

# COSTS IN ELECTRONIC COMMERCE B2C FROM CUSTOMER'S PERSPECTIVE

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## ABSTRACT

Electronic commerce B2C (business to consumer) represents one of the most attractive and profitable electronic modes in today's economy, both from the perspective of the customer and from the firm's point of view. However, capturing customers and retaining them in such a competitive medium constitutes a challenge that can only be met by a serious and rigorous analysis of value. However, the customers' disposition to enjoy the benefits of on-line shopping depends on the reduction or elimination of the barriers to, or costs of, that shopping mode. The empirical validation of a scale of costs in electronic commerce B2C from the customer perspective stands out as the principal conclusion that *design*, which represents the cost of learning of the context of the service, and *economy*, which measures the economic cost of the transaction, constitutes the fundamental barriers to the online purchase. *Security*, on the other hand, is beginning to lose its significance as an access barrier, thanks to the firms' efforts to limit the risks of online shopping to the customer.

## 1. INTRODUCTION

Electronic commerce B2C is receiving much more attention from academics and professionals due to the exponential growth that it has enjoyed in recent years and that is forecast for the near future. This growth is not gratuitous; there are logical reasons for it. From the retailer's point of view, Internet represents a way of reaching the customer with a more personalized and convenient offer by taking full advantage of its information potential (Wilson-Jeanselme and Reynolds, 2005). From the manufacturer's point of view, the virtual environment gives the company the opportunity to deal directly with the customer, with no need for intermediaries (Reynolds, 1997; Bitner, 2001; Gurau, 2003; Douglas *et al.*, 2003). As far as the customers are concerned, electronic commerce B2C allows them to access any web page 24 hours a day, 365 days of the year, to purchase without outside help and with significant price reductions (Darian, 1987; Szymanski and Hise, 2000; Page and Lepkowska-White, 2002; Khalifa and Liu, 2003).

Firms have, with every reason, taken the strategic opportunity offered by the Internet. As a result, small, medium and large firms co-exist in the electronic sphere (Muir and Douglas, 2001). That circumstance raises competition to new heights, which contributes to power on the Internet constantly changing (Singh, 2002). Moreover, as Wilson-Jeanselme and Reynolds (2005) establish, the competition on Internet is so fierce that it may even have a negative effect on the profitability of the transactions. As a parallel effect, customers now have a greater offer at the click of a mouse (Cox and Dale, 2001; Singh, 2002; Douglas *et al.*, 2003; Yang *et al.*, 2003) and complete and detailed information available to evaluate the actions of each company individually. This creates an efficient, almost perfect market with no information imbalances (Smith *et al.*, 1999; Brynjolfsson and Smith, 2000; Reynolds, 2000). This produces more demanding customers that have clear ideas of what they want and how they want it, and that ask for more, and tolerate fewer mistakes (Bitner, 2001; Cox and Dale, 2001; Muir and Douglas, 2001; Singh, 2002; Douglas *et al.*, 2003; Yang *et al.*, 2003).

It is here where the treatment of value from consumer's perspective takes on a strategic importance of the first order. As Wilson-Jeanselme and Reynolds (2005) observe, given the industry face a much more competitive environment, some business models of customer loyalty may not be

applicable. Therefore firms must reconstruct their chains of value to adapt to Internet and develop new ways of creating sustainable value to consumers (Wilson-Jeanselme and Reynolds, 2005). Outside the case of electronics, value is an important topic of debate for academics and professionals alike. Its importance basically lies in its role in the consumer's decision making process (Zeithaml, 1988; Cronin *et al.*, 1997; Bolton and Drew, 1991; Dodds *et al.*, 1991; Swait and Sweeney, 2000) and in attracting and retaining the consumer (Zeithaml, 1988; Wang *et al.*, 2004), since it plays a significant part in the prediction of purchasing conduct and the achievement of sustainable competitive advantages (Dodds *et al.*, 1991; Holbrook, 1994, 1999; Cronin *et al.*, 2000).

There are many interpretations of the nature and conceptualization of value. The most generally accepted of them is the value for money that the consumers receive; in other words, what is obtained for what is paid, and this refers to the purchased product or the result of the purchase. One significant contribution to this field is made by Zeithaml (1988) and is the result of the examination of the various interpretations of value expressed by the individuals in the study. In that work, four possible interpretations of the term value were obtained: *value as low price*; *value as the benefits I receive from the product*; *value is the quality I obtain for what I pay*; and *valor is what I obtain for what I contribute*. As Zeithaml (1988) comments, that last interpretation seems to be the most logical since it includes the previous three. In effect, it must be stressed that all the possible variables of purchase benefits and costs must be considered from the perspective of the decider, since the interpretation of value as an exchange between benefits and what I have to sacrifice is a widely accepted posture in the literature (Heinonen, 2004).

However, it is impossible to enjoy the benefits of the online purchase if the costs are high and they counter the willingness of the decider. Moreover, if the access barriers or costs persist, the growth of electronic commerce B2C slows down. Therefore, this article aims to analyze the sources of costs from the perspective of the customers in their online purchases. In addressing this matter, this paper is structured as follows. The first part reviews the question of costs in electronic commerce B2C in order to propose a theoretical model of costs from the customer perspective. The second section attempts to validate empirically the consistency of the theoretical proposal, and the objectives and methodology are set out. The third analyzes the results obtained from the statistical analyses of the data. The fourth sets out the principal academic and professional implications of the study and the final section presents the conclusions of the work and future lines of research.

## 2. COSTS IN ELECTRONIC TRANSACTIONS FROM THE CUSTOMER PERSPECTIVE

Based on the revision of the literature and on interviews with online shoppers and experts in the field of electronic commerce b2c, we propose a theoretical scale to measure costs relievers in online purchase (Table I), using fourth dimensions: *security*, *design*, *economy* and *time*. The dimension *security* measures the cost arising from the customer's perception of insecurity in the online transaction. The dimension *design* represents the cost of the customer's learning to perform the traditional purchase act in a format other than the physical context. The dimension *economy* quantifies the total economic cost of the transaction. Lastly, the dimension *time* considers the cost of convenience by measuring the waiting times during and after the transaction.

**TABLE I.** E-costs: dimensions and attributes

<b>DIMENSIONS</b>	<b>COST TYPE</b>	<b>ATTRIBUTES</b>
<b>Design</b>	Cost of learning	Intuitive navigation ; navigation tools; signposting of pages; explanation and orientation

<b>Security</b>	Cost of uncertainty	Protection policy of the financial and personal data; image; reason and logic of the data required.
<b>Economy</b>	Economic cost	Prices; financial charges
<b>Time</b>	Cost of convenience	Quick downloading; quick delivery

*Fuente:* elaboración propia.

### *The security dimension as the cost of uncertainty*

In electronic commerce B2C this dimension occupies an important position from the moment that users perceive a significant risk in the virtual media stemming from the possibility of the customer's personal and financial data being used improperly (Pechtl, 2003). This represents a significant access barrier to the online customer's willingness to purchase that hinders the adoption of Internet (Miyazaki and Fernández, 2001). In the literature security is considered a key evaluative criterion in online shopping (Culnan and Armstrong, 1999) and an absolute minimum condition to begin the purchase (Odekerken-Schröder and Wetzels, 2003). Yang *et al.* (2003) confirm this when they analyze the dimensions that determine quality for present and potential purchasers on the Internet. One important conclusion of their study is that, while *reliability* is the most important dimension for present purchasers, as also occurs in the physical market, *security* is the most important to potential purchasers.

As a result, practically all the texts that analyze and advise on the characteristics that a website must contain in this subject mention security and privacy as key elements. Security is mainly related to the protection of the personal and financial data that the customer must provide in order to perform the operation with no financial loss. Basically, privacy centers on the appropriate use of the data, which must not be passed to other companies for unauthorized use, such as the sending of unsolicited information or registration of the sales transaction (Zeithaml, 2002; Yang *et al.*, 2003). For the purpose of constructing the scale, a dimension, *security*, was created. This dimension includes data protection in its security and confidentiality aspect, the image and recognition of the company in the market as well as the logic of the data required as characteristics which reduces uncertainty.

### *The design dimension as the cost of learning*

The creation of a streamlined, fast and understandable design appears as an important element in electronic encounters that increases the convenience perceived by the customer (Wilson-Jeanselme, 2001; Wilson-Jeanselme and Reynolds, 2005). As Srinivasan *et al.*, (2002) indicate, the very nature of electronic transactions means that consumers expect fast, efficient processes that favor the development of the purchase. Ahn *et al.* (2001) warn that, in the absence of that speed and efficiency, many consumers will choose to leave the website without completing the purchase process. Moreover, as Cao and Gruca (2004) state, transaction inconvenience represents an opportunity cost to consumers.

As Wilson-Jeanselme and Reynolds (2005) reflect, all of that is logical from the moment that Internet changes the context, content and contact of the traditional transactions. In effect, the web page becomes the place where customer and company meet; it represents the latter, and replaces the sales staff and the functions of the traditional tangible aspects of physical encounters. In this context, the user must be able to complete the process up to the point of payment or interrupt it in any of the preceding steps. Therefore, the tools and design that orient, guide, explain and locate must be available, thus enabling the customer to purchase without the need for assistance (O'Neill *et al.*, 2001; Douglas *et al.*, 2003; Trocchia and Janda, 2003).

On that basis, as Madu and Madu (2002) explain, website designers must heed the needs and wishes of the consumers, even more so when usability is the starting point for gaining the trust and support of the users. Yang *et al.* (2003) highlight this when they state that customers must find navigation easy, otherwise they will feel confused and find it complicated to use, leading them to reject it. An efficient, fast design increases convenience to the customer and helps achieve utilitarian objectives, while a muddled and complex design represents a significant barrier and may constitute a valid reason for the potential customer to decide not to return to the site (Odekerken-Schröder and Wetzels, 2003). Furthermore, simple, functional designs facilitate learning by reproducing standard models on the Internet and reducing the inexperienced user's perceptions of errors in the design.

#### *The dimension economy as the economic cost*

From the perspective of the electronic customer, price is one of the key comparative elements in the electronic market. Unlike the physical market, where the imperfect market increases ignorance of the customer, the electronic market is a more informatively perfect market (Reynolds, 2000). Consequently, Porter (2001) warns of the loss of profitability that firms may suffer on Internet. Brynjolfsson and Smith (2000) also recognize this casuistry, which they call "the efficiency of Internet", and that would lead to vendors on Internet obtaining zero economic profit because the consumers are well-informed about the products and prices and the location of the vendor is irrelevant to them. This means that prices will be homogeneous and not an element that differentiates websites.

However, a review of the literature reveals empirical data that support the existence of price dispersion rather than a uniform policy (Brynjolfsson and Smith, 2000; Smith *et al.*, 1999; Pan *et al.*, 2002). More specifically, Smith, Bailey and Brynjolfsson (1999) state that factors such as the trust transmitted by the vendor, brand image, or the convenience of a familiar design may justify higher prices. However, the perceived total cost is not only the price of the product, but also the charges arising from the acquisition. Thus, Cao and Gruca (2004) find a direct relationship between after-sales services and the price of products sold on Internet. In other words, the virtual vendors with the highest prices also have superior post-purchase performance.

Thus, prices cease to be homogeneous and consequently become a comparative element and a purchase cost, even more so when the new information and communications technologies offer firms great opportunities to reduce their costs in their chains of value (Bitner 2001; Bitner *et al.*, 2000; Burke 2002; Levenburg, 2005; Meuter *et al.*, (2000); Nicholls and Waltson, 2005). It is starting to become normal practice that firms pass on part of their cost-savings to customer by making significant reductions in prices and purchase costs (Keh and Shieh, 2001; Kaufman-Scarborough and Lindquist, 2002; Raijas, 2002), thus, the firm satisfies and values the customer (Darian, 1987; Keeny, 1999; Mathwick *et al.*, 2001).

#### *The dimension time as the cost of convenience*

According to Baker *et al.* (2002), time and effort materialize in the rational costs of a purchase process. In that respect, a significant percentage of people wishing to purchase a product or service on the Internet abandon the attempt because of the slowness of the page download. To reduce the loss of those potential customers it is necessary to increase the speed of the websites. Hurley and Birkwood (1997) share that posture when they warn that sites that are too slow in downloading and being displayed on the user's computer encourage users to abandon the process.

Another aspect of time in electronic commerce B2C that affects the perceived cost is the product delivery time. In this respect, unlike the online purchase, the traditional purchase has the advantage of immediate receipt of the purchased product (Alba *et al.*, 1997). However, customers

weigh up the other benefits and decide to buy electronically. In order to reduce the perceived cost of the delivery time, firms must endeavor to deliver the agreed product as soon as possible (Chen *et al.*, 2003). It is here that the function of logistics acquires strategic importance by becoming one the most important variables of success in electronic commerce.

As support for that proposition, the works of Wilson-Jeanselme (2001) and Wilson-Jeanselme and Reynolds (2005) argue that the speed of the transactions and quick delivery of the order are aspects that generate customer convenience and any deficiencies in those aspects reduces value in the purchase process.

### 3. OBJETIVOS DE LA INVESTIGACIÓN Y METODOLOGÍA

Based on the above, this section presents the objectives of the research and the methodology used. Firstly, there are three objectives of this work that address the principal questions arising from the theoretical review.

*Objective 1:* “To analyze the dimensionality of cost relievers in electronic commerce B2C”. There is a statistical analysis of the theoretical scale comprising 11 attributes with the aim of examining the proposed dimensionality in order to configure a scale that includes only those variables that really provide relevant information about cost.

*Objective 2:* “To analyze the relationship between the scale of cost relievers and perceived quality”. The aim is to measure the extent to which the dimensions of cost impact on the quality perceived by the customer in the online purchase experience.

*Objective 3:* “To analyze the predictive validity of cost relievers in behavioral intentions”. The explanatory capacity of the resulting scale of behavioral intentions, namely the disposition to repeat the purchase experience and the disposition to recommend the experience to others, is analyzed after the appropriate statistical analyses. This is necessary since reducing costs is aimed at guaranteeing customer retention, and behavioral intentions are, to a certain extent, indicators of that guarantee.

Secondly, the population of the study was defined as those lecturers of the University of Las Palmas de Gran Canaria (ULPGC) who had purchased by Internet. The choice of university lecturer as the active agent was considered appropriate for the following reasons: it matches the profile of the average Internet purchaser in terms of education, income and age, and product purchased; mainly the most purchased on the Internet -books IT products and travel. After a telephone survey of 835 ULPGC lecturers, the population was 452, with the final number of surveys at 191: that margin was mainly due to problems related to locating, accessing, and availability of the lecturers. The size is considered adequate since it is recommended that there are 5 respondents per attribute in the refinement of quality scales (Hayes, 1995). The details of the technical specifications are shown in Table II. The most important sociodemographic data for the sample were: 73% males to 27% females, mostly between the ages of 31 and 40 (119 individuals), and 41 and 50 (51 individuals), 97% of whom accessed Internet everyday.

**TABLE II.** Technical specifications of the research

<b>METHODOLOGICAL PROCEDURE</b>	Questionnaire
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<b>DELIMITATION OF UNIVERSE</b>	ULPGC lecturers who had purchased in Internet, and who also met certain requirements in terms of products acquired (mainly books, airline tickets and IT products), memory of the purchase, the steps taken personally in the purchase process, and the willingness to participate in the study
<b>GEOGRAPHICAL CONTEXT</b>	Gran Canaria
<b>POPULATION</b>	452 lecturers
<b>INFORMATION GATHERING METHOD</b>	Personal questionnaire
<b>SAMPLING PROCEDURE</b>	Attempts were made to contact all ULPGC lecturers Finally 54% were contacted
<b>SAMPLE SIZE AND RESPONSE RATE</b>	191 (78%)
<b>RELIABILITY LEVEL</b>	95% $Z=1.96$ $p=q=50\%$
<b>SAMPLE ERROR</b>	5.4%

*Fuente:* elaboración propia.

In the study, each respondent answered various questions and completed a self-administered personal questionnaire on which he/she had to indicate, on a 9-point Likert type scale: his/her opinion of the actions of his/her usual purchase company (the one with which they had most experience, in order to ensure recall of the purchase, and the quality of the responses) in each of the scale's attributes; the perceived overall quality; the disposition to repeat and the disposition to recommend to others. Once the completed questionnaires had been received, various analysis methods and techniques were applied. Firstly, a principal components analysis was applied as a data reduction technique, followed by structural equations as a confirmatory technique. Secondly, and to validate the scales' predictive capacity related to overall quality and behavioral intentions, regression analyses were conducted.

#### 4. ANÁLISIS DE LOS RESULTADOS

A principal components analysis with varimax rotation was applied to the database, with the criterion of an Eigen value of 1 or above in the choice of factors. The resulting rotating matrix of saturations, which provided the correlations between the original items and the factors, was used: to restructure or eliminate those factors that overlapped, to eliminate items with insignificant weight in any factor -they do not contribute relevant information-, or that have a high weight in several factors -they contribute redundant information, and finally, to reassign the remaining items and to interpret the factors. It can be seen in Table III that a factor structure with two dimensions -*design* and *economy*-, and 5 attributes was obtained. The K.M.O. ratio (values of between 0.7 and 0.8 are considered acceptable) and Bartlett's sphericity test (the value must be significant, that is, the error must be below 0.05) of the model confirms the viability of conducting the factor analysis. The data show that (a) the results of the factor analysis can be considered satisfactory since around 68% of total extracted variance is explained; (b) the correlations between the factors and the different items, expressed through factor loads, are highly significant in that they are in levels above 0.5; and (c) the proportion of explained variance of each of the items, expressed in terms of communalities, is acceptable (above 0.50) (Hair *et al.*, 1988) (Table IV). With regard to the reliability of the scales, measured by Cronbach's *alpha*, the reliability of the total scale in the model exceeded 0.6 (Table III).

**Table III.** Principal component analysis

INDICATORS OF THE MODEL IN THE PRINCIPAL COMPONENTS ANALYSIS				
Kaiser-Meyer-Olkin measure of sample suitability		0.670		
Bartlett's sphericity test		168.198 (0.000)		
Reliability of overall scale ( <i>alpha</i> )		0.650		
Total explained variance		67.908%		
DIMENSIONS	ATTRIBUTES	COMMUNALITY	FACTOR LOAD	RELIABILITY DIMENSION
Design	Signposting	0.687	0.828	0.730
	Intuitive navigation	0.685	0.825	
	Tools	0.644	0.761	
Economy	Prices	0.683	0.823	0.570
	Charges	0.697	0.831	

Fuente: elaboración propia.

In the interest of greater scientific rigor in the purification of the scale, the model was confirmed by means of structural equations analyses. The results support the scale by providing satisfactory indicators of the overall goodness of fit of the model (Marsh *et al.*, 1988; Hair *et al.*, 1988; Bollen, 1989). The chi-squared probability (CMIN) of the model (0.147) is above the recommended level of 0.05, which shows that there is acceptable correspondence between the matrix produced by the models and the observations matrix. Given the exploratory nature of the model, the compound reliability of each dimension can be considered acceptable (Marsh *et al.*, 1988; Hair *et al.*, 1988; Bollen, 1989). With regard to the extracted variance, which indicates the validity of the tested model, higher values are advisable, especially for the dimension economy (Table IV).

**TABLE IV.** Confirmatory analysis of the scale

INDICATORS OF OVERALL GOODNESS OF FIT OF THE MODEL				
CMIN=6.792 <i>gl</i> =4; <i>p</i> =0.147; GFI=0.986; AGFI=0.947; RMSEA=0.061; PGFI=0.263; PNFI=0.384; ECVI=0.152; AIC=2.792				
DIMENSION	ATTRIBUTE	STANDARDIZED REGRESSION WEIGHTS	COMPOUND RELIABILITY	EXTRACTED VARIANCE
Design	Signposting of pages	0.675	0.74	0.49
	Intuitive navigation	0.731		
	Explanation and orientation	0.684		
Economy	Prices	0.621	0.57	0.40
	Financial charges	0.640		

Fuente: elaboración propia.

As final step, the data shown in Table V indicate that the scale of cost relievers explains almost 30% of overall perceived quality, with the dimension *design* contributing most to that effect ( $\beta=0.421$ ). On the other hand, the scale of cost relievers has more impact on the disposition to recommend ( $R_a^2=0.190$ ) than on the disposition to repeat ( $R_a^2=0.125$ ).

**Table V.** Regression analyses

<b>REGRESSION ANALYSIS WITH OVERALL QUALITY: <math>R^2</math>adjusted=0.258; <math>F(p)</math>=34.104 (0.000)</b>			
<b>Dimension</b>	<b>Standardized Beta Coefficient</b>	<b><i>t</i></b>	<b>Sign.</b>
Design	0.421	6.734	0.000
Economy	0.299	4.781	0.000
<b>REGRESSION ANALYSIS WITH DISPOSITION TO REPEAT: <math>R^2</math>adjusted=0.125; <math>F(p)</math>=14.539 (0.000)</b>			
<b>Dimension</b>	<b>Standardized Beta Coefficient</b>	<b><i>t</i></b>	<b>Sign.</b>
Economy	0.287	4.222	0.000
Design	0.228	3.354	0.000
<b>REGRESSION ANALYSIS WITH DISPOSITION TO RECOMMEND: <math>R^2</math>adjusted=0.190; <math>F(p)</math>=23.346 (0.000)</b>			
<b>Dimension</b>	<b>Standardized Beta Coefficient</b>	<b><i>t</i></b>	<b>Sign.</b>
Design	0.397	6.077	0.000
Economy	0.204	3.125	0.002

*Fuente:* elaboración propia.

## 5. IMPLICACIONES ACADÉMICAS Y PROFESIONALES

The discussion of the principal academic and practical implications is in two parts; first the factor structure of cost and then the relationship of value with the overall perceived quality and intentions of future purchases.

### *Factor structure of cost*

The analysis of the obtained factor structure of cost relievers can be performed from two perspectives: the dimensions of the theoretical model not present in the final model, and the resulting model. The dimensions of the theoretical model that were eliminated are: *security* and *time*, while the dimensions of the final model -*design* and *economy*- correspond to the original idea. Considering the line of argument of the theoretical model, the absence of the dimensions *security* and *time* requires some comments.

Firstly, one explanation of the absence of the dimension *security* is the informants stated that they prefer to purchase on sites known for their reputation and that strengthen security in the transaction. These firms make it clear on their websites that they assume responsibility for ant unauthorized use of personal and financial data by third parties, and those circumstances reduce the perception of insecurity. With regard to the exclusion of the dimension *time*, the informants considered the average page download time acceptable since, as they commented, the pages were simple and functional and the time tended to decrease progressively as site sections or pages were accessed. Hence, the customer lost less time in the transaction and the convenience of the purchase increased. In statistical terms, these dimensions were excluded the analyses because they contributed no differential.

The dimensions *design* and *economy* of the final model represent the sources of cost to the customer in electronic transactions. It could first be said that one factor influencing the presence of these dimensions is the market's degree of maturity. The dimension *design* explains the ability of a website to offer the customer an easy purchase experience, with intuitive navigation. Although these qualities are necessary in every website, they generate differential value in incipient markets. The presence of the dimension *economy* in the model is logical given that, in markets with low degree of maturity, the customer uses prices and financial charges as comparative indicators and sources of cost.



### *Cost/quality and Cost/behavioral intentions relationships*

The resulting data reveal that the scale of cost relievers of the final model explains almost 30% of the overall quality perceived by the customer in his/her online transactions. This result is acceptable and satisfactory since *cost* represents a portion of the equation of value (benefits and costs). On the other hand, the positive relationship between the scale of cost relievers and behavioral intentions -the disposition to repeat the purchase experience and the disposition to recommend the experience to others- was to be expected.

However, we should not ignore the lower impact that the scale of cost relievers has on the disposition to repeat in comparison to its effect on the disposition to recommend. This should be interpreted as follows: the online firm offers lower costs and so the customer recommends the experience to others but the disposition to repeat is lower because there is no apparent motive that retains the customer. In other words, lower costs are only a motive to attract and purchase.

## 6. CONCLUSIONES

Electronic commerce B2C represents an important area for the development of business-customer market transactions, the importance of which is steadily growing. Therefore, the factors of success in this type of operation represent an area of study that is of great commercial importance and that helps enrich the knowledge established in the literature on the analysis of value from the perspective of the customer in the traditional market. The identification of this academic and professional opportunity led to the development of this work.

Value is presented as a concept that has been interpreted in a great many ways. A joint view of that interpretive diversity in the academic and professional discussions reveals that almost all its definitions are valid insofar as each of them contributes a different meaning without ruling out other meanings. Thus, we deal with value as benefits and costs, but this article focuses on the study and analysis of the costs perceived by the customer in his/her virtual purchase. The logic of that position is that the reduction of costs encourages the customer to complete the transaction and enjoy the benefits of the purchase. This line of argument leads to the theoretical proposal of a multidimensional scale of cost (*design, time, security and economy*) which was validated empirically. The results support a structure with two factors, *design* and *economy*. It is also shown that, in effect, lower costs positively explain the overall perceived quality, the disposition to repeat and the disposition to recommend.

This last paragraph serves to orient future research in two areas of interest. The first is a study that compares sources of cost between types of product -standard or personalized- and between types of consumers. The second is an analysis that compares sources of transactional cost -sources of the costs of a specific transaction- with sources of relational cost -sources of costs to loyal customers. Thus, the *economy* dimension -prices and charges- is important to the first time purchaser on a website and so constitute a source of transactional cost. However, as the customer's relationship with a determined firm that offers a personalized experience and outcome develops, he/she will be willing to pay a higher price for a better service and would recognize that the cost of switching supplier is too high, and prefers to pay more to remain with the same supplier.

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