sample demographics.

	Spanish	Internet users in Spain (comScore, 2013a)	Argentiniens	Internet users in Argentina (comScore, 2013b)
<i>N</i>	194		83	
<i>Gender</i>				
Women	51.03%	48%	38.55%	50%
Men	48.97%	52%	61.45%	50%
<i>Age (years)</i>				
<24	26.29%	16.4%	16.87%	29.2%
25–34	32.47%	24.9%	32.53%	27.4%
35–44	25.77%	25.4%	25.30%	18.9%
>44	15.46%	33.4%	25.30%	24.5%
<i>Education level</i>				
Primary	2.06%	NA	1.20%	NA
Secondary	22.16%	NA	10.84%	NA
University	75.77%	NA	87.95%	NA

Note: NA = not available.

the dominant stream in e-service quality operationalization, we rely on the E-S-QUAL scale (Parasuraman et al., 2005) which considers e-service quality as a high-order construct formed by four dimensions (efficiency, privacy, fulfillment, and system availability). A short version of the E-S-QUAL scale was employed, and three items of each dimension were selected according to empirical validation processes on e-service quality multi-dimensional scales in previous works (Cristobal et al., 2007; Janda et al., 2002). Loyalty intentions were measured by three items based on the scales of Algesheimer et al. (2005), and Bhattacharjee (2001). For all these measurements we rely on 7-point Likert scales in which respondents had to assess their level of agreement to the statements ranging from 1 “strongly disagree” to 7 “strongly agree”. We also collect some basic information about relevant sample demographics such as users’ nationality (in order to divide participants into Argentinian and Spanish consumers), age, gender, and education level.

Content validity was ensured by the extensive review we undertook to identify suitable scales. We also tested for face validity using a variation of Zaichkowsky’s (1985) method, in which ten experts on marketing research classified each item as “clearly representative,” “somewhat representative,” or “not representative” of each construct. Only those items that produced a high level of consensus among the experts were retained (Lichtenstein et al., 1990).

### Analytical procedure

The data were analyzed first to assess measurement validity and second to run model estimation. In line with a growing number of researchers in e-commerce and international marketing, Partial Least Square (PLS) was chosen as estimation procedure (Henseler et al., 2009). PLS is particularly useful because it makes no assumptions regarding the underlying distribution of the data and allows the analysis of small data sets (Chin and Newsted, 1999; Stan and Saporta, 2005), as it is the case of our study. As well, according to

Roldán and Sánchez-Franco (2012), PLS is especially useful in exploratory studies in which theoretical foundations are limited, when the phenomenon under research is relatively new, and when conducting an incremental study (that is, a study which is based on a prior model but new measures and structural paths are then introduced into it). All these aspects happen in our research, since we analyze how slight differences in their cultures (previous literature has ignored this issue) affect the relationships among quality, satisfaction and loyalty intentions (which may be seen as a prior model). Data analysis was carried out using SmartPLS software version 2.0 (Ringle et al., 2005).

First, a confirmatory factor analysis confirmed the initial factor structure with all items loading above .7 on their respective construct as the recommended benchmark in literature suggests (Henseler et al., 2009). Second, because all construct composite reliabilities were higher than 0.8, all constructs also proofed to be internally consistent. As well, the average variance extracted (AVE) is .5 or over for all constructs, ensuring the convergent validity of scales. Table 4 presents factor loadings, composite reliability and AVE for each construct in the model. Finally, we confirm that the value of the square root of the AVE is greater than the shared variance among constructs (correlations) as further evidence for discriminant validity of the measures (Fornell and Larcker, 1981). Table 5 shows the descriptive statistics of the constructs, their square root of the AVE values, and correlations to test discriminant validity.

Following the dominant stream in literature dealing with e-service quality (e.g. Cristobal et al., 2007; Fassnacht and Koese, 2006), we considered this variable as a second order factor formed by four dimensions efficiency, privacy, fulfillment and system availability. Authors who developed e-service quality scales also recommend the use of high order factor from a theoretical perspective (Parasuraman et al., 2005), which contributes to clarify our proposed research model and facilitates result interpretation. Because PLS does not allow to directly introduce

**Table 4** Construct measurement loadings, reliability and convergent validity.

Variable and indicators	Factor loading	t-Value	$\rho_c$	AVE
<b>E-S-QUAL dimensions<sup>a</sup></b>				
- <i>Efficiency</i>			<b>.928</b>	<b>.811</b>
EFF1. This website makes easy to find what I need	.906	39.652		
EFF2. Information at this website is well organized	.936	62.928		
EFF3. This website enables me to get on to it quickly	.860	19.350		
- <i>Privacy</i>			<b>.880</b>	<b>.710</b>
PRIV1. This website protects information about my actions at the website	.891	21.299		
PRIV2. This website shows concern for the privacy of its users	.816	11.703		
PRIV3. This website does not share my personal information with other companies	.819	11.723		
- <i>Fulfillment</i>			<b>.927</b>	<b>.809</b>
FUL1. This website enables me to easily contact with the company	.834	14.089		
FUL2. This website delivers orders when promised	.936	55.493		
FUL3. This website is truthful about its offerings	.927	48.296		
- <i>System availability</i>			<b>.928</b>	<b>.811</b>
SYS1. This website is always available for making transactions	.898	37.208		
SYS2. This website launches and runs right away	.910	37.177		
SYS3. This website performs well when I enter my information	.893	24.823		
<b>E-S-QUAL (as second order factor)</b>			<b>.834</b>	<b>.557</b>
<i>Efficiency</i>	.725	12.731		
<i>Privacy</i>	.771	14.026		
<i>Fulfillment</i>	.744	12.464		
<i>System availability</i>	.745	9.488		
<i>Satisfaction</i>			<b>.934</b>	<b>.792</b>
SAT1. Based on my experience with this website, I feel very satisfied	.898	35.942		
SAT2. Overall, my relationship with this website has satisfied my expectations	.934	65.728		
SAT3. My relationship with this website is close to be perfect	.859	22.418		
SAT4. I think I did the right thing when I decided to use this website	.866	22.240		
<i>Loyalty intentions</i>			<b>.931</b>	<b>.818</b>
LOY1. My intentions are to continue using this website rather than any alternative mean	.924	44.559		
LOY2. I would actively search for this website in order to use it again	.918	44.254		
LOY3. I intend to continue using this website rather than discontinuing its use	.873	19.010		

Notes:  $\rho_c$  = composite reliability, AVE = average variance extracted.

<sup>a</sup> Reliability indicators for the four E-S-QUAL dimensions and their items loadings was obtained from the first stage of the second order calculation. For the rest of variables, including E-S-QUAL as second order factor, the model with all direct and moderation effects was considered.

high-order factors, we follow a two-step approach (e.g. Agarwal and Karahanna, 2000) to include E-S-QUAL as a second order factor. In the first stage, the model was estimated without the second-order; that is, E-S-QUAL was replaced by its four dimensions as one-dimensional factors. The latent variable scores estimated in the first stage were

subsequently used as indicators of the second order factor afterwards (Agarwal and Karahanna, 2000). That is, at the second stage, models were estimated with E-S-QUAL as a construct formed by four indicators corresponding with the latent variables scores of each of the four dimensions. As can be observed in Table 4, we confirmed measurement loadings

**Table 5** Descriptive statistics and discriminant validity.

	Mean	S.D.	1	2	3	4	5	6
1. Efficiency	5.68	1.18	<b>.900</b>					
2. Privacy	5.80	1.22	.366	<b>.823</b>				
3. Fulfillment	4.91	1.57	.438	.374	<b>.899</b>			
4. System availability	5.65	1.23	.327	.607	.351	<b>.900</b>		
5. Satisfaction	5.39	1.29	.554	.456	.530	.438	<b>.890</b>	
6. Loyalty intentions	5.58	1.37	.327	.363	.391	.355	.608	<b>.904</b>

Notes: Diagonal elements (bold figures) are the square root of the AVE (the variance shared between the constructs and their measures). Off-diagonal elements are the correlations among constructs.

as well as constructs' reliability and convergent validity at both stages of the process.

After this process, PLS was employed to estimate the models and test hypotheses. To estimate the model relationships and their significances we used the recommended bootstrap of 500 iterations (Chin, 1998). To assess the moderating effect of culture as the principal purpose of the study we built a model incorporating moderating variables in different stages. Initially, we built a baseline model considering only the main direct effects as presented in hypotheses 1–3. Then, we included culture as a dummy variable coded as 1 "Spanish culture" and 0 "Argentinian culture". The moderating effect of cultural differences on loyalty intentions implied the creation of interaction terms resulting by multiplying the values of culture by e-service quality, and culture by satisfaction. To better assess the influence of culture on loyalty intentions, we also consider its direct effect.

We introduced three control variables in order to compare the influence of culture with those influences exerted by alternative variables (control variables). As control variables, we included gender dummy coded 1 "woman gender" and 0 "man gender". Age and education variables were operationalized as ordinal scales corresponding with the progressive intervals already explained in the sample demographic description (see Table 3). We proceed similarly to culture and consider both the direct and moderating effects of control variables on loyalty intentions.

In sum, as depicted in Table 6, we tested the baseline model and added the effect of culture, gender, age, and education level each one separately, and all four together in order to check the suitability of our proposed model.

## Results

### Test of hypotheses

Table 6 shows the results from the PLS analyses. The first column of the table contains the results for the baseline relationship model including the effects of e-service quality on satisfaction and loyalty intentions, and the effect of satisfaction on loyalty intentions. In support of H1, results reveal that e-service quality has a high and positive impact on satisfaction ( $\beta = .668, p < .01$ ). Also the effect of satisfaction on loyalty intentions is positive and significant ( $\beta = .616, p < .01$ ), in favor of the proposed H3. Nevertheless, H2 is not supported since the effect of e-service quality on loyalty intentions is non-significant ( $\beta = .136, p > .10$ ); this result will be further commented in the discussion section. Thus, the

results of the baseline model show that two of the three preliminary hypotheses are supported. These direct effects of the baseline model with similar levels of significance are maintained along the alternative specifications when additional variables are introduced.

The second column of Table 6 presents our proposed model, which is the baseline model including culture in order to check H4a and H4b. As previously hypothesized, results suggest that slight cultural differences moderates the effects received by loyalty intentions from its antecedents. Specifically, the effect of e-service quality on loyalty intentions is reduced in the Spanish culture – compared to the Argentinian one –, acting as a moderator ( $\beta = -.313, p < .05$ ), in support of H4a. Interestingly, the effect of satisfaction on loyalty intentions is increased in the Spanish culture ( $\beta = .272, p < .05$ ) – compared to the Argentinian one –, supporting in this case H4b. Therefore, a more consensus-oriented culture like the Spanish (The Hofstede Centre, 2014c) moderates negatively the effect of e-service quality and positively the effect of satisfaction on loyalty intentions. In other words, in comparison to Argentinian culture which presents a higher preference for achievement, assertiveness and material reward for success, Spain, which is a culture ruled by a higher preference for cooperation, modesty, caring for the weak and quality of life tend to give more relevance to satisfaction and less to e-service quality when deciding to be loyal to an online service provider. The direct effect of culture on loyalty intentions included as a control pathway is not significant ( $\beta = -.002, p > .10$ ). This lack of effect expresses that slight cultural differences does not directly affect loyalty intentions but just act as a moderator.

The columns 3–5 of Table 6 present the inclusion of the control variables gender, age, and education level to the baseline model separately. The last column of the table includes the moderating effect of slight cultural differences and the three control variables at the same time. In order to abbreviate on results' description, we focus on the latest complete model in which all moderators are considered. Results show that the effect of e-service quality on loyalty intentions is not moderated by any of the control variables: gender ( $\beta = -.036, p > .10$ ), age ( $\beta = .130, p > .10$ ), or education level ( $\beta = .010, p > .10$ ). However the moderating effect of culture continues being negative and significant ( $\beta = -.267, p < .10$ ). Analogously, results also reveal that the effect of satisfaction on loyalty intentions is not moderated by gender ( $\beta = -.028, p > .10$ ), nor by age ( $\beta = -.054, p > .10$ ), or education level ( $\beta = -.107, p > .10$ ), but it continues being

**Table 6** PLS results of estimated coefficients.

	Baseline model		Culture (proposed model)		Gender		Age		Education level		Culture + control variables	
	$\beta$	<i>t</i>	$\beta$	<i>t</i>	$\beta$	<i>t</i>	$\beta$	<i>t</i>	$\beta$	<i>t</i>	$\beta$	<i>t</i>
<i>Direct effects on satisfaction</i>												
E-S-QUAL (H1)	.668	11.01***	.668	11.23***	.668	11.22***	.668	11.25***	.668	10.87***	.668	11.28***
<i>Direct effects on loyalty</i>												
E-S-QUAL (H2)	.136	.96	.099	.79	.146	.98	.110	.84	.141	1.08	.091	.75
Satisfaction (H3)	.616	3.77***	.544	4.61***	.503	3.59***	.544	4.45***	.515	3.86***	.555	4.42***
Culture			-.002	.02							.005	.05
Gender					-.023	.26					.006	.08
Age							-.032	.37			-.038	.43
Education level									.106	1.12	.113	1.10
<i>Moderation effects on loyalty</i>												
E-S-QUAL $\times$ culture (H4a)			-.313	2.05**							-.267	1.83*
E-S-QUAL $\times$ gender					.067	.42					-.036	.27
E-S-QUAL $\times$ age							.147	.80			.130	.80
E-S-QUAL $\times$ education level									.013	.09	-.010	.07
Satisfaction $\times$ culture (H4b)			.272	2.03**							.242	1.76*
Satisfaction $\times$ gender					.018	.13					-.028	.24
Satisfaction $\times$ age							-.102	.75	-.134	.91	-.054	.46
Satisfaction $\times$ education level											-.107	.70
$R^2$ satisfaction		.446		.446		.446		.446		.446		.446
$R^2$ loyalty		.379		.438		.384		.394		.404		.472
$Q^2$ loyalty		.300		.358		.315		.324		.322		.385

Notes: Codification of dummy variables: culture (Spain = 1, Argentina = 0), gender (1 = woman, 0 = man).

\*  $p < .1$ .

\*\*  $p < .05$ .

\*\*\*  $p < .01$ .

**Table 7** Consistent PLS estimated coefficients.

	Baseline model $\beta$	Culture (proposed model) $\beta$	Culture + control variables $\beta$
<i>Direct effects on satisfaction</i>			
E-S-QUAL (H1)	.813***	.813***	.813***
<i>Direct effects on loyalty</i>			
E-S-QUAL (H2)	.143	.142	.082
Satisfaction (H3)	.550***	.552**	.588***
Culture		.011	.055
Gender			.047
Age			-.026
Education level			.102
$R^2$ satisfaction	.661	.661	.661
$R^2$ loyalty	.452	.452	.477

Notes: Codification of dummy variables: culture (Spain 1, Argentina=0), gender (1 = woman, 0 = man).

\* $p < .1$ .

\*\* $p < .05$ .

\*\*\*  $p < .01$ .

positively moderated by culture ( $\beta = .242, p < .10$ ). Additionally, we also control the direct effect of each of these variables on loyalty intentions. The direct effect received by loyalty intentions from culture ( $\beta = .005, p > .10$ ), gender ( $\beta = .006, p > .10$ ), age ( $\beta = -.038, p > .10$ ), and education level ( $\beta = .113, p > .10$ ), is not significant for any of the variables. Thus, results suggest that the inclusion of control variables does not help understand the influences to improve loyalty intentions; instead, the slight cultural differences between Spain and Argentina are confirmed as a relevant factor moderating the influence of loyalty antecedents on loyalty intentions. Consequently and summarizing, results support our hypotheses H4a and H4b in favor of culture as moderating variable.

### Predictive capability

In order to examine the predictive power of the models, we compare the proposed model to alternative specifications in terms of  $R^2$  adjusted. To calculate the degree to which the phenomenon is present in the population we use effect size ( $f^2$ ) as provided in Cohen's (1988) formula:  $f^2 = (R^2 \text{ included} - R^2 \text{ excluded}) / (1 - R^2 \text{ included})$ . The effect size indicator ( $f^2$ ) represent the variation of explained variance as a consequence of the inclusion of an additional variable, considering effect sizes of 0.15 as medium and 0.35 as large (Henseler et al., 2009). In terms of explained variance, the baseline model presents the lower  $R^2$  value of loyalty intentions ( $R^2 = .379$ ). The level of loyalty intentions variance explained increases when culture is added to the model,  $R^2 = .438$  ( $f^2 = .11$ ). Nevertheless, as it is predictable given the inclusion of several antecedents of loyalty intentions, the model which includes all moderating variables together (culture and all control variables) reaches a higher level of explained variance,  $R^2 = .472$ . The inclusion of control variables alone, such as gender ( $R^2 = .384, f^2 = .01$ ), to the baseline model present almost no variation of predictive power in terms of effect size. It is important to note the higher level of explained variance obtained by our proposed

model that includes culture, specifically when it is compared to the level obtained by alternative specifications.

As an additional assessment of the models' predictive capability, we examined the Stone-Geisser's  $Q^2$  (Stone, 1974; Geisser, 1975). The Stone-Geisser's criterion assess the model capability to predict the endogenous latent variable indicator (in our model: loyalty intentions) using the blindfolding technique (Tenenhaus et al., 2005). All the alternative specifications considered in this research presents  $Q^2$  values above zero, which means that observed values are well reconstructed as a sign of models' predictive relevance (Henseler et al., 2009). Specifically,  $Q^2$  indicators fall between .300 in the baseline model and .385 in the model which consider all the possible antecedents of loyalty intentions. Similarly to  $f^2$ , the relative impact of the inclusion of variables on the predictive relevance can be assessed by means of the  $Q^2$  indicator:  $Q^2 = (Q^2 \text{ included} - Q^2 \text{ excluded}) / (1 - Q^2 \text{ included})$ . As can be observed in Table 6, compared to the baseline model, the model including only culture ( $Q^2 = .09$ ) is more relevant in terms of predictive capability that the models including only one control variable such as gender ( $Q^2 = .02$ ). Note that predictive relevance relative impact is low for  $Q^2$  values around .02, and medium for values around .15 (Henseler et al., 2009). Analysis on  $Q^2$  indicator validates our proposed model in terms of predictive relevance and the suitability of slight cultural differences between Spain and Argentina as a moderator.

### Post hoc analysis: consistent PLS

PLS is a successful estimation technique that is increasing as a research methodology in high-impact journals (e.g. Henseler et al., 2009; Chen et al., 2013; Chiu et al., 2014). However, PLS has been also criticized and an intense debate has started with articles devoted to expound either the defects (see Rönkkö and Evermann, 2013) or the virtues (Henseler et al., 2014) of this technique.

PLS has been criticized because it usually tends to overestimate the loadings in absolute value and to underestimate

correlations between the latent variables (e.g. [Dijkstra and Schermelleh-Engel, 2014](#)). Besides, PLS estimates are suggested to be only consistent at large – both in the number of indicators and observations – ([Wold, 1982](#)). To overcome these deficiencies, consistent PLS (PLSc) has been recently introduced as an important advance to PLS ([Dijkstra and Henseler, 2013](#)). Specifically, PLSc proposes simple, non-iterative corrections that leads to true parameter values, avoiding over and underestimation; in addition PLSc estimators are consistent and asymptotically normal ([Dijkstra and Schermelleh-Engel, 2014](#)).

Although PLS is a suitable technique according to the aims and nature of our research, we have replicated our model using an alpha version of a new Analysis of Related Composites (ARCOS) software<sup>3</sup> that implements PLSc ([Henseler and Dijkstra, 2014](#)). As can be seen in [Table 7](#), results are very similar to those provided by traditional PLS, with no change in the significance of any direct effect on loyalty intentions (we would like to note that since the software is still in its alpha version, we have not been able to include interaction terms). That is, the direct effect of satisfaction on loyalty intentions remains significant, while the direct effects of e-service quality, culture and control variables are non-significant. Therefore, the application of PLSc gives additional support to our findings.

## Conclusions

E-marketers developing internationalization strategies have to consider the particularities of foreign markets' cultures (e.g. [Singh et al., 2010](#)). Although previous literature has already studied internationalization to culturally distant countries, little research effort has been devoted to e-commerce strategies to be applied in similar countries, especially in the Latin American market. Our research explores how small cultural differences may reach a high influence in online consumer behavior, and specifically in e-loyalty formation. The analysis of loyalty is especially relevant because it may favor not only product repurchase but also positive word-of-mouth, which may enhance company image or boosting business performance in the long-term ([Cambra et al., 2014](#)).

Specifically, we have analyzed the relationships between some of the key variables in online consumer behavior (e-service quality, satisfaction and e-loyalty intentions), considering possible moderating effects due to cross-cultural differences. We have based on well-accepted Hofstede's works about cultural differences among countries ([Hofstede, 1980, 2001; Hofstede et al., 2010](#)). Also, this cross-cultural research centers on two countries with apparently similar cultures (Argentina and Spain), but with subtle differences in some of their cultural dimensions ([The Hofstede Centre, 2014b,c](#)).

Results of PLS and PLSc estimations revealed that e-loyalty intentions are positively and directly influenced by consumer satisfaction. As well, the positive effect of e-service quality on satisfaction is also confirmed; however, the effect of e-service quality on e-loyalty intentions is

non-significant. This non-significant effect of quality is especially interesting, since previous studies have usually found a positive relationship among these constructs (e.g. [Cronin et al., 2000; Boulding et al., 1993; Bloemer et al., 1998](#)). However, as several authors note ([Harris and Goode, 2004; Oliver, 1999](#)), the antecedents of loyalty may be different depending on the market characteristics. Our subsequent results are in this line and suggest that consumers from different cultures, even with slight differences, may consider different factors to form loyalty.

Second, focusing the attention on the influence of culture, results show that slight differences exerts a moderating effect of the relationships between e-loyalty intentions and its antecedent factors. In this way, the relationship between e-service quality and e-loyalty intentions is weakened in countries closer to femininity values, and higher in pragmatism and individualism (in our case, Spain). This result agrees with previous literature on e-commerce adoption, in which individualism cultural dimension is proposed to reinforce the influence of e-service quality on loyalty ([Smith and Reynolds, 2009](#)), and masculinity positively moderates the effects of quality related variables such as perceived usefulness and ease-of use on intention to use ([Yoon, 2009](#)). In turn, the relationship between consumer satisfaction and e-loyalty intentions is strengthened in cultures with a higher level of femininity, pragmatism and collectivism. In this line, previous findings have already provided evidence that the effect of satisfaction on e-loyalty is reinforced for high collectivistic cultures (e.g. [Jin et al., 2008](#)). Thus, even small, cultural differences seem to be also relevant in impersonal contexts like e-commerce, reinforcing our assumption that culture influences the way in which customers interpret and value the characteristics of commercial websites.

These moderating effects due to subtle culture differences are also corroborated thanks to the introduction of control variables. Specifically, we also analyzed the possible moderating effects of gender, age, and education level which have been considered in similar studies (e.g. [Nelson et al., 2006; Hofstede and McCrae, 2004](#)) and are adequate to control the effect of culture as they are the socio-demographic characteristics more related to cultural values. Findings show that the moderating effects of these control variables on the influence of e-loyalty intentions determinants is non-significant, supporting that culture is the main factor moderating the aforementioned relationships.

In sum, the results obtained in this research indicate that even in apparently similar cultures, the existence of specific cultural characteristics may affect consumer behavior and therefore, they need to be considered by companies in order to develop internationalization marketing strategies.

## Managerial implications

In spite of the evidence that cultural differences may affect perceptions, attitudes, values, habits and consumer behaviors, there is not a clear pattern about how to implement international marketing policies dealing with cultural differences between markets. In this respect, two main alternatives should be noted. First, it is possible to find firms that try to adapt their strategies to the particularities of each country, such as modifying language use or

<sup>3</sup> The software, which is not available yet, was directly provided by Prof. Jörg Henseler.

communication policies (e.g. changes in the brand name to avoid negative connotations in certain cultures). For example, [Okazaki and Alonso Rivas \(2002\)](#) observed that some Japanese webs adapted their online communication strategy in external markets (i.e. Spain and the U.S.) according to the different values inherent in local markets. Second, we find companies that standardize their commercial strategy (the so-called global marketing), proposing the same marketing actions regardless of the country or culture in which they operate.

Global marketing strategies are based on the fact that consumer are homogenizing their behavior as a consequence of aspects such as long-distance travels or the influence of new technologies ([Levitt, 1983a,b](#)). Some authors suggest indeed that standardization may be considered the most influential aspect of international marketing strategy (e.g. [Schilke et al., 2009](#)). Nevertheless, some authors have criticized these globalization strategies (e.g. [Hill and Winski, 1987](#); [Lipman, 1988](#)).

According to our results, even slight cultural differences (like the ones between Spain and Argentina) may affect the consumer loyalty formation process. Indeed, this moderating effect of culture suggests that e-service adaptation to different countries, instead of standardization, could be a good strategic decision as far as loyalty returns overwhelm the costs of this culture adaptation. Our findings suggest that a more masculine, individualistic and less pragmatic culture (like Argentina when compared to Spain) will require a special attention on the quality of the e-services offered. In turn, in a more feminine, collectivistic and pragmatic culture (like Spain when compared to Argentina), companies should not only attend e-service quality, but also focus on other aspects that may increase the levels of consumer satisfaction such as the presence of hedonic elements in their websites ([Chiu et al., 2014](#)). Therefore, investments in website design and the management of online strategies should take into account the specific aspects of each culture. In this way, companies should consider cultural differences between countries and empirically analyze how these differences are influencing customers' evaluation of commercial websites and loyalty formation. This suggestion is in line with the previous conclusion that culturally congruent websites have a positive impact on performance measures such as overall effectiveness ([Vyncke and Brengman, 2010](#)).

In sum, this research shed some light on a current trend almost unexplored by researchers on the Latin American market: internationalization processes by means of e-commerce. Specifically, our cross-cultural study reveals the need to adapt e-commerce strategies in order to increase e-loyalty formation abroad, even for internationalization processes to countries with similar cultures. Thus, companies should carefully adapt their commercial websites accordingly.

### Future research lines and limitations

This research relies on the cultural dimensions framework developed by Hofstede (e.g. [Hofstede, 1980](#)); however, this theory has some limitations that have been acknowledged in previous research (e.g. [McSweeney, 2002](#)). Specifically, it is recognized that cultural characteristics are not static

aspects inside the frontiers of a given country, but this framework is very categorical in determining frontiers and only considers differences between countries but not inside them. Therefore, it could be interesting to analyze cultural differences not only at the national level, but also at the individual level. As well, the study should be replicated across other countries, and following the criticisms made by some authors to the simplicity of the Hofstede's model when applied to computer-mediated-communication (e.g. [Ess and Sudweeks, 2005](#)), it would be interesting to confirm the results of this research by developing a specific theory more adapted to this context or taking other frameworks of cultural analysis as a theoretical basis (e.g. the Seven Dimensions of Culture, [Trompenaars and Hampden-Turner, 1997](#)).

To partially solve these issues and to better understand the role of culture, we have included socio-demographic characteristics (gender, age and educational level) in our research model; so that we are able to control the possible effects due to heterogeneity between subjects and isolate the explicit effect of culture. However, we have to acknowledge the limitations of the sample; there is a small number of Argentinian participants (especially women), and participants are users of online networks, which may not be representative of all online consumers. Therefore, using a sample that better represents in terms of age and gender the population under analysis would be useful. As well, a more complete study should be performed to better assess additional factors that differ between both countries and might also affect consumers' choices (e.g. economic factors), or include additional personal characteristics (e.g. personality traits) that may differ among participants. In addition, our study has considered a great heterogeneity of online services; therefore, replicating the research model in specific sectors may be useful to generalize results.

New research lines should face the challenge of finding alternative cross-cultural differences between culturally similar countries than those observed between Argentina and Spain. In addition, due to the lack of studies analyzing the role of pragmatism or indulgence on online consumer behavior, it may be interesting to investigate more in-depth the possible influences that these dimensions may have in other relevant aspects nowadays, such as the phenomenon of social networking.

Finally, our research finds that e-service quality indirectly affects loyalty by means of satisfaction. Nevertheless, the lack of a significant direct effect between e-service quality and loyalty require further analysis. Focusing on e-commerce internationalization, our study reveals that slight cultural differences moderate this effect; therefore, culture could emerge as a crucial variable to understand the relevance of e-service quality in forming customers' e-loyalty intentions. As [Kozak et al. \(2004\)](#) notes, cultural differences may impact satisfaction levels, so this aspect should be investigated in more detail.

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