

Evaluation of Food Product Packaging Design: An Empirical Study of Consumer Attitudes in the Capital City of Amman

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ABSTRACT

The study examined consumer attitudes towards the quality of packaging design of food products in Jordan, based on the VIEW model of product packaging. The study is based on a fieldwork and a judgement sample of 400 consumers located in shopping centers in the capital city of Amman. The data were analyzed, using various statistical techniques, such as Frequency analysis, Descriptive analysis, Factor analysis and, One Way ANOVA. The main results showed that consumers were not satisfied enough with the quality of packaging design of food products, particularly the workability aspects. Moreover, the analysis revealed significant differences in consumer attitudes due to age and income variables. In light of the research findings, appropriate recommendations were made.

INTRODUCTION

Today, marketing communication has a critical role in a business's overall marketing success. Very often, an effective integration in the various communication elements (e.g. brand names, logos, advertising, point-of-purchase materials, and eye-catching packaging... etc.) is absolutely imperative for success in a highly competitive business world. In consumer markets, one major objective of IMC (Integrated Marketing Communications) is to influence consumer's buying behaviour at the point-of-purchase, where packaging and other components of IMC ultimately come together, and where most buying decisions are often made.

In fact, many studies on consumer shopping behaviour revealed that high proportion of purchases in retail outlets is unplanned. For example, one study revealed that 70% of purchase decisions are made at the point of purchase (Rivett, 1999). This implies that many brand choice decisions are made while the buyer is in the store, and that packaging, along with other point-of-purchase materials, can play a major role in influencing unplanned buying decisions.

Today, packaging represents a critical element in enhancing brand image via conveying functional,

symbolic, and experiential benefits (shimp, 2004). In other words, it plays a crucial role in the product strategy, which is one major dimension of the marketing mix.

Research Objectives

The overall objective of this research is to assess consumer attitudes towards food product packages in the Jordanian product market, with particular reference to the View model of product packaging (Visible, Information, Emotion, and Workable). In that, the research seeks to examine how Jordanian consumers perceive the packaging design of food products, in terms of the main components the View model. Additionally, the research will examine if such attitudes vary by demographic variables (sex, age, income and education). While many studies have been conducted on this issue around the world, the current study is the first of its nature in the Jordanian context.

Research Problem

In today's business world, marketers operate in a highly competitive and dynamic environment. Competition for consumer attention, at the point-of-purchase, has become more intense. Marketers are now fully aware that product packaging design plays a critical role in a brand's marketing strategy to influence shopping behaviour at the point-of-purchase, where most buying decisions are made.

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In the competition arena, the focus has shifted from media to the point-of-purchase, making product packaging more important than ever before. In fact, packaging serves to enhance brand's image, along with other marketing communications tools. It performs marketing functions beyond the traditional role of protection. Essentially, an effective package design has only few seconds to make an impact. In this time, it should catch the shopper's eye, break through competitive clutter at the point-of-purchase, draw attention to the brand, promote brand features, communicate the right message and ultimately convince him/her that it is the optimum proposition on the shelf. One study revealed that, on the average, shoppers spend 10 to 12 seconds viewing brands on the shelf prior to making a final brand choice (Dickson and Sawyer, 1990). In other words, the package presents the last word in a silent advertising to motivate shopper's brand choice. The increased importance of packaging has given rise to statements such as "Every package is a five-second commercial" and "packaging is the least expensive way of advertising" (Gershman, 1987). This trend has led many marketers and producers to invest more money in product packaging. However, the extent to which package design appeals to consumers in different cultures and influences their buying decisions remains a matter of concern to marketers across the world. Indeed, this is where the current research begins. It looks at this issue through examining the main element of the VIEW model of package design (Visible, Information, Emotion, and Workable) from consumers' perspective in the Jordanian food market. The VIEW model (Twedt, 1968), which was developed in the late 1960s, is now an important framework to develop an effective package. In fact, numerous innovations in recent years have enhanced the model and made it an appropriate guide for marketers and package designers (Shimp, 2004).

The findings of the current research are expected to help marketers understand how Jordanian shoppers look at the quality of food product packages, according to the four dimensions of the VIEW model. This should, in turn, highlight ways of improving packaging design of food products to draw shoppers' attention better and influence their brand choices.

Literature Review

Food product companies today are choosing from a wide range of packaging options (in terms of color, size,

shape, style, decoration, features, ...etc.). Regardless of their approach, they are all looking to achieve the same objective: powerful packages that truly stand out on the retail shelf. Indeed, packaging has today become a critical element in product marketing strategy to distinguish a company's product and deal with competition (American Drycleaner, 2001).

Essentially, the package should perform three specific functions (Packaging Council of Australia Inc., 1997):

Containment: most food products must be contained properly before shipping to destination. The package must ensure integrity of product content. Inappropriate or bad containment can lead to problems, such as spillage, losses, and serious damage to both the product itself and neighboring products.

Protection and Preservation: packaging has an important role in protecting products and preserving them in good conditions both in the retail store and as they go to the final consumer. In particular, different climatic conditions (heat, cold, moisture, vapor, ... etc.) should be considered in packaging food products.

Communication: the communication function is the most important part in packaging. The package should communicate the right message. It must draw attention to the brand and its features quickly and sell it. In other words, the package must protect what it sells, and sell what it protects. In fact, it is the power of communication on the package that sells the product. Product information is in the heart of communication. A package designer must devote the limited package space to the most important brand features rather than clutter the package with too many messages. Having identified the most salient brand features, the designer should establish communication priorities (Shimp, 2004). Furthermore, the designer has to observe certain government regulations regarding some labeling requirements (e.g. price, ingredients, nutrition value, safety, ... etc.), and certain ethical and environmental issues (e.g. using environment friendly materials, reducing wastage, recycling).

According to Shimp (2004), decisions on packaging must take several ethical issues into consideration. For example, product information should not mislead consumers by providing exaggerated desirable information or by unethically hiding certain undesired aspects of the product. Packaging graphics can be

unethical when the pictures and other illustrations on a package misrepresent product contents. Moreover, unsafe packaging can be dangerous in food products, particularly for children.

The VIEW Model

The VIEW model was originally developed in the late 1960s (Twedt, 1968), though very much popular today. The model suggests that a good package should be designed according to four main dimensions: Visibility; Information; Emotion and Workability. **Visibility** describes the package's ability to draw attention and stand out on the retail shelf (Hine, 1995). Rowan (2000) maintains that a package must be visible at the earliest opportunity to hold consumer's attention. A suitable mix of color, size, shape, graphics and, style should enhance package's visibility. **Information** is concerned with various product information aspects, such as usage instructions, brand name and slogan, product benefits, labeling and, other information. Product information should stimulate product trial and encourage repeat buying behaviour (Smith and Shannon, 1995). **Emotion** deals with package's ability to evoke a desired feeling. It represents an invisible touch that creates a relaxing and positive mood for shopping (Trend lines International, 2002). For example, a package designer can mix package elements in a manner that arouses feelings of elegance, prestige, happiness and pride. **Workable** deals with protection, preservation and storage functions of the package. In recent years, many companies improved the workable aspects of their packaging designs significantly (Lefton, 1997).

As indicated earlier, there was no previous research work found on the subject of packaging in Jordan in particular, making the current study the first of its nature in the area. However, plenty research work was conducted across the world. For example, Schwartz (2000) conducted a study to forecast the use of flexible packaging in the United States. He forecasted an annual growth of 3.5 percent over the years 2000 to 2005 in this industry. Higgins (2000) stressed the importance of packaging convenience food products in the United States. Higgins noticed an increasing consumer's willingness to pay a premium for convenience food, since many people were too busy to cook at home. Niff (2001) found that package-goods companies have moved to capitalize on prosperity with new premium versions of everyday products (e.g. razors, detergents, chocolate,

potato chips... etc.). Schneider (1977) investigated the possibility of controlling accidental childhood poisoning, and found it feasible to design packages and labels that reduce child's attraction to such products. In a study of consumer preference for a no-choice option, Dhar (1997) concluded that, in general, shoppers may not make a brand choice (deferred decision), in a given set of alternatives, when they find no single alternative has a decisive advantage.

Research Hypotheses

To address the objectives of this research, highlighted earlier, the following hypotheses were formulated:

H1: Jordanian consumers are generally favorable about the visibility aspect of the packaging design of food products.

H2: Jordanian consumers are generally favorable about the informational value of the packaging design of food products.

H3: Jordanian consumers are generally favorable about the emotional appeal of the packaging design of food products.

H4: Jordanian consumers are generally favorable about the workable aspects of the packaging design of food products.

H5: There is no statistical difference in Jordanian consumer attitudes towards packaging design due to sex ($\alpha \leq 0.05$).

H6: There is no statistical difference in Jordanian consumer attitudes towards packaging design due to age ($\alpha \leq 0.05$).

H7: There is no statistical difference in Jordanian consumer attitudes towards packaging design due to income ($\alpha \leq 0.05$).

H8: There is no statistical difference in Jordanian consumer attitudes towards packaging design due to education ($\alpha \leq 0.05$).

Research Methodology

Population

Study Population in this research includes all consumers in the capital city of Amman, who are 18 years old or above. Obviously, consumers in this age category are mature enough to express responsible views regarding their shopping behaviour.

Table 1: Distribution of the study sample according to demographic variables

Variable		Count	Percentage
Sex	Male	189	47.2
	Female	211	52.8
Age	18-30	260	65.0
	31-45	91	22.8
	46+	49	12.2
Education	High school or below	78	19.5
	Diploma/ University degree	287	71.7
	Postgraduate degree	35	8.8
Income (JD)	200 or Below	167	41.8
	201-300	94	23.5
	301-500	48	12.0
	501+	91	22.7

n=400.

Table 2: Statements of the four dimensions of the VIEW model

Visibility
1- Attractive colors are used in packaging to attract attention.
2- Packages are designed in an attractive and elegant way.
3- Jordanian products can be recognized easily (among other products) by the package.
Information
4- There is sufficient useful information on the package.
5- Information, written on the package, is clear and readable.
6- The information on the package is correct and useful.
7- The information on the package helps the consumer understand the optimal way for usage.
Emotional appeal
8- Products are packaged in an attractive and colorful way.
9- The design and shape of the package increase consumer willingness to buy.
10- The quality of the materials used in the package gives a positive impact about the product.
11- There is a harmony in the package structure (shape, color, size).
Workability
12- Products are packaged in a way that keeps them in good condition.
13- Packages can be easily handled (catch, move, remove, use).
14- Products are packaged in a way that facilitates easy storage.
15- The package can be recycled / reused.
16- The package contains environment friendly materials.

Table 3: Descriptive analysis and factor loading of attitude statements regarding the four dimensions

Visibility¹	Mean Score	Standard Deviation	Factor Loading
1- Attractive colors are used in packaging to attract attention.	3.58	1.05	0.457
2- Packages are designed in an attractive and elegant way.	3.39	1.13	0.408
3- Jordanian products can be recognized easily (among other products) by the package.	3.92	1.13	0.816
Information²			
4- There is a sufficient useful information on the package.	3.48	1.1	0.721
5- Information, written on the package, is clear and readable.	3.54	1.03	0.664
6- The information on the package is correct and useful.	3.14	1.09	0.690
7- The information on the package helps the consumer understand the optimal way for usage.	3.42	1.08	0.651
Emotional appeal³			
8- Products are packaged in an attractive and colorful way.	3.19	1.17	0.724
9- The design and shape of the package increase consumer willingness to buy.	3.08	1.23	0.776
10- THE quality of the materials used in the package gives a positive impact about the product.	3.54	1.23	0.783
11- There is a harmony in the package structure (shape, color, size).	3.46	1.06	0.677
Workability⁴			
12- Products are packaged in a way that keeps them in good condition.	3.54	1.05	0.456
13- Packages can be easily handled (catch, move, remove, use).	3.41	1.1	0.664
14- Products are packaged in a way that facilitates easy storage.	3.45	1.01	0.541
15- The package can be recycled / reused.	3.03	1.23	0.622
16- The package contains environment friendly materials.	2.98	1.23	0.871

Reliability 1=0.715 2=0.700 3=0.791 4=0.717
Eigenvalues: 1=3.02 2=2.04 3=1.66 4=1.25
n=400

Sample of the Study

The study is based on a judgement sample of 400 consumers located in major shopping places in the capital city of Amman. This approach is often referred to as a Shopping Mall Intercept (Aaker et al., 2004). 400 self-administered questionnaires were distributed to shoppers in five major shopping centers in the study area, chosen on judgement basis. They were located in Amman downtown, where most people usually go shopping. Shoppers were briefed about the purpose of the study. Strict distribution and collection procedures were used, which resulted in a full response rate (100%). Table (1) shows the demographic distribution of the sample.

Research Instrument

The data for this research were collected by means of a self-administered questionnaire (Arabic version). The questionnaire contains four main sections, each was designed to measure consumer attitudes towards one dimension of the VIEW model (Table 2). Section one includes three statements, which examine the visibility dimension of packaging design. Section two includes four statements, which assess the informational aspect of packaging. Section three has four statements, which evaluate the emotional appeal of packaging. Section four contains five statements, which examine the workability aspect of packaging design. A fifth section was added to the questionnaire, which contains questions on demographic characteristics of respondents (sex, age, income and, education). Consumer attitudes on the four main dimensions were measured by five-point Likert scale of agreement, running from strongly disagree to strongly agree "1=strongly disagree, 2=disagree, 3=neutral value, 4=agree and 5=strongly agree" (Sekaran, 2003). Obviously, the higher the attitude mean score the more favorable the attitude and so on. Furthermore, the questionnaire was validated through a number of academics, specialists and practitioners in the marketing field. Their opinions and comments were taken into account in the final draft of the measuring instrument. Further, Cronbach Alpha test of instrument reliability correlation showed a reasonable Alpha value ($\alpha = 83\%$), which is generally acceptable in scientific research.

For data analysis, various statistical techniques were used, including Frequency analysis, Descriptive analysis, One Way ANOVA. Furthermore, Factor analysis was used to show the relative contribution of statements (factor loading) in representing each of the four

dimensions. Factor analysis tests the extent to which each group of statements measures one dimension of the VIEW model. The statistical package "SPSS" was used in the analysis of data.

Data Analysis and Discussion

The decision rule for testing the first four hypotheses depends on the value of mean score. The midpoint of the five-point Likert scale, in this study, is 3. This point represents a neutral consumer attitude, and that the higher the score the more favorable the attitude. When the value of the mean score is above 3, consumer attitudes are favorable, and that we accept the hypothesis, and vice versa. The decision rule for testing the rest of hypotheses (H5 to H8) will be based on t-test and F-test, at 5% significance level ($\alpha \leq 5\%$). We accept the null hypothesis when α is greater than 5%.

Table (3) shows mean scores, standard deviation and factor loading for attitude statements regarding the four dimensions of the VIEW model. For each dimension, factor loading values for individual statements were above 40%, which indicates that these statements are highly relevant in measuring each dimension. These results were further enhanced by the reasonable reliability value for each dimension, as shown in Table (3).

Visibility

Figures in Table (3) show that respondents were generally happy about the visibility aspect of packaging of food products in Jordan. Mean scores for individual attitude statements, which measure this dimension, were above 3, with standard deviations signalling very little dispersion around the mean. Obviously, the majority of respondents were likely to believe that packaging design of food products was generally attractive and elegant, and can be easily distinguished among other products in the retail store (mean scores 3.58, 3.39 and 3.92, respectively). These findings support the first hypothesis, which states "Jordanian consumers are generally favorable about the visibility aspect of the packaging design of food products". Therefore, we accept this hypothesis. Nevertheless, it is noticeable that mean scores ranged between 3 and 4. This indicates that the consumer satisfaction level was not very high. This implies that package designers need to make packaging more eye-catching on the retail shelf. That is, further improvement on the visibility aspect of packaging is still needed.

Table 4: Mean scores, standard deviations and t-values for respondent attitude scores by sex

Sex	Percent	Mean score	Standard deviation	t-value	Significance level (α)
Male	47.2	3.37	0.64	1.082	0.280
Female	52.8	3.44	0.55		

n=400

Table 5: Mean scores, standard deviations and F-ratios for respondent attitude score by age

Age Group	Percent	Mean score	Standard Deviation	F-ratio	F-probability (α)
18-30	65.0	3.36	0.60	5.307	0.005
31-45	22.8	3.42	0.58		
46+	12.2	3.66	0.55		

n=400

Information

Findings in Table (3) demonstrate that respondents were generally satisfied with product information on the package. Mean scores for individual attitude statements, which measure this dimension, were above 3, with standard deviations showing very little dispersion around the mean. Clearly, the majority of survey participants believed that product information was likely to be sufficient and useful, clear and readable, real and helpful in terms of usage instructions (mean scores 3.48, 3.54, 3.14 and 3.42, respectively). Obviously, these findings support the second hypothesis that states "Jordanian consumers are generally favorable about the informational value of the packaging design of food products". Therefore, we accept this hypothesis. However, attitude mean scores did not show very high scoring (between 3 and 4), which suggests a need for further improvement to make product information on the package more, and yet better, informative.

Emotional Appeal

The analysis in Table (3) shows that respondents were generally happy with the emotional appeal of food

product packaging. Attitude mean scores were above 3, with standard deviation indicating little dispersion around the mean. According to the analysis in Table (3), respondents were likely to believe that packaging design had attractive color mix, convincing appeal, high quality materials and harmony in shape color and size (mean scores 3.19, 3.08, 3.54 and 3.46, respectively). Obviously, these findings support the third hypothesis, which states "Jordanian consumers are generally favorable about the emotional appeal of the packaging design of food products". We, therefore, accept this hypothesis. However, these results suggest that consumers were not highly impressed with the emotional look of packages, as mean scores did not exceed 3.54 on this dimension. Similarly, there is a need for further improvement on this dimension.

Workability

Figures in Table (3) show that survey participants were generally satisfied with the workable aspects of packaging design of food products in Jordan. Mean scores were above 3, with one exception found for the last statement (2.98). Responses had very little dispersion

around the mean, as demonstrated by the standard deviation values. Obviously, the majority of respondents were likely to believe that food products were packaged in a way that allowed contents to remain in good conditions, helped moving and handling, facilitated easy storage and designed for reusing or recycling (mean scores 3.54, 3.41, 3.45 and 3.03). However, they believed that package materials were not environment friendly enough (mean score 2.98). In general, though, these findings support the fourth hypothesis, which states “Jordanian consumers are generally favorable about the workable aspects of the packaging design of food products”. Therefore, we accept this hypothesis. As in the previous dimensions, the results in Table (3) did not show very high consumer satisfaction with this dimension, as scoring varied between 2.98 to 3.54. Clearly, this indicates a need for further improvement on the workable aspects of packaging design. That is, package designers are recommended to make the package more workable, particularly as it relates to the environment.

The following analysis will examine differences in consumer attitudes toward packaging design, on the four dimensions together, according to demographic variables, using ANOVA testing (hypotheses H5 to H8).

Sex

The fifth hypothesis states that “There is no statistical difference in Jordanian consumer attitudes towards packaging design due to sex ($\alpha \leq 0.05$)”. To evaluate this hypothesis, mean scores, standard deviations, and t-values were calculated to test for significant differences, as shown in Table (4). The analysis of variance (ANOVA) in the table shows that there is no significant difference in consumer attitudes towards packaging design due to sex ($\alpha = 2.80$). That is, male and female respondents did not show significant differences in their attitudes towards packaging design of food products. Therefore, we accept the fifth hypothesis.

Age

The sixth hypothesis states that “There is no statistical difference in Jordanian consumer attitudes towards packaging design due to age ($\alpha \leq 0.05$)”. To test this hypothesis, mean scores, standard deviations, and F-ratios were calculated to find out if there are significant differences between the mean scores of respondent attitudes due to age, as shown in Table (5). Figures in Table (5) show that there are statistically significant

differences in consumer attitudes towards packaging design due to age ($\alpha = 0.005$). Therefore, we cannot accept this hypothesis. Clearly, the analysis in Table (5) reveals that mean score values increase by age, which indicates that older respondents were likely to be more satisfied with packaging design than younger ones. Perhaps, as consumers get older, they become more mature, and that the perception of things becomes different. In other words, their expectation of quality becomes less. As a general rule, the lower the expectation the higher the satisfaction, and vice versa.

Income

The seventh hypothesis states that “There is no statistical difference in Jordanian consumer attitudes towards packaging design due to income ($\alpha \leq 0.05$)”. To evaluate this hypothesis, mean scores, standard deviations, and F-ratios were worked out to examine if there are statistical differences between the mean scores of respondent according to income, as shown in Table (6). Research findings in Table (6) show that there is a significant difference in consumer attitudes towards packaging design due to income ($\alpha = 0.008$). This indicates that we can not accept this hypothesis. Apparently, income was a significant variable in consumer attitudes towards packaging design of food products. The analysis in Table (6) reveals that respondents in the higher income bracket had lower mean scores than those in the other income brackets. However, the figures in Table (6) show that attitude mean scores for all income brackets concentrate on the favorable side of the scale. Thus, the significant difference observed in Table (6) was merely in the level of favorableness. Perhaps, respondents in the highest income category would require more value for their money. Therefore, they appeared less happy than the others did. Their expectations would be higher. At least partly, this may explain why their attitudes mean score was the lowest.

Education

The last hypothesis (H8) states that “There is no statistical difference in Jordanian consumer attitudes towards packaging design due to education ($\alpha \leq 0.05$)”. To examine this hypothesis, mean scores, standard deviations, and F-ratios were computed to examine if there are statistical differences between the mean scores of respondent in terms of education (Table 7). Research findings in Table (7) reveal no significant differences in

Table 6: Mean scores, standard deviations and F-ratios for respondent attitude score by Income

Income (JD)*	Percent	Mean	Standard Deviation	F-Ratio	F-Probability (α)
200 JD or below	41.8	3.36	0.58	3.958	0.008
201 – 300 JD	23.5	3.54	0.62		
301 – 500 JD	12.0	3.54	0.56		
501 JD +	22.7	3.29	0.59		

n=400

* Low income: 200 JD or below

Middle income: 201-300 JD + 301-500 JD

High income: JD 501+

Table 7: Mean scores, standard deviations and f-ratios for respondent attitude scores by education

Education level	Percent	Mean score	Standard deviation	F-ratio	F-probability (α)
High school or below	19.5	3.49	0.60	1.486	0.228
Diploma/ University degree	71.7	3.4	0.60		
Postgraduate degree	8.8	3.29	0.57		

n=400

consumer attitudes towards packaging design due to education. Therefore, we accept this hypothesis. Apparently, respondents in different educational levels were likely to be similar in terms of their attitudes towards packaging design of food products.

Conclusions

In light of the current research findings, it appears that consumer satisfaction with the packaging design of food products in Jordan was not very high. In fact, the analysis revealed that it was around the average. Today, this

means that it is not good enough. While this meets the minimum requirement of a packaging design, it may not impress people nor create an invisible and creative touch to influence buying decisions.

In a highly competitive economy, with increased consumer affluence, marketers no longer look for the minimum. They compete for excellence through a new concept of consumer satisfaction, called consumer delight. In fact, they have become fully aware of two levels of satisfaction. The first level is to meet consumer expectations, which certainly leads to consumer

satisfaction. While the other level is to exceed consumer expectations, called consumer delight. This implies that a package designer should impress and delight consumers with packaging appeal. As one specialist puts it “the’ package on the shelf talks to you”.

Recommendations

In view of the current research findings and conclusions, it is highly recommended that marketers and package designers, in particular, be more aware of the important role of the package in influencing buying decisions. They may consider package improvement on

the four dimensions of the VIEW model, particularly the workable aspects of the package.

Future research may build upon the current research findings to investigate more specific issues of food product packaging in the Jordanian context, such as product information and emotional appeal of personal care products, communication priorities on the package, comparisons of certain dimensions in packaging designs on the basis of country of origin. The role of marketing channels and strategic alliances may also be incorporated in future research on this subject.

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