

The effect of packaging elements on purchase intention: case study of Algerian customers

Sidi Mohammed Benachenhou^{a*}, Benallal Guerrich^a and Zahia Moussaoui^a

^aLecturer, Tlemcen university, Algeria, BP: 226 Tlemcen Algeria

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ABSTRACT

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The aim of this article is to study the impact of marketing innovation and the visual and verbal elements of packaging on customers purchase intentions. After a brief literature review, an empirical study is conducted among 140 customers of Coca-Cola brand in Tlemcen city. To this end, a model of intention has been developed to be tested by structural equations modeling. The results of this study showed that marketing innovation and the visual and verbal elements of packaging directly affect the purchase intentions of the customers of this brand.

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1. Introduction

According to marketing experts, the use of only traditional promotional tools in the case of modern consumers is insufficient (Wyrwa & Barska, 2017). Therefore, marketing strategies are based on understanding consumer behavior. It is about identifying their needs and attitudes and working on selecting and designing a suitable and successful marketing mix that uses control variables, such as packaging, pricing and advertising (Chind & Sahachaisaeree, 2012). While marketing seeks to persuade consumers to purchase the product, it can choose packaging as a mean of giving an image that reflects the quality and characteristics of the products (Gon & Calves, 2008; Chind & Sahachaisaeree, 2012), using graphical features that are placed on the basic product interface. In this regard, packaging plays an important role in introducing the product and the brand, by recording the name of the latter and the information associated with it, by virtue of which the customer can distinguish the brand to be purchased from the competing brands. The term packaging consists of the package and the cover, they are complementary to each other, and the fundamental difference between them lies in the task of each one of them, the packaging has a dual technical task (preservation and protection of the product) and marketing (stimulating the consumer) and the cover is only marketing.

* Corresponding author. Tel.: +213 774257214
 E-mail address: benach_med@yahoo.fr (S. M. Benachenhou)

1.1 Problem statement of the study

The intensification of competition in the markets has forced the marketer to be precise in the packaging design in order to achieve competitive advantage in the market and to meet the expectations of the different parts of the customers. In order to achieve this, she must choose a combination of innovative verbal and visual stimuli to achieve her strategic goals. In the context of these ideas, we suggested the following problem:

What is the effect of optical and verbal components and marketing innovation for packing and packaging on the intention of buying of the customer?

This problem includes a number of key questions related to the concept of packaging. It also focuses on identifying the most important factors influencing the consumer's perceptions of the brand through the packaging. It also focuses on determining the importance of visual (colors and shapes) and verbal elements, and marketing innovations for packaging to the consumer.

1.2 The importance of the study

The importance of this research lies in its focus on: 1) Studying consumer perceptions of packaging of various brands, especially those with large consumption. This coincided with the development of sensory marketing, which is concerned with influencing the purchasing decision of the consumer through his five senses: Hearing, sight, smell, touch, taste, and how this type of marketing enables institutions to achieve a competitive advantage; the importance is also to know; 2) the effect of packaging on the consumer's perception of the brand image; and finally 3) the inclusive effect of the visual and verbal packaging on all types of customers makes this study important because it addresses the global institution of Coca-Cola.

1.3 Objectives of the study

This paper attempts to test buyers' perception of the appearance of the product and to study the importance of visual and verbal features that can be used to design packaging to influence the cognitive and emotional perception of the targeted consumers, leading to the purchase decision (Hayden, 2009; Chind & Sahachaisaeree, 2012; Mohammadshahi, 2013). On this basis, we will initially introduce a literature survey of previous studies that dealt with the effect of visual and verbal elements and marketing innovations of packaging on the intention of purchasing by the consumer, and then we will do a field study with the consumers of soft drinks Coca-Cola to try to know the impact of packaging of this brand on the perceptions and intent of purchasing by the consumers in question.

2. Literature review

According to Chudy and Pietraszewski packaging is defined as “a physical structure suitable for the product, designed to protect it from damage and deterioration, and enable dividing it into parts and moving it, as well as provide information about the product and display it aesthetically (Promotional functions)” (Wyrwa & Barska, 2017). From this definition, we can see the active role that packaging can play in the marketing and communication of the organization's brands. Studies in this field have focused on the use of packaging in advertising and promotion of sales, specifically the role that visual and verbal elements of packaging can play in shaping consumer purchasing behavior and decision-making process (Chind & Sahachaisaeree, 2012). Marketing literature has shown that considerations and research on packaging focused primarily on the general characteristics of packaging (Karnal et al., 2016; Ampuero & Vila, 2006; Chind & Sahachaisaeree, 2012). Several studies in this field have confirmed the status and the role of packaging in marketing products, their close links to each element of the marketing mix, other studies praised the pivotal role of marketing innovation in packaging in increasing the value of the product in consumer mind (Majid, 2016).

2.1 The impact of Visual elements of packaging on purchase intention

The importance of packaging lies in the development of brand image and symbolic communication of the company to shape consumer buying behaviors and their contributions to influencing the consumer intention to buy. The packaging are understood as a set of symbols that are properly designed and creating an image of the product/brand, affecting the perception and attitude towards the product/brand, packaging show the features and characteristics of the product (Ankiel-Homa, 2012). According to Chind and Sahachaisaeree (2012) visual elements are the most important element in the overall design of the product, especially as the packaging image is an important approach to express product value and increase confidence to convince the consumer to buy. Studies in this field focused on the use of packaging in advertising and promotion of sales, and highlighted the visual elements of packaging consisting of size, shape, color, material and graphics on the cover. Shapes and colors have meanings and are communicated to consumers to describe product quality (Gon & Calves, 2008; Chind & Sahachaisaeree, 2012). In addition, structure and drawing are important to consider design to communicate and inform the consumer about the product using design elements such as color, copying, and images on the cover and packaging (Meyers & Lubliner, 1998; Chind & Sahachaisaeree, 2012). In general, packaging consists of color, shape; size, material, as well as the drawings on the packaging. Previous studies have shown that the *color* of packaging has an impact on consumer's purchase intention. Among these studies: Dichter (1964), Gordon et al. (1994) [coffee cover color]; Brée Sohier et al. (2000); Patin (2004) [color of water bottle] and Droulers and Rouillet (2005) [Color of Pharmaceuticals] (Benmansour, 2016). Other studies have also shown the effect of the *form* of packaging, along the lines of studies: Krider et al. (2001), Raghbir and Greenleaf (2006) [packaging of pizza]; Matta and Folkes (2004) [Shape of soft drinks bottles] (Benmansour, 2016). The *size* of packaging is also confirmed to have an effect on the consumer's intention of buying from the series of studies carried out by researchers in different fields: Folkes, et al. (1993), Wansink (1996), [mineral water bottles]; Gilalinia, et al. (2013) [cleaning supplies]; Benyamina (2011) [dairy products]; Benmansour (2016) [drinks juices]. Among the *visual* elements is the material from which the packaging was made. The study of Benmansour (2016) in Algeria found that the difference in the material of the packaging has an effect on the intention to purchase. The glass container is better than the carton and better than the plastic. The customer also tends towards eco-friendly packages that are solid (Benmansour, 2016). Also the drawings on the packaging have an impact on the intention of purchase among consumers in the study. Based on the foregoing, the first hypothesis is formulated as follows:

H.1: Visual elements for packaging has a positive impact on purchase intention.

2.2 Verbal elements of packaging and its impact on purchase intention

The information contained in food packaging, as one of the components of marketing information, is a factor that greatly influences consumer's opinion about the product, because the diversity of food products traded in the market, leads to the need to provide consumers with complete and reliable information about the products sold (Wyrwa & Barska, 2017). It is justifiable to investigate consumers' attitudes towards information about food packaging and on the basis of that information; consumers decide whether to buy the product or brand. The design of products packaging also plays a major role in marketing strategy, it may also contribute to increasing the competitiveness and interest of buyers (Nowogródzka et al., 2014; Wyrwa & Barska, 2017). Verbal elements consist of information, country of origin, and logo. Many studies have praised the role played by verbal elements, especially the information on the cover, in influencing consumers' intention to buy, among these studies we mention: Underwood and Klein (2002) [water bottles of famous brands]; Hyatt et al (2008), Kuvykaite et al. (2009), Balaban and Maleti (2011), Dobson et al. (2012) [water bottles]; Asghararefi and Mahtab Nekoyi (2010) [food products]; Rahmani et al. (2013) [food, health & beauty products]; Benyamina (2011) [milk products]; Benmansour (2016) [juice drinks]. The above discussions suggest the following hypothesis:

H.2: Verbal elements for packaging has a positive impact on purchase intention.

2.3 Marketing Innovation of packaging and its impact on purchase intention

Recent trends in retail and lifestyle changes are catalysts that have led to the development of new and innovative packing and packaging technologies without compromising food safety and quality (Dainelli, 2008). Moreover, Jerzyk and Kaniewska-Sęba noted that modern packaging “innovative one” makes the product more attractive and has a positive impact on potential buyers encouraging them to buy” (Ciechomski & Opakowanie, 2008). The changes in the packaging industry have reinforced the economy by improving food safety and quality and minimizing product losses (Vanderroosta et al., 2014). The marketing innovation of packaging is no less important than the visual and verbal components of packaging for its effect on purchase intention. The innovative brands positively affect purchase intention. This is the conclusion of the field studies conducted in this regard, such as: Raheem, et al. (2014) [Food Products]; Benyamina (2011) [Dairy Products]; Benmansour (2016) [Juice Drinks] (Benmansour, 2016; Benyamina, 2010). These studies concluded that the containers with sealed reseals are well understood by the customer, and in compliance with his requirements, also the survival of the packaging even with the long-term use, as well as creativity in their manufacture have a significant impact in the selection of the brand, regardless of the quality of the product contained in the package. Based on the above, we propose the following third hypothesis:

H₃: Marketing innovation for packaging has a positive impact on purchase intention.

3. Methodology

3.1 Research model

The theoretical model of our research (see Fig.1) consists of three independent variables: 1) Visual elements for Packaging (VISP); 2) Verbal elements for Packaging (VERP) and Marketing Innovation (INOV) for packaging. They are supposed to influence the purchase intention (PINT) of our sample.

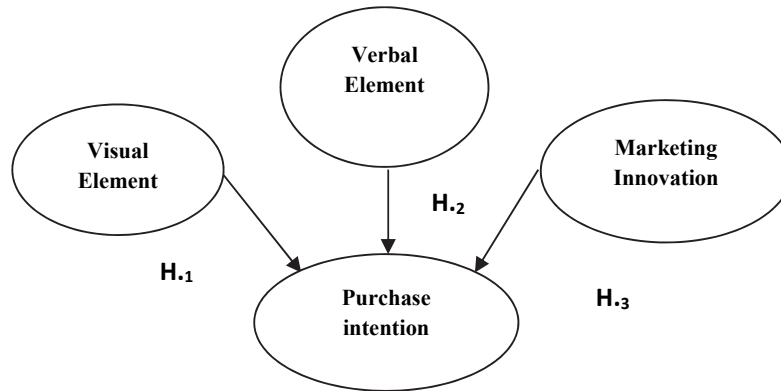


Fig. 1. The research model of Packaging

3.2 Sample

We conducted a survey focusing on 140 customers in Tlemcen city (Western Algeria). The field work was developed in March and April 2017.

Table 1

Description of the respondents

	Demographic Variables	Frequency	Ratio (%)
Gender	Males	68	49.28
	Females	72	50.71
Age	20-30	118	84.28
	30 and over	22	15.71

Our sample comprised of almost 49.28% male and 50.71% female respondents. In terms of age, nearly 84% of participants were between 20 and 30 years, and 15.7% were more than 30years.

3.3 Measures

A questionnaire was developed to measure the constructs in the model of packaging. Respondents answered the questions in the best way that described how they think, the way they perceived the visual element for packaging (15 items), the perception of verbal element for packaging (7 items) and marketing innovation of packaging (5 items), also their intentions to purchase the coca cola brand (6 items). The respondents are asked to indicate the extent of their agreement using a seven-point Likert scale from «1» (Strongly Disagree) to «7» (Strongly Agree).

4. Data factor analysis

4.1 Exploratory factor analysis

To test the reliability of scale we will initially explore the veracity of items in measuring the variables of the study. To achieve this purpose, the SPSS.22 software, was used. This analysis enabled us to obtain the reliability indicators (alpha Cronbach), the test of variances, averages and standard deviations, and chose the significance of Fisher test, which is summarized in Table 2. The average responses for all items are greater than 4.34, which means that most of the responses tended to be approving (7, 6 and 5 according to Likert scale). The value of the standard deviation is acceptable because it is greater than or equal to 1.5, because this value explains the distribution of the answers (whether they are convergent or spaced), which are shown to be distributed in a normal distribution. α Cronbach is also no less important than the other indicators in Table 2. We note that most of the results of this indicator were greater than the minimum acceptance of 0.6, all of which were good that they were limited between [0.641 - 0.927]. So these results confirm the validity of the items in the statistical analysis. The working analysis also recorded encouraging results with respect to the KMO index, which is used to determine the quality of the links between the component clauses.

Table 2

Descriptive statistics reliability measures and Factor Analysis ($N = 140$)

Variables	No. of Scale Items	Mean Score	σ Standard Deviation.	α Cronbach	F Fisher	KMO	Bartlett Khi-deux	V(x) variance explained
Visual Element	12	5.012	1.465	.738	11.443	.730	284.475	56.831
Verbal Element	6	5.529	1.5	.791	15.048	.798	219.874	49.375
Marketing Innovation	4	4.929	2.51	.611	33.414	.653	79.997	48.462
Purchase Intention	6	4.305	1.828	.927	16.935	.855	661.342	73.509

The researchers conclude that its value is acceptable when it exceeds 0.6 .We note that its value is acceptable because it was between [0.659 and 0.854], As well as the zero value of Bartlett all tended to 0.The closer it gets to zero, the better the consistency between the items and the more credible the answers. Also, the value of the explained variance exceeds 50%. This means that half of the variables should have been interpreted in the applied model for the Fisher test was significant below a significant level of less than 0.05.

4.2 Confirmatory factor analysis

The empirical analysis enables us to test the ability of the working constants of the measured variables used to measure the underlying variables (visual, verbal, marketing innovation and purchase intention) and to test the good correlation between the theoretical model and the empirical model and it also enables us to analyze the regression.

The working constants (loading) expressed by a coefficient of λ limited between [0.194 and 0.863] and

the Student's T-test was greater than 1.96, (significant level of 0.05) for all the working constants of the measured variables (items) related to the variables of the theoretical model. Since our findings in the working constants Test were encouraging, now we are moving to the test of fit index. From the results, the chi² value is [1197.91] and the degree of freedom (*df*) is: [432].

Table 3
Regression analysis

Latent variables	ML β_i	T	ERR	P-VAL	OLS β_i
(VISP)-58→(PINT)	0.261	0.085	3.058	0.002	0.531
(VERP)-59→(PINT)	0.018	0.087	0.206	0.837	0.327
(INOV)-60→(PINT)	0.493	0.080	6.147	0.000	0.629
(ZETA1)→(PINT)	0.689	0.084	8.172	0.000	0.215

These are the most common and accurate indices when compared to other indices, so that they are used to calculate the *df* / chi² value, we compare its approach to the field [2 - 5] so its value is good because it is equal to 2.77. As for the absolute fit index [GFI =0.779 and AGFI=0.746], they were generally average since they were not far from 0.9. The incremental indicators of [BBNNFI =0,715, BCFI =0,735 and Bollen's Delta =0.737] were generally moderate and also the econometric correlation was good [James-Mulaik-Brett Parsimonious Fit =0.617]. Based on the results obtained, we conclude that the standards of good index were medium and therefore we can move to the analysis of regression equations (see table.3).

5. Findings and discussion results

The first hypothesis, in which we investigated the impact of visual elements of packaging (VISP) on purchase intention (PINT) of customers. The results showed that the visual elements have a positive and significant relation with purchase intention, so that the coefficient of correlation between the two variables value [$\beta_1 = +0.531$]. This result supports the first hypothesis proposed in this research, and also confirms many of the results of previous studies conducted in this regard, such as: Finlay et al. (1994); Burke and Jones (2000); Patin (2000); Droulers and Rouillet (2005); Gilalinia et al. (2013), which has reached the same conclusions. On this basis, it can be said that the visual elements of Coca-Cola packaging have a positive impact on customers purchase intention. The second hypothesis tested the effect of verbal elements of packaging (VISP) on customers' intention of Coca-Cola brand. The correlation between the two variables was as follows [$\beta_2 = +0.327$]. The positive relationship in this study between these two variables provides strong support for the second hypothesis and is largely consistent with the studies of the following studies: Underwood and Klein (2002); Kuvykaite et al. (2009); Benyamina (2011); Balaban and Maletić (2011); Dobson et al. (2012); Rahmani et al. (2013); Benmansour (2016). On this basis, we can say that the second hypothesis is confirmed. Finally, the coefficient of regression between marketing innovation (INOV) for packaging and the purchase intention of Coca-Cola is positive [$\beta_3 = +0.629$]. This finding leads us to accept the third hypothesis and is consistent with the results of the following research studies: Raheem et al. (2014); Benyamina (2011); Benmansour (2016). From the above, we confirmed the validity of all hypotheses in the research because the total regression coefficients were around 0.5, so we can say that in general the results obtained in the statistical analysis are satisfactory. The results also showed that marketing innovation has the greatest impact on purchase intention by customers. All of this leads us to conclude that purchase intention of Coca-Cola brand is influenced by the visual and verbal elements of packaging.

5. Conclusion

Packaging plays a vital role as an integral part in brand marketing. Many studies have found that packaging are not limited only to physical distribution (Protect it from damage) but also has a promotional role as it stimulates the consumer to make the purchase through the shapes and colors and information it holds, and explain the way it is used and the date and place of manufacture and components, and

helps to distinguish the brand from the Competitive brands easily. Through research, we have tried to understand the effect of marketing innovation and the verbal and visual elements of packaging on consumer's purchase intention. The field study we conducted on Coca-Cola customer and the results found that all visual and verbal ingredients related to packaging, including the marketing innovation, had an impact on purchase intention of Coca-Cola brand. The greatest influence ($\beta_3 = +0,626$) was found in the relationship between marketing innovation and customer intention. On this basis, it was clear to us through the study that the behavior of individuals is affected by packaging, especially when the competing brands are similar, meaning; the product is included in the products of large consumption such as food products. On this basis, enterprises can choose packaging that can distinguish them from competitors and apply to the customer's identity.

5.1 Managerial and perspective implications

- Institutions need to establish a research and development cell so that it can innovate in the use of appropriate packaging adapted to the wishes of the Algerian customer;
- Take into account the color, shape, size and all components that would attract the attention of the Algerian consumer in terms of packaging and be identical with his culture of consumption;
- To protect the environment from pollution, the organization should encourage the use of environmentally friendly packaging, the organization adopt a green marketing orientation;
- Contemporary and continuous renewal of packaging to give the consumer a positive impression of its brand and that it is always innovative and diverse.

5.2 Limitations and Future Direction

First, the items of the questionnaire were reviewed with specialized professors but nevertheless need to be reviewed and adapted to other studies according to the context in which they are located; Second, in fact, the size of a sample of 140 customers is a small size and we cannot obtain statistical results that we can disseminate to the study community due to lack of time, so we used the OLS method, which provides good statistical results in the case of Small samples; Thirdly, the impact of the packaging materials on the environment and the extent of their impact on the purchasing behavior of the consumer can be studied; Finally, the case study can be applied to a local brand and compared with the results of this study.

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