Effect of Advertisement and Sale Promotion on Demand for Dairy Products in Lagos Metropolis, Nigeria

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Abstract: The study examined how advertising and sales promotions affect the demand for dairy products in Lagos metropolis. The multistage sampling procedure was used in selecting 60 respondents who consume milk and milk products. Purposive sampling procedure was used to select three producers of milk as well as 10 marketers of milk. The 60 consumers were drawn from 5 local governments in the State. Well structured questionnaires were used to obtain data from the respondents. Two sets of data were collected and used in the study. Analysis of the data was done using descriptive analysis and regression analysis as well as student t-test were used. The result showed that radio (0.280) and billboard (10.392) as media of advertisement and sales promotion had positive and significant relationship with dairy product consumption while newspaper (-3.036) and exhibition/display (-1.973) had negative but significant relationship with dairy product. Majority of the consumers (48.3%) agreed that adverts and sales promotion create awareness of products which conform with the result of the regression analysis that confirm a significant relationship between sales promotion/advertisement media and consumers demands.

Key words: Advertisement, sale promotion, demand, milk, lagos, Nigeria

INTRODUCTION

Milk is a nearly white liquid, secreted by the mammary glands of female mammals for nourishing their young. Milk contains all the nutrients needed for young mammals until their growth allows them to eat the food of the adult mammals. Milk is considered nature's most perfect food because it contains nearly all the substances essential for human nutrition. Although milk and milk products are specifically intended to nourish young. Nutritional expert generally include dairy foods to balance the diet of human of all ages (Matthewman, 1993). Several kinds of mammals are raised to produce milk for human consumption. Of these, dairy cattle are of greatest commercial importance but milk is also obtained from water buffalos, goats, sheep, camels, reindeers, mares and other mammals.

In 2001, Americans consumed 30 pounds of cheese (a milk product) per person, 8 times more than they did in 1909 and more than twice as much as they did in 1975 (Judy and Jone, 2003).

In the tropical regions of the world, milk production and distribution is more challenging due to requirements for low temperature for milk stability. Consider the following chart illustrating the numbers of bacteria per millilitre of milk after 24 h as given by Douglas (1995).

Temperature	Numbers of bacteria
5°C	2,600
10°C	11,600
12.7°C	18,800
15.5°C	180,000
20°C	450,000

Traditionally, this has been overcome in the tropical countries by stabilizing milk through means other than refrigeration, including immediate consumption of warm milk after milking, by boiling milk or by conversion into more stable products such as fermented milks.

Marketing of commercial products, like dairy products, acts as a bridge linking the producing companies, wholesalers, retailers etc with the consumer (target). It is an important aspect in any profit oriented enterprise, company, organization or corporation. This is because it plans prices, promotes and distributes want-satisfying products to target markets to achieve organizational objectives (Etzel et al., 1997).

An advertisement, as defined by Hanson (1990) is consumer education. This is because advertisements are informative sources to consumers and the dairy milk market. For long, it has been observed that gluts do occur at times in the market. These gluts may be due to the ignorance (lack of awareness) of the products, which now

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makes these products remain for longer than necessary on the shelves where they may exceed their expiry dates thereby causing losses to producers and sellers alike. The need therefore to enlighten the public (consumers) has now led marketers into spending money on enlightening the populace about the presence and importance of their products. This they do through advertising and sales promotions.

Thus, advertising is an investment in future sales (Arens and Bovee, 1994). The cost of a new plant or distribution warehouse is investment in the company's future ability to produce and distribute products. Similarly, advertising as one element of the promotion mix is an investment in future sales. While advertising is often used to stimulate immediate sales, its greatest power is in its cumulative long-range effect as it builds consumer preference and goodwill, which in turn enhances the reputation and value of the company name and brand.

Sales promotion is another important tool in marketing relating to advertising. Arens and Bovee (1994) defined sales promotions as a direct inducement offering extra incentives all along the marketing route to enhance the products movement from producer to consumer. Etzel *et al.* (1997) described sales promotion as efforts other than advertising to increase sales by creating or expanding the demand for a product i.e., they are demand-stimulating devices designed to supplement advertising and facilitate personal return.

Considering the high amount invested in adverts and sales promotions and for there to be profit, Total Revenue (TR) should of necessity be greater than Total Cost (TC) as profit are the revenue left after cost, the following questions need be answered:

- What are the socio-economic characteristics of the respondents that affect their consumptions of dairy products?
- Do adverts and sales promotions influence the buying behaviour of consumers thereby increasing sales?
- How does advertising affect the total demand for a product category?

Objectives of the study: The main objective is to determine the economic implication of advertising and sales promotions on dairy products marketing in Lagos metropolis. The specific objectives are:

- To determine the socioeconomic characters of consumers of dairy products.
- To find out the exciting channels of adverts and sales promotion.

- To highlight the consumption level of different dairy products.
- To determine the effectiveness of the existing adverts and sales promotion channels.

Hypothesis

H_0 There is no significant relationship between sales promotion/advertisement media and consumer demands.

H_A There is significant relationship between sales promotion/advertisement media and consumer demands.

MATERIALS AND METHODS

The study area is Lagos State which according to the National Population Commission (1998) has the largest population of urban dwellers far in excess of the national average (94%) in 1991 and was second most populated with about 5.7 million people. With a projected average annual growth rate of 3.12 based on the medium variant the projected population for Lagos in the year 2002 is 7,401,882 with 3,904,504 males and 3,497,378 females. Lagos also has the largest percentage of 64.1%. Virtually all other States have their indigenes living and working in Lagos. Thus the State was purposively selected for the study.

The population of the study is the consumers and producers as well as the marketers of milk in the study area. Sixty respondents from 5 Local Governments in the State were administered questionnaires. Two wards were randomly selected from each of the Local Governments making a total of 10 wards altogether. The 6 respondents selected per ward consist of 2 respondents each of children, young adults and adults.

Purposive sampling procedure was used to obtain information from three major producers of milk product as well as 10 milk marketers.

Three different questionnaires labeled A, B and C was structured-used to retrieve information from the producers, the consumers of milk and the dealers of milk products, respectively. The information collected were analyzed using descriptive analysis and regression analysis. Student t-test was used to test the significance of the hypothesis.

The regression model is explicitly given as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

where
Y   =   Consumers demand
X_1 =   Television advertisement

X_2 = Radio advertisement
X_3 = Newspaper advertisement
X_4 = Billboard advertisement
X_5 = Exhibition/Displays
e = Error term

The student t-test is given as:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

where

t = The student t
r = The simple linear coefficient
n = Number of observation respondents.

RESULTS AND DISCUSSION

Socio-economic characteristics of the respondents: Table 1 revealed that young people between the ages of 21-25 years are the highest consumers of dairy products while those above the age 55 years are the least consumers. 63.3% of the respondents were male while 36.7% were females. The highest percentage (65.0%) of the consumers are singles, the married are 35.0% while separate, divorced and widowed have 0%.

Medium of awareness: Awareness is received through various media but there are differences in the number of consumers reached. All the media, television hold the highest percentage of 96.6%, radio was next with 73.3% and billboards with 60.3%. Others are newspapers with 50.0% and exhibition/displays with 25.9%. All the media reached 15.5% of the same consumer.

Major milk brand consumed: The study shows that though consumers may consumer more than one milk brand, they regularly than other from Table 3. Peak milk has the highest percentage of 63% with Dano milk coming a distant second at 10%. Blueboat milk had 6.7%, Olympic and cowbell milk had 3.3% each, while Nido milk, Carnco milk and Coast milk had the lowest percentages of 1.7% each.

Consumers' suggestions: Table 4 shows that consumers made different suggestions. However, some consumers made similar suggestions. This is seen in 48.3% agreeing that adverts and sales promotions create awareness of products. Thirty five percent agreed that they increase sales of products. 1.7% of the consumers believed that adverts and sales promotions determine the success of the products. 13.3% gave other comments not listed here.

Table 1: Distribution of respondents by their socio-economic characteristics

Characteristics	Frequency	(%)
Age		
≤15	12	20.0
16-25	20	33.3
26-35	9	15.0
36-45	8	13.3
46-55	6	10.0
≥56	5	8.4
Total	60	100.0
Sex		
Male	38	63.3
Female	22	36.7
Total	60	100.0
Marital status		
Married	21	35.0
Separated	0	0.0
Divorced	0	0.0
Single	39	65.0
Widowed	0	0.0
Total	60	100.0

Source: Field survey, 2004

Table 2: Distribution of media of awareness

Medium	Frequency	(%)
Television	58	96.6
Radio	44	73.3
Newspapers	29	50.0
Billboards	35	60.3
Exhibition/Display	15	25.9
All	9	15.5
Others	1	1.7
Total	60	100.0

Source: Field survey, 2004

Table 3: Distribution of major milk brand consumed

Brands	Frequency	(%)
Peak	41	68.3
Nido	1	1.7
Carnco	1	1.7
Blueboat	4	6.7
Dano	6	10.0
Olympic	2	3.3
Cowbell	2	3.3
Coast	1	1.7
Others	2	3.3
Total	60	100.0

Source: Field survey, 2004

Table 4: Distribution of consumer suggestions

Consumer suggestions/comments	Frequency	(%)
Creates awareness of products	29	48.3
Increase sales	21	35.0
Creativity should be involved	3	5.0
Adverts and promotions should continue	4	6.7
Adverts and promotions are motivation	9	15.0
Right things should be advertised	6	10.0
Product success	1	1.7
More of adverts, promotions not necessary	6	10.0
Others	8	13.3

Source: Field survey, 2004

Table 5 is the result of the simple linear regression analysis used to test for the hypothesis. From the table, the regression equation is given as:

Table 5: Linear regression analysis of sales promotion/advertisement media and consumers demand

Model	Unstandardized coefficient		Standardized coefficient	t	Sig.
	Beta	Std. error			
Constant	5.198	1.554		3.344	0.002
Television	4.124 E-02	0.076	0.035	0.541	0.590
Radio	0.771	0.275	0.206	2.801	0.007
Newspaper	-1.148	0.378	-0.260	-3.036	0.004
Billboard	1.631	0.157	1.024	10.392	0.000
Exhibition/ Display	-0.398	0.202	-0.157	-1.973	0.054

Source: Computed from field survey data collected, 2004

$$Y = 5.198 + 0.04124X_1 + 0.771X_2* - 1.1481X_3* + 1.631X_4 - 0.38X_5**$$

$$(0541) \quad (2.801) \quad (-3.036) \quad (10.32)$$

$$(-1.973)$$

*   Represent 1% level of significance
**   Represent 5% level of significance
R   =   0.885
R^2 =   0.784
F   =   32.008

The result of the linear regression analysis shows the extent of the relationship between the independent variables television (X_1), radio (X_2), newspaper (X_3), billboards (X_4), exhibition/displays (X_5) and the dependent variable Y which is the consumption of dairy products.

The result indicated that about 78.4% of the observed variation in the consumption of dairy products in Lagos metropolis (Y) is explained by the independent variables.

All the variables except television (X_1) have significant effect on the consumption of dairy products. Radio and billboards advertisement have a positive and significant relationship with the consumption of dairy products. A unit increase in the amount spent on increases the demand of dairy products by 0.78 and 1.63 unit, respectively. But newspaper advertisement and exhibition/displays have a negative and significant effect on the demand fore dairy products in the study area. A unit increase in the amount spent on newspaper advertisement and exhibition/displays reduces the demands for dairy products by 1.15 and 0.38 units.

Due to high level significant relationship between the dependent and the independent variables, the null hypothesis that there is no significant difference between sales promotion/advertisement media and consumer demands is rejected.

CONCLUSION

The research studied the economic implications of advertisement and sales promotion on dairy products marketing in Lagos metropolis.

It was discovered from the study that age and consumption of dairy products are negatively correlated. Consumers receive awareness through various channels but nevertheless television advertisement creates the highest awareness of 96.6% and all the media of awareness reached 15.5% of the same consumers. Although consumers demand more than one milk brand, they have a major brand consumed more regularly of which peak milk have the highest percentage (63.0%) while Nido milk, Carnco milk and Coast milk has the lowest percentages of 1.7% each.

Majority of the consumers (48.3%) agreed that adverts and sales promotion create awareness of product which is in line with the result of the regression analysis that confirm a significant relationship between sales promotion/advertisement media and consumers demand.

Advertisement and sales promotion have positive impacts on the sales though in varying degrees. Advertising has greater impact than sales promotion. However, sales promotion tends to have instantaneous investment in that demand increases with time. Television as a channel has no significant effect on demand, even though consumers have access to television yet it does not affect their buying behaviour compared to other awareness media.

RECOMMENDATIONS

Advertisers and sales promoters should device other means using the print media. Apart from newspapers, they may use pamphlets, handbills and posters.

Marketers, advertiser and sales promoters should use more of the radio and billboards media than exhibition/displays and newspaper advertisement.

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