

The Impact of e-Service Quality's dimensions on Consumer Attitudes - Empirical Study

تأثير أبعاد جودة الخدمة الإلكترونية على اتجاهات المستهلكين -دراسة تطبيقية

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Abstract:

The objective of this study is to identify the impact of the different dimensions of electronic quality of service on consumer attitudes, and particularly on their purchase intentions and on their attitude to revisit the site or not. A questionnaire was administered online to users of the Jumia site. The results highlight the main dimensions of the quality of service of a merchant site and verify their relationship with consumers' attitudes towards online shopping and towards the website.

Keywords: quality of service, web site, attitude, purchase intention, attitude towards the site

Jel Classification Codes : M31 ; M39; M30

مستخلص:

الهدف من هذه الدراسة هو تحديد تأثير الأبعاد المختلفة لجودة الخدمة الإلكترونية على موقف المستهلك، وخاصة نواياه الشرائية وموقفه من إعادة زيارة الموقع من عدمه. تم تصميم استبيان ونشره عبر الإنترنت لمستخدمين موقع Jumia. تسلط النتائج الضوء على الأبعاد الرئيسية لجودة خدمة الموقع التجاري والتحقق من علاقتها بسلوك المستهلكين تجاه الشراء عبر الإنترنت واتجاه الموقع الإلكتروني.

الكلمات المفتاح: جودة الخدمة، الموقع الإلكتروني، الاتجاه، نية الشراء، الاتجاه نحو الموقع

تصنيف Jel: M31; M39; M30

Introduction:

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The influence of technology on business organization has been significant in recent years. In Algeria, e-commerce has been growing well before the adoption of the e-commerce law. Several activities and sites have been created on the net, which has led to the democratization of online purchasing.

According to Lovelock and Lapert (1995), new technologies have changed the way service sector firms interact with their customers. Quinn (1996) stated that the objective that emerges from the implementation and use of these technologies is: standardization of service, reduction of administrative costs related to each transaction, and reduction in the number of contacts between employees and clients.

Several authors suggest that this technology replaces traditional interaction at the point of exchange with transactions in an exchange or market-space (Rayport and Sviokla, 1995). This exchange space is defined as a virtual universe in which products and services exist in the form of digital information, and can be delivered through information-based distribution channels.

The technological option most used by consumers to access the services they need is the Internet. For it to become a major distribution network, it must provide quality service and generate online buying intentions, which has allowed the study of electronic service quality in the marketing literature to attract the attention of many researchers. The problem of our research is situated in this context:

What is the impact of the dimensions of e-service quality on consumer attitudes?

From this main question flows other secondary questions:

- How do consumers evaluate the quality of website service?
- Which dimensions most influence the consumer's intention to purchase and to revisit the site?

The structure of our problem is based on two main hypotheses formulated as follows:

- 1- The six dimensions of the quality of electronic service have an influence on the consumer's intention to purchase on the site;
- 2- The six dimensions of the quality of service of a merchant site influence the consumer's intention to revisit the site.

The methodology followed in the realization of this work consists of a descriptive analytical method, which begins with a documentary research in order to highlight the concept of quality of electronic service, then and in order to answer our problem we used a quantitative study based on a questionnaire distributed to a sample of web-buyers.

1- Electronic quality of service:

Bregeard's (1996) study on customer choice for different modes of servuction identifies three possible relationships between the consumer and his business :

- Classic" servuction, which represents the physical interaction between the customer and the staff in contact,

- Automated" servuction, which is defined as the physical interaction between a customer and an automaton, located outside the customer's home where there is no intervention of contact personnel in the production of the service,

- Remote" servuction, which concerns the interaction without physical contact between the customer and the provider. According to this way, the customer obtains the desired services without leaving the place where he is (home, work...) by using a technological support.

1-1- Uerstanding electronic quality of service

Research on traditional quality of service, for more than twenty years, has provided a better understanding of this concept (dimensions, related variables, etc.).

Quality of service has been described in the literature as an "elusive" construct and "abstract "(Cronin et al., 1992). Bitner and Hubbert (1994)define it as"an overall impression of the client's inferiority orto the superiority of an organization and its services"

Quality of service is often measured in the literature through client perceptions of this quality (Parasuraman et al., 1985).Chumpitaz and Swaen (2004) define perceived quality as "an overall evaluative judgement about a product or service about the relative superiority of that product or service".

The perceived quality of service in a physical environment is based mainly on face-to-face interaction with the customer and the staff in contact. Many conceptualizations of traditional quality of service have been proposed in the literature trying to capture the key dimensions of face-to-face service quality. Among the proposed models, we have the SERVQUAL model of

Parasuraman et al (1988) considered as one of the "origins of quality of service theories"...

In contrast, the study of the quality of service delivered by websites is in its infancy. While traditional quality of service is defined as "an overall judgement, or attitude, about the superiority of service" (Parasuraman et al., 1988), electronic quality of service represents "the degree to which a website facilitates effective and efficient shopping, purchasing and delivery of products" (Zeithaml et al., 2002). It is a transactional quality and includes elements of pre- and post- service experience evaluation. By drawing a parallel with traditional service quality, it is possible to show the similarities and differences between the two concepts.

The authors consider that electronic quality of service is a key factor in the success of BtoC on the Internet (Lin et al., 2016; Parasuraman et al., 2005; Xing et al., 2010).

Research on e-Service Quality attempts to understand the consonants' perceptions of the service quality of an e-merchant site. In addition, how it influences their satisfaction and loyalty to the site, or brand. Rowly (2006) explains that e-service quality depends on the computer technology quality of the site and the quality of the service provided.

1-2-The dimensions of electronic quality of service

The continuous development of the Internet and e-commerce since the 2000s has enabled the development of a new branch of marketing research on electronic quality of service. It appears that the most obvious and important difference between traditional and electronic quality of service is the replacement of interpersonal interaction by human-machine interaction. This distinction between the two concepts is at the origin of many questions concerning the evaluation of quality of service developed in the context of e-commerce .

In order to be able to carry out this assessment and given the specific characteristics of e-commerce, the dimensions used for traditional commerce are not appropriate for assessing the quality of service of websites.

This substantial review of the literature on electronic service quality is not complete, but it is nonetheless the robust studies in this area of research. Through what follows, we will try to present an overview of all the dimensions raised in the literature review.

Given the essential role of the evaluation of service delivery by cyberconsumers, knowledge of the determinants of their perceptions of this quality of service on the Internet is fundamental.

Parasuraman and Grewal (2000) point to the existence of specific dimensions for assessing the perceived quality of technologically mediated service interactions. Numerous studies have shown that the dimensions measuring quality of service, whether traditional (Carman, 1990; Finn and Lamb, 1991; Cronin and Taylor, 1992; Sabadie, 2001) or electronic (Rolland, 2003; Bressolles, 2004; Muller, 2004), are inconsistent depending on the context of the study, and that they are only relevant for a given sector.

Zeithaml et al (2000), based on a series of qualitative interviews, identified eleven dimensions of online service quality, Wolfinbarger and Gilly (2003), through focus group meetings and an online survey, reduced the dimensions of e quality to four key dimensions, Yang et al (2004) discovered six key dimensions of online service quality. Yoo and Donthu (2001) identified four factors related to the quality of a site.

Loiacono et al. (2002), on the basis of a very rich literature review and three exploratory studies as well as interviews with Web site creators, found four dimensions of Web site quality divided into twelve sub-dimensions. Also, Rolland (2003) constructed two scales for measuring the perceived quality of Web sites. Bressolles (2004), through qualitative interviews with cyberconsumers and experts, constructed a multidimensional scale for measuring the quality of electronic services. This measurement includes five dimensions: ease of use, reliability, design, security/confidentiality and information.

In fact, there is no consensus on the dimensions of electronic service quality. On the basis of a review of the literature on this topic, it is possible to identify the main dimensions of this construct, which recur fairly systematically (Barnes and Vidgen, 2003; Wolfinbarger and Gilly, 2003; Parasuraman, Zeithaml and Malhotra, 2005; Bressolles, 2006):

- **Reliability:** this concept has been defined by Parasuraman et al (1988) as "the ability of the service provider to deliver the promised service in an accurate, precise and trustworthy manner". on the website, this translates into the delivery time, the accuracy of the order, in other words, this dimension is related to the ability of the online seller to keep its promises and offer the desired service as well as the respect of delivery times.

-Ease of use of the site: also referred to as usability in the context of the Internet (Swaminathan et al., 1999), it is an important element and is reflected in the way the Internet user interacts with the website.

- The design of the website: this dimension is represented by the graphics of the site, its colors, the use of images, animations, videos, windows embedded in the screen.

-The security/confidentiality of information: during the service experience, consumer information is collected, ensuring security is explained by the fact that the company is committed to protecting users from the risks of fraud and financial loss through the use of their credit cards.

-The quality and quantity of information presented on the site: the need for information is reinforced during the online purchase, given the absence of physical contact between the service provider and the consumer. This dimension measures Internet users' perceptions of the quality and quantity of commercial and technical information available on products and services.

-Interactivity and personalization: Interactivity allows for tailored responses and increases the possibility of offering a personalized service (Bitner et al., 2000). Personalization represents the possibility of adapting the content and design of the site according to consumers' expectations and profile.

2- Attitudes:

Attitude is a central element of consumer behaviour. His initial study in psychology quickly developed into an understanding of consumer choices and the ordering of preferences among various offers.

Attitudes express the consumer's positive or negative orientation towards an object.

An attitude is an overall evaluation that expresses how much we like or dislike an object, issue, person or action. Attitude are learned, and they tend to persist over time. Our attitude also reflect our overall evaluation of something based on the set of association linked to it. Thus we have attitudes toward brands, product categories, ads, people type of stores, activities and so forth.

2-1- The importance of attitudes

Attitudes are important because they serve several functions (Hoyer., Macinnis, 2001):

- They guide our thoughts (the cognitive function)
- They influence our feeling (the affective function)
- Affect our behavior (the conative function)

Therefore, we might decide which ads to read, whom to talk to, where to shop and where to eat based on our attitudes. Likewise, attitudes influence the acquisition, consumption, and disposition of an offering our buying behavior.

An individual's attitude towards a product is an intermediate stage between need and motivation on the one hand and the actual act of purchasing on the other. It is supposed to be a predictor of behavior .

When the consumer's attitude towards a product or brand is positive or very positive, the consumer can indeed be expected to buy, or at least consider buying, the brand in question. Conversely, a brand for which the consumer's attitude is unfavorable is unlikely to be chosen by the consumer.

Marketers must make every effort to develop a favorable attitude of their target group towards the brand.

As already mentioned, technology influences the perception of quality by customers. This can be explained on the one hand through the modification of the experience, which is made possible by the interactivity of the internet, which is defined by Steuer (1992) as the degree to which users of a medium can influence the form or content of a digitized environment in real time. This interactivity and according to Alba et al (1997) improves the availability of product information, allowing multi-attribute comparisons and reducing search costs for the buyer .

On the other hand, the use of e-merchant sites has an influence on the evaluation of products/services, or more precisely on consumer attitudes .

Indeed, digital technology has led to the dematerialization of products/services, even if the products and services sold on a website are real, what is presented to the consumer is only an abstraction (Volle, 1999). Also, the change in assessment affects the attributes that the consumer uses in making choices and the information processing process. According to Dandouau (2001), the Internet pushes the individual to use numerous choice criteria. The evaluation phase of alternatives is therefore more rational on the Internet than on other media and in store, since the processing of information is more systematic and analytical, whereas other media and the store leads to more affective processing .

In the course of this work, we are interested in showing the impact of electronic service quality on the consumer's intention to buy and his intention to revisit the site, in other words, we focus our study on the third component of attitude.

3- Empirical research

3-1- Methodology and materials

In order to answer the main problem of this work, as well as the various secondary questions, the research relied on the descriptive and analytical method using the empirical survey for data collection. This was achieved through the questionnaire, which was designed to reflect the research objectives and test the relationship between the study variables .

The online questionnaire was administered during the last quarter of 2019 to 240 Jumia Algeria customers, we were interested in the overall online shopping experience for users of the site, which is a leading e-commerce site in Algeria.

The measurement of e-service quality is divided into two main categories: behavioral measurement focusing on the measurement of the commercial activity of the website (number of visitors, number of clicks, conversion rate of new visitors (Totty, 2003) and an attitudinal measurement based on measurement scales to assess consumer perceptions.

In this research, we adopted the attitudinal perspective of measuring electronic service quality. The work focused on B2B e-commerce and available on the various databases shows a variety of instruments used for this measurement .

The Webqual scale (Barnes and Vidgen, 2003), which has been developed iteratively and applied to different domains, encompasses three dimensions: (1) site usability, (2) information quality, (3) quality of interaction, (4) quality of service, and (5) quality of service.

The eTailQ scale (Wolfenbarger and Gilly, 2003), developed from online and offline group meetings and an online survey based on a consumer panel. It includes four factors: (1) site design, (2) consumer service, (3) reliability / compliance, (4) security / privacy. The third main scale (Sitequal) is the one developed by Yoo and Donthu (2001), it comprises 9 items including 4

dimensions: (1) ease of use and ability to obtain information; (2) design and creativity of the site with multimedia content and colors; (3) speed of the order process and responsiveness of interactivity to consumer requests; and (4) security of financial and personal information.

The scale we used in this research is Netqual, developed by Bressolles (2006), which measures electronic service quality based on consumer perception. It is measured on the basis of 18 items divided into 6 dimensions (Ease of use, information, design, reliability, Interactivity/Customization, Security/Privacy). The author developed this scale by analysing the causalities of electronic service quality with satisfaction and loyalty of the merchant site (Bressolles and Durieu, 2011) and tested it by integrating a typology of the consonant in a mixed model (Bressolles et al., 2014).

3-2- Results and discussion

To determine and know the attitudes of consumers towards the quality of service of the website, we must ask questions that allow us to understand the different components of attitudes. Then, we must verify that these different questions or items measure what we want to measure, in order to obtain results that are as close as possible to reality.

The principles for validating a measurement scale were presented by Churchill (1979), who proposed an approach to reinforce and ensure the validity and reliability of the measurements that the researcher makes.

The KMO index and the Bartlett test allow the researcher to check whether the data accept factorization. The value of the Kaiser-Mayer-Olkin index is greater than 0.7, indicating that the correlations between the items are of good quality. Then Bartlett's test of sphericity is significant ($p < 0.0005$), so we can reject the null hypothesis that our data come from a population for which the matrix is an identity matrix. Therefore, not all correlations are equal to zero. We can therefore continue the analysis.

To verify the unidimensionality of the electronic quality of service scale, we performed a confirmatory factor analysis (using SPSS software). The analysis revealed a single dimension, examining eigenvalues that are greater than 1 allows us to extract a single factor that explains 79% of the shared variance .

The reliability of the scale was measured using Cronbach's Alpha coefficient, which was of the order of 0.874, a value that represents high reliability according to Malhotra (2004)

Table1: Demographic Profile

Gender	Frequency	Valid Percentage
Male	135	56,25
Female	80	43,75
Total	240	100%
Age		
20-30	61	25,4
30-40	93	38,7
40-50	54	22,5
+50	32	13,4
Total	240	100%
Occupation		
Student	47	19,6
Employee	53	22
Executive	32	13,3
Retired	20	8,4
Liberal Business	88	36,7
Total	240	100%
Monthly Income		
-25000 DZD	23	9,6
25000-40000 DZD	91	37,8
40 000-60 000 DZD	74	30,9
+60 000DZD	52	21,7
Total	240	100%

Source: SPSS Output

Relationship between electronic service quality and intent to purchase

The calculation of the correlation coefficient gives a synthetic measure of the intensity of the relationship between two variables, thus giving us information on the existence of a linear relationship (in the form of a straight line) between the two variables under consideration.

The following table presents the results obtained following the analysis of the data with the spss software, including the correlation coefficients between the dimensions of electronic service quality and the intention to purchase on the site.

Table 2: Correlation Analysis

Dimensions of electronic quality of service	Coefficient of correlation	Significance level
Ease of use	0,709	0,022
Information	0,570	0,041
Design	0,601	0,031
Reliability	0,595	0,048
Security/Privacy	0,733	0,019
Interactivity/Customization	0,615	0,029

Source: Based on the results obtained with SPSS

According to the results that appear in the table, we can see that there is indeed a statistically significant relationship between the different dimensions of the quality of service of a merchant site and the intention to purchase on this site. Indeed, the strength of the link between these dimensions and the dependent variable is different; the strongest significant link is observed between security/privacy and purchase intention, which explains why the consumer gives the greatest importance to the security that is provided by the site as well as to the respect of his privacy (personal data...). Secondly, the ease of use of the site is also important for consumers, an aspect that allows them to search for information, compare between different products and brands and make purchases without wasting time.

The correlation coefficient that also exceeds 0.5 is that between interactivity/personalization and the intention to buy on the site, which may explain why the personalization and interactivity on the site can partially compensate for the lack of direct contact with the seller and make the visit

to the site more pleasant. The study by (Burroughs, 1996; Thompson et al., 1990) showed that purchase intent can arise when the consumer feels that he or she has stumbled upon a product made for him or her and that he or she can get a good deal.

In order to model the relationship between electronic service quality and intent to purchase on the site, we used multiple linear regression, the results are presented in the following table :

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Table 3 : Results of the multiple linear regression analysis between electronic service quality and purchase intent

	R	R-deux	A	β	T	sig
Electronic service quality	0,752	0,693	2,004	-	-1,685	0,017
Ease of use	-	-	-	0,052	0,500	0,000
Information	-	-	-	0,201	1,050	0,020
Design	-	-	-	0,186	1,105	0,040
Reliability	-	-	-	0,211	0,874	0,010
Security/Privacy	-	-	-	0,046	1,471	0,000
Interactivity/Customization	-	-	-	0,109	0,461	0,036

Source: Based on the results obtained with SPSS

Results of the above table indicate that there is a significant positive impact of Electronic service quality on intent to purchase on the site at the level ($\alpha \leq (0.05)$). This correlation is estimated with a rate of 75.2% between the two variables.

The R squared, or the coefficient of determination, which measures the quality of prediction of a linear regression is estimated at $R^2=0.693$, which explains that all the dimensions of the quality of service of a merchant site, when they are all considered, explain 69.3% of the consumer's intention to purchase on the site. Therefore and based on these results, hypothesis H1 is verified.

Relationship between electronic service quality and intention to revisit the site

Table 4: Correlation Analysis

Dimensions of electronic quality of service	Coefficient of correlation	Significance level
Ease of use	0,698	0,021
Information	0,599	0,049
Design	0,673	0,037
Reliability	0,523	0,071
Security/Privacy	0,541	0,063
Interactivity/Customization	0,709	0,014

Source: Based on the results obtained with SPSS

Table 4 shows a significant positive impact between the different dimensions of e-Service quality and the consumer's intention to revisit the site. The results also highlight that the variable that recorded the strongest link is interactivity and personalization, followed by ease of use and navigation on the site. The third variable with a correlation coefficient exceeding 0.60 is Site Design, which encompasses the attractiveness of the site, its creativity, and whether its design is appropriate for this type of website.

In order to test the second assumption we made, a multiple linear regression was carried out, the results are shown in the following table :

Table 5 : Results of the multiple linear regression analysis between electronic service quality and intention to visit the site

	R	R-deux	A	B	T	Sig
Electronic service quality	0,780	0,700	3,005	-	-1,733	0,013
Ease of use	-	-	-	0,047	0,711	0,018

Information	-	-	-	0,104	2,805	0,041
Design	-	-	-	0,059	1,366	0,033
Reliability	-	-	-	0,205	0,278	0,048
Security/Privacy	-	-	-	0,122	2,349	0,045
Interactivity/Customization	-	-	-	0,036	1,233	0,000

Source: Based on the results obtained with SPSS

From Table 5, we can observe that the Sig is less than 0.05. This result confirms that the correlation coefficient R is statistically significant at the level ($\alpha \leq 0.05$), in other words, there is a significant relationship with a correlation level estimated at 78%, at the level ($\alpha \leq 0.05$) between the dimensions of electronic quality of service and the consumer's intention to revisit the site.

In general, the higher the R-squared, the better the model fits your data, for second model, it is the percentage of the response variable variation that is explained by a linear model.

For this second model, the R squared is higher, it is estimated at 0,700, which means that the dimensions of the quality of service of a merchant site explains 70% of variation in the consumer's intention to revisit the site. Result that lets us verify the second hypothesis put forward.

Conclusion

The study of the quality of services on the Internet is a relatively recent phenomenon in the marketing literature. The quality perceived by consumers of a merchant website influences a primordial variable in the study of consumer behavior, which is attitude. In order to elicit one of the main components of this attitude, and which is the most difficult component to change and influence: the intention to purchase on the site, it is essential that the dimensions of the quality of service of the merchant website are well perceived by the consumer. The latter are divided between utilitarian and hedonic dimensions. However, the security and privacy of consumers, as well as the ease of use that is allowed by the site are the first dimensions that have a significant impact on the consumer's intention to purchase on the site. More hedonistic dimensions such as design come in third place in their influence on purchase intent, as the hedonic potential of an e-commerce website often remains limited in comparison to traditional retail outlets.

This research also shows that the consumer's intention to revisit the e-commerce site is primarily influenced by personalization and interactivity, which allows the consumer to receive personalized information or use interactive features that help them navigate.

This study has certain limitations. For example, the sample used is composed only of purchasers; non-buyers should be considered in future studies in order to generalize the results. Also, it would be interesting in future research to study the influence of other dimensions of service quality such as the richness of the offer on purchase intention, satisfaction and impulse purchases.

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APPENDIX

List of NetQual' scale items

Ease of use

- Eofu1: It is easy to search for information
- Eofu2: I find this site easy to navigate

Information

- Info1: This site provides in-depth information about the product(s) or service(s) proposed

- Info2: This site provides relevant information
- Info3: This site provides accurate information

Design

- Des1: This site is colourful
- Des2: This site is creative
- Des3: This site has an attractive appearance
- Des4: The design is appropriate for the type of site

Reliability

- Rel1: The product or the service is delivered by the time promised by the company
- Rel2: You get your merchandise quickly when you order

Security/privacy

- Sec1: I am confident of security with this site
- Sec2: I trust the Website administrators will not misuse my personal information
- Sec3: I feel like my privacy is protected at this site
- Sec4: This site has adequate security features
- Sec5: This site ensures me of security

Interactivity/personalisation

- Inter1: I can interact with this site in order to get information tailored to my specific needs

- Inter2: This site has interactive features, which help me accomplish my search