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# Product Quality Evaluation in Physical Stores versus Online Stores

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*In Romania, the value of online shopping reached 2.8 billion in 2017, 40% more than in 2016, being one of the highest increases in the European Union. However, the e-commerce market value is still small compared to other European countries, one of the main reasons that people prefer not to buy online is mistrust in the quality of the products offered. In order to gain insights into the criteria used by Romanian consumers to evaluate product quality, we conducted eight in depth interviews. The results show that there are a lot of similarities between attributes used to evaluate product quality in a physical store and attributes used to evaluate product quality in an online store. Meanwhile, the differences consists in the presence of customer reviews as the most relevant attribute for the online stores and price as the most relevant attribute for physical stores.*

**Keywords:** *Product Quality, Online Store, Physical Store, Product Quality Evaluation*

**JEL Classification:** *L15, L20, L81, M30, M31*

## 1. Introduction

Product quality is a very important factor considered when making a purchasing decision for goods and services. A study by InfoCons investigated the criteria that Romanians consider when choosing to place a product in the shopping cart. The results found the following factors that influence the purchasing decision, presented in order of their importance: the price - 80% of the Romanians choose the products according to the price. Romanians tend to choose the cheapest products: "the lower the price of a food, the greater the chances that the product will reach the shopping cart" (Spiridon, 2017). Another important criterion is quality, 74% of consumers consider quality to be important or very important, followed by brand and package.

In this paper, we explore how consumers assess product quality by investigating which are the attributes used to define a high and a low quality product. We also explore if there is any difference between attributes used to evaluate product quality in a physical store and attributes used to evaluate product quality in an online store. The interest for the online environment is motivated by its evolution experienced in recent years. In Romania the value of the e-commerce market in the total retail market registered a proportion of 5.6%, in 2017, up from 4% in 2016. The variety of online stores can be remarked, with 7,000 relevant online shops in terms of traffic and orders in 2017, compared to 5000 online stores in 2016. Out of the 5,000 active

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online stores in the Romanian e-commerce landscape in 2016 “approximately 200 are big and medium businesses, exceeding 1 million EUR in annual turnover” (Radu, 2016). Considering this information our focus is on understanding how a consumer evaluates the product quality in physical stores versus e-commerce.

We obtained our data from eight semi-structured in-depth interviews. First we developed an interview guide to help us to address the most important aspects for our research. Each discussion was individual and summed up how the product quality is perceived by the respondents as well as the particularities of how a product is evaluated in the online environment versus a physical store. After analyzing the data we obtained seven categories of important attributes used in product quality evaluation based on the variables identified previously in the literature.

Defining the most important attributes that consumers use to assess the product quality is very difficult. Zeithaml (1988) sustains that “specific or concrete intrinsic attributes differ widely across products, as do the attributes consumers use to infer quality. Obviously, attributes that signal quality in fruit juice are not the same as those indicating quality in washing machines or automobiles. Even within a product category, specific attributes may provide different signals about quality” (Zeithaml, 1988, p. 7). In order to obtain representative data the attributes must be abstract so it could be applied to more alternatives.

This paper aims to provide answers to questions such as: “What do consumers understand by the “quality” construct?”; “Which are the variables that lead consumers to evaluate a product as high or low quality?” and “Are there differences between how a consumer evaluates the product quality in a physical store and how the same product is evaluated in an online store?”.

## 2. Literature Review

Product quality assessment requires a systematic review and comparison of competing products in a product category (Maeyer and Estelami, 2011). Perceived quality is a theme that captures the interest of many researchers because of cultural differences that can lead to different assessments of this concept and also due to changes in the market and in consumer preferences (Tsotsos, 2005; Bei and Chiao, 2001). From the definition of the quality concept to the importance of purchasing quality and how consumers evaluate product quality, all have been research topics for many authors (Ding et al., 2010; Auer et al, 2018; Brucks et al, 2000; Hallak, 2006; Chen and Juvenal, 2016; Burton and Lichtenstein, 1990). In most cases, quality is closely linked to price: a higher quality will require a high price, while a lower quality is characterized by a low price (Day and Stephen, 1986).

Lichtenstein and Burton (1989) distinguish between objective quality and perceived quality. Objective quality is defined as the impartial evaluation of the quality of a product, taking into account technical attributes, appearance or durability (Mittra and Golder, 2006). On the other hand, the perceived quality refers to “the overall subjective judgment of quality relative to the expectation of quality. These expectations are based on one’s own and others’ experiences, plus various other sources including brand reputation, price, and advertising” (Mittra and Golder, 2006). When we talk about the product quality, we must be aware that the assessment can be made at the time of purchase or at the point of consumption. Zeithaml (1988) argues that when the assessment is made at the point of consumption, intrinsic attributes such as taste or smell have a higher importance in determining product quality because they have a greater predictive value than extrinsic attributes. However, many assessments are made at the time of purchase when there is insufficient information about intrinsic attributes, so extrinsic attributes such as brand, price, warranties or packaging becomes more important. At this point we have evidence that both intrinsic and extrinsic attributes weigh in the consumer assessment process, without being able to tell which one weighs the most in decision making process.

Many authors have investigated over time what are the most important attributes that consumers are considering when assessing the product quality. Garvin (1987) argues that a product's assessment in terms of quality can be made on eight dimensions: performance, perceived quality, serviceability, conformance, durability, reliability, aesthetics and features. According to Garvin, the performance refers to the main features of the product or the measurable attributes (for example for a television performance means image clarity). Features, the second dimension, are often a secondary aspect of performance and represents features that complement the core functionality (for example, the availability to purchase a product in different colors or sizes). Reliability reflects the likelihood of a product malfunctioning or not working for a certain amount of time. This dimension is more characteristic of long life products than for instant consumption products and services. Durability refers to „the amount of use one gets from a product before it deteriorates” (Garvin, 1987). Conformance can be defined as the degree to which the main features of a product meet the established standards. Serviceability refers to after sales services and measures the kindness of the employees, the speed, the competence and the ease of repair of a product. The aesthetic aspect refers to how a product looks, how it

feels when it's touched, how it taste or smell. The last dimension, perceived quality refers to all external sources that can help the consumer to form a perception about the quality of a product. According to Garvin advertising and brand reputation are elements of perceived quality.

Brucks and Zeithaml (2000) identify six abstract dimensions based on which consumers assess durable goods quality: ease of use, functionality, performance, durability, serviceability and prestige. Three of the six dimensions identified are identical to those previously proposed by Garvin: performance, durability and serviceability. The ease of use refers to the complexity of long life products that have become overwhelming in recent years. Therefore, in spite of their complexity, in order to have a high quality, the products must be easy to use, without requiring much effort and prior training. Functionality implies the amount and complexity of features that distinguish the model from a standard model. Prestige implies the visible features of the product, such as appearance, but also includes a less tangible social component that reflects on the image of the product or brand.

Aesthetics, also, has a symbolic function that influences how a product is understood and evaluated in terms of quality (Bloch, 2003). This dimension has raised the interest of researchers, who mainly studied the role of packaging in product evaluation (Magnier et al., 2016; Steenis et al., 2017; Simmonds and Spence, 2017; Ooijen et al. 2017; Westerman et al., 2013). Simmonds et al (2018) conducted a study to investigate how transparent packaging influences product attractiveness, willingness to pay, taste expectations, product freshness expectations, perceived innovation and perceived quality. They showed to respondents three variants of design packaging of a product: one with a transparent window through which the product could be seen, one had a picture with a suggestion for serving, and the last variant had just the brand and product name with no picture or transparent window. The results of the study have shown that transparent windows in the design packaging lead to a positive assessment of the freshness and quality of the products, as well as a higher willingness to pay for several product categories.

Maeyer and Estelami (2011) argue that a large number of consumers are experiencing difficulties in evaluating a product quality, and often rely on external information such as third-party opinions, price or advertising content to form an opinion on product quality. Starting from this point of view, they have proposed to evaluate how third-party product ratings organizations that provide consumer information in the form of expert reviews or other consumers testimonials influence consumer perceptions of product quality. The results have shown that the consumer confidence in the provided data can be significantly influenced by the manner in which product quality information is communicated to the consumer. For example, for tangible goods, consumers value more the experts testimonials on product quality.

Grohmann and Spangenberg (2007) studied the extent to which consumers evaluate the products quality differently when they are allowed to touch them. The features of each product were shown on a whiteboard along with the message "If you want you can touch the product" or "Please do not touch the product during the evaluation." The results showed that higher quality products that could be touched have benefited from more favorable evaluations from the respondents. With regard to low quality products, the tactile contribution did not lead to less favorable assessments.

### **3. Research Methodology**

To obtain our data, we have conducted eight semi-structured in-depth interviews. There were 30-45 minutes individual discussions on how product quality is perceived by respondents as well as on particularities of how a product is evaluated. We used an interview guide structured as follows: questions about the meaning of the quality concept in general, questions about the attributes considered when product quality is evaluated and questions about the particularities of how the evaluation is done in a physical store and also in an online store. The sample was a convenience one, consisting of 8 people (4 women and 4 men) aged between 24 and 35, with higher education level and urban backgrounds who are familiar with the online environment and who interact at least once a day with it - regardless we are talking about social networks, online stores or online newspapers / magazines.

For the data analysis, we used an emergent coding procedure. Coding was done by the interviewer based on the notes taken during the interview. Both the presence and the frequency of the concepts have been encoded, and the irrelevant information has been eliminated. After we performed a content analysis, a categorization of the main attributes based on their implicit or explicit significance was made.

#### 4. Results

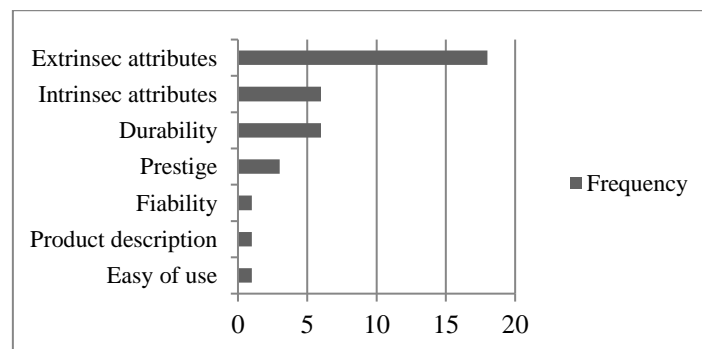
Asked to define „quality” construct, the participants referred both to attributes (see Table 1) and to characterizations such as: "more benefits that I can enjoy", "something to satisfy my needs at the most high level, taking into account personal preferences", "a qualification of a product by comparing it with the existing alternatives that satisfy the same need". In terms of attributes, quality is associated with durability, price, high quality raw material and reliability. Regarding the attributes used to evaluate product quality, in Table 1 we can observe a great diversity, each respondent mentioning at least four criteria that he / she considers when evaluates a product.

**Table 1.** *Attributes used to define quality and product quality*

Attributes used to define quality	Attributes used to define product quality
Durability	Design
Fiability	Composition
High quality raw material	Price
Price	Brand
Satisfying needs without compromises	Package
Comparison with other products	Colour
Ecological	Smell
	Product lifetime
	Expiration date
	Features
	Texture
	Taste
	Fiability
	Easy to use
	Origin
	Manufacturing Technology
	Warranty period
	Wear Resistance

Considering the identified attributes for product quality evaluation, we grouped them in seven categories based on the variables identified in the literature as follows:

- Extrinsic attributes – in this category we included package, origin, manufacturing technology, price, design and composition.
- Intrinsic attributes – in this category we included texture, taste, color and smell.
- Durability – we included wear resistance, expiration date, product lifetime, warranty period.
- Prestige - this variable refers to the brand reputation that can transmit information about the quality of the products.
- Product description – in this category we included product features.
- Ease of use.
- Viability.

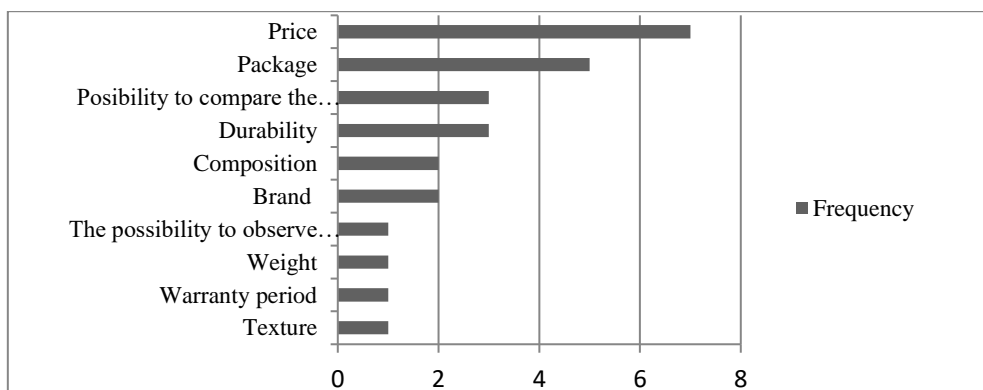


**Figure 1.** *Variables used to evaluate product quality*

From Figure 1 it can be observed that extrinsic attributes are those most often invoked when it is necessary to perform a product evaluation in terms of quality. The frequency of extrinsic attributes mentioned by the participants is twice as high as the frequency of the second or the third most important variable

considered in the process of evaluating a product as high or low quality. Moreover we can see that the frequency of extrinsic attributes is equal to the sum of the frequencies of the other six variables identified.

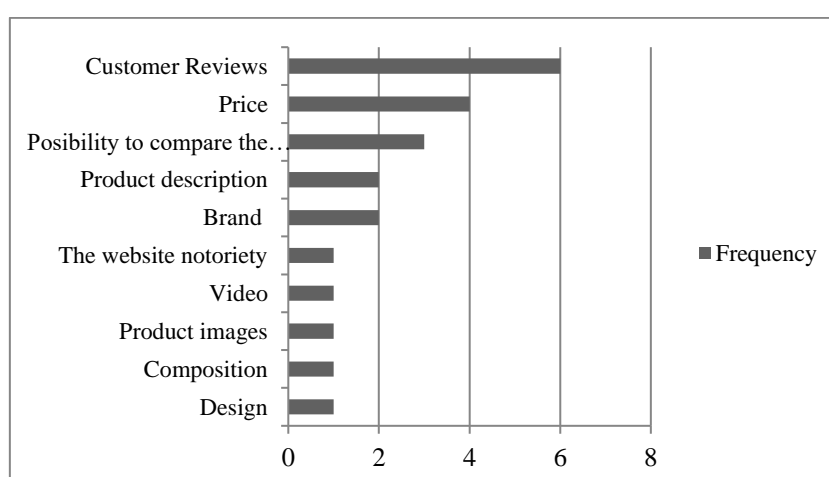
Figure 2 shows us that in the case of brick and mortar stores, the price is the most important attribute, seven of the eight people mentioning it. The following attributes of major importance are packaging, the possibility to compare products and durability. In addition to these attributes, there are references to criteria that we consider to be specific to this environment: the possibility to observe other clients preferences or the possibility to touch the product and feel the texture.



**Figure 2.** Specific attributes used to evaluate product quality in brick and mortar stores

Asked to describe the importance of the buying environment, for physical stores the participants listed advantages like: the possibility to smell and touch the product, the store design offers an advantage in terms of quality product evaluation ("if a store inspires me trust I go with the idea that the products are high quality (even if they are not)"; "the way it looks, smells or how merchandise is arranged gives me a clear picture about the kind of products offered"), product exposure facilitates comparisons between products in the same category.

For e-commerce the main attribute of product quality assessment is represented by customer reviews (see Figure 3). This attribute was mentioned by six of the eight respondents, its importance being amplified by comments such as "If there are no reviews on that site, I search on other sites", "I search on Google reviews of the product". Just as in the case of physical stores, the price and the possibility to compare the actual product with other products are found in the top three criteria. We can also notice specific elements for online environment, such as website notoriety, image clarity and video presence. In the absence of direct contact with the product, the respondents stated that they need clear images and, depending on the product, even video elements in order to make a decision.



**Figure 3.** Specific attributes used to evaluate product quality online stores

According to the respondents, the online environment presents advantages like: "you can find opinions from persons who have already used the product", "the way a website is built makes me trust about product quality". There are products that respondents prefer to buy online due to the benefits this environment offers. These products belong to electronics or entertainment category ("I can better set the quality of a movie if I buy it from an online store rather than from a physical store. In an online store I can see a trailer unlike a physical

store where I can see just two photos on the cover of a DVD"). However, for most of the products purchased through online stores, there are disadvantages such as: "I feel nervous until the parcel arrives to see if the products meets my expectations ", "in the case of clothes you cannot touch the material and have to rely only on pictures that in some cases do not show details. The same is applied in the case of perfumes, lotions that you cannot smell".

## 5. Conclusions

Product quality is one of the most important factors considered by Romanians before making a purchase decision. Knowing what Romanian consumers define by quality is very important for companies so they can choose the right market positioning strategy. However, defining the most important attributes that consumers use to assess the product quality is a difficult task due to the various features specific to the different product categories. The literature offers a series of abstract attributes investigated by different authors: performance, aesthetics, reliability, conformance, functionality, durability, serviceability, features, ease of use, perceived quality, and prestige. We have also seen that extrinsic attributes and intrinsic attributes, which are very important to consumers, often fall under product performance.

The results of our study showed consistency regarding the attributes used to evaluate both a high quality product and a low quality product. Price is the most important attribute considered by consumers when they qualify a product as high or low quality. Also, the attributes used by respondents to define product quality could be categorized as variables identified by other researchers in the literature. We have therefore seen that for Romanian consumers extrinsic attributes have the greatest importance in the process of assessing the product quality. Along with extrinsic attributes, intrinsic attributes, durability, prestige, reliability, product descriptions and ease of use can be met. These dimensions have been previously identified in the literature by different researchers (Garvin, 1987; Parasuman et al., 1985; Brucks and Zeithaml, 2000).

We also showed that there are similarities between attributes used to evaluate product quality in a physical store and attributes used to evaluate product quality in an online store. On the online environment, the customer reviews attribute has the most importance. Respondents trust and even look for the opinions of people who already purchased and used the product and after that follow the cues offered by price and results obtained by comparing several products in the same category. If we talk about how a certain quality is attributed to a product purchased from a physical store, the price is the main attribute considered by most respondents, followed by product packaging and the results obtained by comparing several products in the same category.

Our approach has some limits. One of these is that, in the absence of a specific product category that needs to be evaluated, respondents have reported to a variety of products: from food and clothing to electronic products or furniture. To form a clear picture of the main attributes that indicate the quality level of a product was somewhat difficult, especially in the case of intrinsic attributes that differ widely between product categories. Another limit may be the small sample considered for interviewing. A larger sample would be more representative for the target population concerned. However, the consistency of the responses among the eight respondents suggests the existence of a core key attributes that defines the way consumer evaluate product quality. This study can also represent the starting point for future research that can focus on how the quality of a particular product category is assessed in the online environment.

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