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A survey on critical factors influencing new advertisement methods

Naser Azad[a*], Seyed Fovad Zarifi[b], Somayeh Hozori[b] and Shahram Hashemi[b]

[a]*Department of Management, Islamic Azad University, South Tehran Branch, Tehran, Iran*
[b]*Master student, Department of Management, Islamic Azad University, South Tehran Branch, Tehran, Iran*

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A B S T R A C T

Soft drink beverages are important part of many people's foods and many prefer soft drink to water when they have dinner. Therefore, this business model can be considered as the longest lasting sector for many years and there has been not much change in these products. However, new methods of advertisement play important role for increasing market share. In this paper, we study the impact of new methods of advertisement in product development. The proposed study of this paper designs a questionnaire for one of Iranian soft drink producers, which consisted of 274 questions in Likert scale and uses factor analysis (FA) to analyze the results. The study selects 250 people who live in city of Tehran, Iran and Cronbach alpha has been calculated as 0.88, which is well above the minimum desirable limit. According to our results, there were six important factors impacting in product development, including modern advertisement techniques, emotional impact, strategy of market leadership, pricing strategy, product life chain and supply entity. The most important factor loading in these six components include impact of social values, persuading unaware and uninformed customers, ability to monopolizing in production, improving pricing techniques, product life cycle and negative impact of high advertisement.

1. Introduction

Soft drink beverages are important part of many people's foods. Many people prefer soft drink to water when they have dinner. Therefore, this business model can be considered as the longest lasting sector for many years and there has been not much change in products. Advertisement plays an important role to exposure products and services in different industries. Advertisement in soft drink commodities is one of the most important ways to get into the market and business units. One primary question in this market is to learn more about the effects of various advertisement techniques especially the newly introduced ones such as social pages, email messages, etc. During the past few decades, there have been many studies associated with measuring the impact of advertisement in soft drink industry.

*Corresponding author.
E-mail addresses: dr.naserazad@yahoo.com (N. Azad)

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Kioulafas (1985) studied the implementation of quantitative techniques in analyzing the Greek soft drink market. The paper developed single equation and simultaneous-equation regression models and compared the results with time-series data. The use of these techniques in a real life case brought out some problem of interelationships existing between advertising and sales of products with some small differences.

Probart et al. (2006) explained the extent and locations of soft drink advertisements on high school campuses in Pennsylvania and detected important factors associated with them. They used a three-phase survey strategy including distribution of a postcard reminder 1 to 2 weeks after the initial survey distribution, and mailing of a second survey to nonrespondents 1 to 2 weeks after mailing of the postcard. There were 228 school foodservice directors (84%) returned surveys and the data were analyzed using linear multiple regression analyses. The results recommended that commercialization and sales incentives might impact to contribute to school environments, which are not “nutrition-friendly.

Andreyeva et al. (2011) investigated the direct impact of food advertising on children's diet and diet-related health, particularly in non-experimental settings. They investigated the relationship between exposure to food advertising on television and children's food consumption and body weight and recommended that soft drink and fast food television advertising was associated with increased consumption of soft drinks and fast food among elementary school children (Grade 5).

Grimm et al. (2004) investigated different factors associated with soft drink consumption in school-aged children. They concluded that different factors could be associated with soft drink intake in school-aged children, soft drink consumption habits of parents and friends, most notably taste preferences, soft drink availability in the home and school, and television viewing. Tay (2005) in another survey studied the effectiveness of the anti-drink driving and anti-speeding enforcement and publicity campaigns used in the Australian State of Victoria. They reported that the anti-drink driving enforcement and publicity campaigns had a significant impact in reducing crashes but their interactive effect was anti-complementary.

Ramanathan and Muyldermans (2010) identified demand factors for promotional planning and forecasting in an empirical case study of a soft drink company in the UK. They used structural equation modeling for this purpose and the results confirmed the impact of the promotional factors in the sales uplift for all products. They also recommended various demand structures for different product families, and confirmed the relative importance of collecting and exchanging the proper supply chain information.

In this paper, we present an empirical survey to investigate the effects of new methods of advertisements on soft drink industry using factor analysis. During the past few years, factor analysis has been widely used to detect important factors influencing various businesses. Azad et al. (2013), for instance, determined critical components in agricultural insurance using factor analysis. Azad and Sadeghi (2012) performed an empirical study to determine effective factors on organizational commitment using factor analysis. Abdolvand et al. (2012) studied effective factors for the success of tourism industry in Iran using factor analysis. Azad et al. (2012) investigated critical success factors in industrial marketing supply chain management by implementing factor analysis. Mansouri Moayyed et al. (2012) studied the role of advertising through social networks to promote brand equity using factor analysis.

2. The proposed study

In this survey, we consider the impact of new methods of advertisement in product development. The proposed study of this paper designs a questionnaire for one of Iranian soft drink producers, which consists of 274 questions in Likert scale. We have used factor analysis (FA) to analyze the results and

Cronbach alpha (Cronbach, 1951) has been calculated as 0.88, which is well above the minimum desirable limit. Since FA is sensitive against Skewness coefficient, we have decided to remove questions 1, 2, 10, 13, 16, 19, 20 and 23 and out of 25 variables we have extracted 6 factors. KMO and Bartlett's Test yields Kaiser-Meyer-Olkin Measure of Sampling Adequacy as 0.623 and Chi-Square value is equal to 3599 with 300 degrees of freedom and the level of significance is equal to 0.000. The six influencing factors are modern advertisement techniques, emotional impact, strategy of market leadership, pricing strategy, product life chain and supply entity.

3. The results

In this section, we present details of six factor extracted from factor analysis.

3.1. Modern advertisement techniques

The first factor is associated with modern advertisement technique, which includes four variables: advertisement through email facilities, new media, detecting appropriate path for introducing products and the impact of social values. Chronbach alpha has been calculated as 0.649 and Table 1 summarizes the results.

Table 1
The results of factor analysis for modern advertisement technique

Factor	Factor weight	Eigenvalues	% of variance	Accumulated
Advertisement through email facilities	0.840			
New media	0.869			
Detecting appropriate path for introducing products	0.541			
Impact of social values	**0.884**	1.976	49.407	49.407

As we can observe from the results of Table 1, the last factor, the impact of social values, maintains the highest factor weight, 0.884, followed by new media and advertisement through email facilities and it could explain 49.407% of variance.

3.2. Emotional impact

The second factor is associated with modern advertisement technique, which includes four variables: continuous advertisement, sale's growth, persuading potential customers and persuading unaware and uninformed customers. Chronbach alpha has been calculated as 0.578 and Table 2 demonstrates the results.

Table 2
The results of factor analysis for emotional impact

Factor	Factor weight	Eigenvalues	% of variance	Accumulated
Continuous advertisement	0.653			
Sale's growth	0.628			
Persuading potential customers	0.738			
Persuading unaware and uninformed customers	**0.740**	1.779	44.483	44.483

As we can observe from the results of Table 2, the last factor, the impact of persuading unaware and uninformed customers maintains the highest factor weight, 0.740, followed by Persuading potential customers, continuous advertisement and sale's growth it could explain 44.483% of variance.

3.3. Strategy of market leadership

The third factor is associated with strategy of market leadership, which includes four variables: having a full market share when a new product is introduced, ability to monopolizing in production,

existing competition among producers and dynamic advertisement during the introduction of a new product. Chronbach alpha has been calculated as 0.468 and Table 3 shows the results.

The results of Table 3 show that, the second factor, Ability to monopolizing in production keeps the highest factor weight, 0.760, followed by existing competition among producers, Dynamic advertisement during the introduction of a new product and having a full market share when a new product is introduced and it could explain 38.064% of variance.

Table 3
The results of factor analysis for strategy of market leadership

Factor	Factor weight	Eigenvalues	% of variance	Accumulated
Having a full market share when a new product is introduced	0.586			
Ability to monopolizing in production	**0.760**	1.523	38.064	38.064
Existing competition among producers	0.679			
Dynamic advertisement during the introduction of a new product	0.643			

3.4. Pricing strategy

The fifth factor is associated with pricing strategy, which includes three variables: improving pricing techniques, customer demands over time and pricing decisions. Chronbach alpha has been calculated as 0.447 and Table 5 presents the results.

Table 5
The results of factor analysis for pricing strategy

Factor	Factor weight	Eigenvalues	% of variance	Accumulated
Improving pricing techniques	**0.814**	1.460	48.466	48.466
Customer demands over time	0.580			
Pricing decisions	0.677			

The results of Table 5 explain that, the first factor, improving pricing techniques maintains the highest factor weight, 0.814, followed by customer demands over time and pricing decisions and it could explain 48.466% of variance.

3.5. Product life chain

The fifth factor is associated with product life chain, which includes three variables: impacts of competitors, product life cycle and persuading customers. Chronbach alpha has been calculated as 0.518 and Table 5 presents the results.

Table 5
The results of factor analysis for product life chain

Factor	Factor weight	Eigenvalues	% of variance	Accumulated
Impacts of competitors	0.573			
Product life cycle	**0.695**	1.539	51.304	51.304
Persuading customers	0.632			

The results of Table 5 explain that, the second factor, product life cycle has the highest factor weight, 0.695, followed by persuading customers and impacts of competitors and it could explain 51.304% of variance.

3.6. Supply entity

The sixth factor is associated with supply entity, which includes three variables: impacts of competitors, product life cycle and persuading customers. Chronbach alpha has been calculated as 0.518 and Table 5 presents the results.

The results of Table 6 explain that, the third factor, negative impact of high advertisement has the highest factor weight, 0.655, followed by brand identity and feedback for applying new strategies and it could explain 55.945 % of variance.

Table 5
The results of factor analysis for product life chain

Factor	Factor weight	Eigenvalues	% of variance	Accumulated
Feedback for applying new strategies	0.538			
Brand identity	0.598			
Negative impact of high advertisement	**0.655**	1.678	55.945	55.945

4. Conclusion

In this paper, we have presented an empirical study to investigate the impact of new methods of advertisement in product development. The proposed study of this paper designed a questionnaire for one of Iranian soft drink producers, which consisted of 274 questions in Likert scale. We have used factor analysis (FA) to analyze the results and Cronbach alpha has been calculated as 0.88. According to our results, there were six important factors impacting in product development, including modern advertisement techniques, emotional impact, strategy of market leadership, pricing strategy, product life chain and supply entity. The most important factor loading in these six components include impact of social values, persuading unaware and uninformed customers, ability to monopolizing in production, improving pricing techniques, product life cycle and negative impact of high advertisement.

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