



INFLUENCE OF PACKING AND PACKAGING CHARACTERISTICS ON CONSUMER EVALUATION OF FOOD PRODUCTS

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ABSTRACT

The purpose of this study is to demonstrate the effect of packaging characteristics on consumer evaluation of food products. The questionnaire form prepared for this purpose included 20 questions for 149 consumers in Baghdad, regarding consumer awareness of the importance of packaging design, the impact of packaging materials from which the packaging is made, product characteristics, the influence of the brand and the country of origin on the consumer's purchasing decision, the results of questionnaire analyzed using percentages, weighted arithmetic mean and percentile weight, the results showed that the packaging characteristics of food products was effect on the purchasing decision for Iraqi consumer.

Keywords: Consumer, packaging, food products.

تأثير خصائص التعبئة والتغليف على تقييم المستهلك للمنتجات الغذائية

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الخلاصة

هدف البحث إلى بيان تأثير خصائص التعبئة والتغليف على تقييم المستهلك للمنتجات الغذائية، ولهذا الغرض اعدت استمارة استبانة شملت 20 سؤالا لاستطلاع اراء المستهلك ومدى ادراكه لأهمية تصميم العبوة وتأثير مواد التعبئة والتغليف المصنع منها العبوة وخصائص المنتج وتأثير العلامة التجارية وبلد المنشأ في قرار المستهلك الشرائي، وجرى توزيع الاستبانة على عينة عشوائية مكونة من 149 مستهلك في مدينة بغداد، وحللت البيانات باستعمال النسب المئوية والوسط الحسابي المرجح والوزن المنوي، وأظهرت النتائج أن خصائص تغليف المنتجات الغذائية تؤثر في قرار الشراء للمستهلك العراقي.

الكلمات المفتاحية: المستهلك، التعبئة والتغليف، منتجات الاغذية.

INTRODUCTION

The features of the food packaging shape an important key in the success of marketing food products, is function of packaging are no longer limited to just food safety alone (Alsoufi *et al.*, 2022), therefore, the roles of the packaging in food marketing has be development continuously to cover the growing of the needs of the markets and consumer (Alsoufi *et al.*, 2020b); so, packaging is considered the 5th elements in the marketing mix (Nickels & Jolsen, 1976), thus, the right packaging will be an important element for success the marketing strategy through right deal with consumers and satisfy their desires and needs consumerism (Klimchuk & Krasovec, 2013), as it packaging will documents the mental image of the consumer, and attracting the attention it and giving a good image of the product and providing a brief explanation about it. In addition, the packaging affects the consumer's feeling and acceptance towards the commodity, which will affect his final decision to buy, because the first impression of the packaging upon purchase or use greatly affects the marketing of the product,



and the visual elements such as shape, size, color and verbal elements are represented by the information it contains by themselves, the communication elements that the marketer sends to the consumer (Alsoufi *et al.*, 2017; Duncan, 2002). Therefore, among the most important goals pursued by the designer is the method of influencing the consumer, and this is done by simulating sensory temptation. An ineffective design is undoubtedly a design that lacks the inevitability of its existence in the first place, and to achieve this goal, an effective methodology must be used that guarantees the communication of the message embedded in the shock. design and make it firmly in the mind so that the consumer's purchase of the product meets a psychological need more than it is a consumer need (Alsoufi *et al.*, 2020a; Deliya & Parmar, 2012).

RESEARCH METHODOLOGY

First: Problem

Due the openness of the locally markets and the increase in food import in the last years for the many reasons such as increase in the people and consumption pattern change of the Iraqi consumers and the noteworthy decrease in the food locally production. The local markets witnessed the presence of imported products largely characterized by the quality of their packaging and packaging, despite the low quality of the material they contain, which the Iraqi consumer has become prefer over local products that suffer from the issue of packaging, thus, packaging has be one of the important requirements that add value to the manufactured product in order to ensure its marketing correctly and earn consumer satisfaction, therefore, the research problem lies to know the effect of packaging characteristics on the Iraqi consumer evaluation of food products in the locally markets.

Second: Importance

The attention to design and the external shape of the food packages, due to it become important requirements in this Industry, that will positively reflect for marketing of the these products for consumers.

Third: Objectives

1. Recognition of Iraqi consumer's opinion on the impact of food packaging characteristics in his purchasing decision
2. Determine the packaging variables that affect the consumer's purchasing behavior.

Fourth: Method

The opinion poll for a random sample of consumers in Baghdad was depended to get the required data and analyze it.

Fifth: Limits

1. Temporal limits: The research completion period extended from January 1, 2022 to December 1, 2022.
2. Spatial boundaries: Questionnaire was applied in Baghdad, Iraq.

Sixth: Sample

The sample of study was form 149 consumers which randomly selected in Baghdad to get their opinion in questionnaire form that prepared for this purpose.

Seventh: Tool

Questionnaire was depended for collecting required information, and it included of 20 questions, 6 for consumer awareness of the importance of design, 4 for packaging materials from which the packaging is made, 4 for product characteristics, and 6 for the brand and country of origin.



Eighth: Statistical methods

Percentages, arithmetic mean, hypothetical mean, and weight percentile were used as a statistical method in this study.

THEORETICAL FRAMING

Packaging is important step in the food production due it has to provide success marketing for consumer (Alsoufi, 2022). Therefore, over the last years, it was noted that a many largest brands working for improving their branding characteristics, that including color, shape, labeling information's, texture, weight and ease of use and opening (Spence, 2016). The color was considered the most important character for packaging of food products, therefor, the most food producers in the world use color in order to indicate their product, that also effect of the consumer's behavior during food purchase from markets (Seher *et al.*, 2012), while, sometimes, the color indicates not the flavor, but it represented specific brand such as red in Coca-Cola's, in this context, and given the importance of color in packaging, the replacement of color in any famous brand need to deep study for the consumer opinion, the shape of packaging come directly after branding in terms of influencing the consumer and the success of the marketing process according to the opinions of some marketers (Piqueras-Fizman & Spence, 2015), therefore, the workers in this field resorted to the continuous improvement for the shape of packaging, with considerate not affecting the mental image of the consumers and making sure that it will provide all the information that the consumer needs (Alsoufi, 2021; Spence, 2016; Velasco *et al.*, 2014). The texture material that use in packaging of food product is effect on the consumers decision, therefore, packaging designers putting that in the first place when they thinking to development the texture of food packaging, due to its closely related to the consumer's mind, arouse his interest, effect in his decision, increase the chance of purchase and ensure the marketing process effectively (Gallace & Spence, 2014; Labbe *et al.*, 2013; Schifferstein *et al.*, 2013). Weight accuracy of the food products are one aspect important to success of the packaging process (Alsoufi *et al.*, 2019; Hussein & Alsoufi, 2013), many studies are demonstrating that the consumer's decision can be altered by changing the weight of the packaging (Alsoufi *et al.*, 2017; Al-Hamdany *et al.*, 2014), through providing offers at lower prices as the weight increases, use psychological tricks to increase weight of packaging without any real weight gain (Spence, 2016).

ANALYZE AND DISCUSS RESEARCH RESULTS

First: Demographic variables

The results (Table, 1) refer to the demographic variables for sample of study.

Table (1): The demographic variables for sample of study.

No.	Demographic variables	Number	(%)
1	Gender		
	Females	72	48.3
	Males	77	51.7
2	Age (years)		
	20-29	16	10.8
	30-39	38	25.5
	40-49	47	31.5
	59 -50	48	32.2

Second: Research variables

The results show the effect of the printing design on the consumer's purchasing decision, through the axes of the questionnaire, that contain the importance of packaging, colors, packaging design, packaging size, materials from which the packaging is made, packaging shape, product characteristics, product name, trademark, and country of origin.

It is noted from (Table 2) that the average value of the weighted arithmetic mean and weight percentile were 3.949 and 78.97%, respectively, which ensures the agreement of the sample (<3) with the axis related to the impact of the consumer's awareness of the importance of packaging design in his purchasing decision, as the degree of response of the samples agreed It was strongly (<3) although good packaging gives additional value to food products (Question 2), while the sample response was in agreement (<3) although good design leads to attracting attention when shopping (Question 1), and the shape of packaging It reflects the distinctiveness of the food product and its trademark (Question 3), and that the colors used in packaging help to find the desired product easily and conveniently (Question 4), and that the consumer always tends to prefer buying food packages that are easy to use and store (Question 5), and that foods Those with large packages are more attractive to buy when shopping (Question 6).

Table (2): The impact of consumer perception of the importance of packaging design on his purchasing decision.

Question No.	Question	Degree of response					Arithmetic mean	Arithmetic mean relation with		Weight percent (%)
		Strongly agree	Agree	Neutral	Don't agree	Strongly don't agree		Degree of response	hypothetical mean	
		5	4	3	2	1				
the design										
1	Good design attracts attention when shopping	38 (25.5%)	74 (49.7%)	35 (23.5%)	2 (1.3%)	0	3.993	Agree	>3	79.86
2	Good packaging adds value to food products	61(40.9%)	67 (45%)	18 (12.1%)	0	3 (2%)	4.228	Strongly agree	>3	84.56
3	The form of packaging reflects the distinctiveness of the food product and its trademark	31 (20.8%)	70 (47%)	44 (29.5%)	4 (2.7%)	0	3.859	Agree	>3	77.18
4	The colors used in the packaging help to find the desired product easily	36 (24.2%)	75 (50.3%)	34 (22.8%)	4 (2.7%)	0	3.960	Agree	>3	79.2
5	The consumer always tends to prefer buying food packages that are easy to use and store	21 (14.1%)	73 (49%)	41 (27.5%)	14 (9.4%)	0	3.678	Agree	>3	73.56
6	The consumer always tends to prefer buying food packages that are easy to use and store	30 (20.1%)	85 (57%)	34 (22.8%)	0	0	3.973	Agree	>3	79.46
Average							3.949	Agree	>3	78.97
Category length 4/5= 0.8		4.20-5	3.40-4.19	2.60-3.39	1.80-2.59	1-1.79				
Hypothetical mean = 3										

It was observed from (Table, 3) that the mean value of the weighted arithmetic mean and weight percentile were 4.01 and 82.2%, respectively, which means the agreement of the sample (<3) with the axis related to the effect of packaging materials from which the package is made on the consumer's purchasing decision, as the degree of response was the samples agree (<3) with the fact that the raw materials used in the food packaging industry represent a basic criterion in making the purchase and consumption decision (Question 7), and that the food packaging materials reflect the quality of production and the brand (Question 8), and that the consumer prefers to buy unbreakable packages (Question 9), and that the consumer would

like the packaging materials to be made of materials that are not harmful to health and the environment (Question 10).

Table (3): The effect of packaging materials from which the packaging is made on the purchasing decision for consumer's.

Question No.	Question	Degree of response					Arithmetic mean	Arithmetic mean relation with		Weight percent (%)
		Strongly agree	Agree	Neutral	Don't agree	Strongly don't agree		Degree of response	hypothetical mean	
		5	4	3	2	1				
Packaging materials from which the packaging is made										
7	The raw materials used in the food packaging industry represent a basic criterion in making the purchase and consumption decision	31 (20.8%)	86 (57.7%)	30 (20.1%)	2 (1.3%)	0	3.980	Agree	>3	79.6
8	Food packaging materials reflect the quality of production and the brand	44 (29.5%)	70 (47%)	35 (23.5%)	0	0	4.060	Agree	>3	81.2
9	The consumer prefers to buy unbreakable packages	28 (18.8%)	76 (51%)	33 (22.1%)	12 (8.1%)	0	3.805	Agree	>3	76.1
10	The consumer wants the packaging materials to be made of materials that are not harmful to health and the environment	39 (26.2%)	100 (67.1%)	10 (6.7%)	0	0	4.195	Agree	>3	83.9
Average							4.01	Agree	>3	82.2
Category length 4/5= 0.8		4.20-5	3.40-4.19	2.60-3.39	1.80-2.59	1-1.79				
Hypothetical mean = 3										

(Table, 4) shows that the average value of the weighted arithmetic mean and weight percentile were 4.27 and 85.4%, respectively, which means that the sample agreed strongly (<3) with the axis related to the effect of product characteristics on the consumer's purchasing decision, as the degree of response of the samples was strongly agreed (3<) Although viewing the information on food packages helps in judging the quality of the product (Question 11), and reading the characteristics of the product on food packages is essential before buying and consuming (Question 12), and that the consumer avoids buying food products that lack Clear and understandable information in the informational indication card (Question 13), and that the consumer always reads the instructions for use, warning signs and storage conditions on the food package before buying and consuming (Question 14).

Table (4): The effect of product characteristics on the purchasing decision for consumer's.

Question No.	Question	Degree of response					Arithmetic mean	Arithmetic mean relation with		Weight percent (%)
		Strongly agree	Agree	Neutral	Don't agree	Strongly don't agree		Degree of response	hypothetical mean	
		5	4	3	2	1				
Product properties										
11	Examining the information on food packages helps in judging the quality of the product	53 (35.6%)	77 (51.7%)	19 (12.8%)	0	0	4.228	Strongly agree	>3	84.56
12	Reading product characteristics on food packages is essential before purchasing and consuming	52 (34.9%)	73 (49%)	24 (16.1%)	0	0	4.268	Strongly agree	>3	85.36
13	The consumer avoids buying food products that lack clear and understandable information on the label	69 (46.3%)	60 (40.3%)	20 (13.4%)	0	0	4.329	Strongly agree	>3	86.58
14	The consumer always reads the instructions for use, warning signs, and storage conditions on the food package before purchasing and consuming it	71 (47.7%)	45 (30.2%)	33 (22.1%)	0	0	4.255	Strongly agree	>3	85.1
Average							4.27	Strongly agree	>3	85.4
Category length 4/5= 0.8		4.20-5	3.40-4.19	2.60-3.39	1.80-2.59	1-1.79				
Hypothetical mean = 3										

The results obtained (Table, 5) showed that the average value of the weighted arithmetic mean and weight percentile were 4.173 and 83.463%, respectively. The samples are strongly agreed upon (3<) although the information on the country of origin affects the purchase decision (Question 16), and that the consumer reads the information related to the

company's name and trademark on the packaging before purchasing (Question 17), and the presence of information on the company's name and trademark is generally It is clear on the packaging that helps reassure the consumer and influence the purchase and consumption decision (Question 19), and that the consumer always avoids buying and consuming food products that do not contain a mention of the country of origin (Question 20), while the degree of response of the samples was consistent (<3) although the mark Well-known and reliable brands are one of the elements that encourage buying (Question 15), and the consumer always avoids buying and consuming food products with unknown names and brands (Question 18).

Table (5): The influence of the brand and the country of origin on the purchasing decision for consumer's.

Question No.	Question	Degree of response					Arithmetic mean	Arithmetic mean relation with		Weight percent (%)
		Strongly agree	Agree	Neutral	Don't agree	Strongly don't agree		Degree of response	hypothetical mean	
		5	4	3	2	1				
Brand and country of origin										
15	A well-known and trusted brand is one of the elements that encourage buying	40 (26.8%)	48 (32.2%)	55 (36.9%)	0	0	3.738	Agree	>3	74.76
16	Country of origin information influences the purchasing decision	65 (43.6%)	70 (47%)	13 (8.7%)	1 (0.7%)	0	4.336	Strongly agree	>3	86.72
17	The consumer reads the information about the company's name and brand on the packaging before purchasing	64 (43%)	65 (43.6%)	20 (13.4%)	0	0	4.295	Strongly agree	>3	85.9
18	I always avoid buying and consuming food products with unknown names and brands	52 (34.9%)	74 (49.7%)	17 (11.4%)	6 (4%)	0	4.154	Agree	>3	83.08
19	The presence of the company's name and brand information clearly on the packaging helps reassure the consumer and influence the purchase and consumption decision	52 (34.9%)	85 (57%)	12 (8.1%)	0	0	4.268	Strongly agree	>3	85.36
20	I always avoid buying and consuming food products that do not contain a mention of the country of origin	66 (44.3%)	55 (36.9%)	27 (18.1%)	1 (0.7%)	0	4.248	Strongly agree	>3	84.96
Average							4.173	Agree	>3	83.463
Category length 4/5= 0.8		4.20-5	3.40-4.19	2.60-3.39	1.80-2.59	1-1.79				
Hypothetical mean = 3										

CONCLUSIONS

The design of the final shape of the food packaging is one of the important things that must be taken into account in production due of its effect on consumer behavior and purchasing inclination, ensuring the successful marketing process and achieving profits.

RECOMMENDATIONS

1. Investing in consumer awareness of the importance of the packaging as it reflects the positive image of the product and provides a high attractiveness for buying and ensuring marketing and competition in the markets.
2. Choosing suitable and attractive designs because they are considered one of the means affecting the consumer's purchasing decision.
3. Providing appropriate and varied sizes of packages to meet consumer demands and consumption discrepancies depending on monthly income, consumer habits and societal behavior.
4. Choosing suitable raw materials for the manufacture of the packaging, which must provide full protection for the product, be non-breakable and not cause damage to public health and the environment, as well as the ease of circulation in the markets to reach the consumer.
5. Paying attention to the information shown in the product's media label and writing down all the necessary information that gives the consumer all the data he needs in a clear and transparent manner.



6. Enhancing the name of the product, its trademark, and the producing company to the consumer by paying attention to the quality of the product and providing the best services to customers in order to sustain the company's sales and gain consumer confidence in its various products.
7. Ensure that the country of origin is clearly written and easy to read by the consumer.

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