

Full Length Research Paper

A model for brand positioning of hygienic products using the most effective factors on competitive position and perceptual map technique

Nadereh Sadat Najafizadeh^{1*}, Mohammad Elahi², Abdolreza Moemeni³ and Zahra Lotfi³

¹Department of Management, Arak Branch, Islamic Azad University, Arak, Iran.

²School of Management and languages, Dept. of Business Management, Heriot-Watt University, Edinburgh, UK.

³Department of Business Administration, University of Tehran, Tehran, Iran.

Accepted 28 December, 2011

Nowadays, product positioning has an outstanding importance as a sensitive and critical component of competitive marketing. In this respect, understanding and recognition of product positioning as well as its concepts are known as significant principles for producer survival. The present research has focused on Iran country's detergents and hygienic products industry. The industry has initiated its growth during 2004 to 2009 through exporting its products to some markets such as Iraq, Pakistan, Turkmenistan, Afghanistan, United Arab Emirate, and Azerbaijan, such that, for instance, with regard to detergent powder, the export rate has experienced a growth equal to 72% at 2009 (31.7 million dollars) compared to 2004 (113.7 million dollars) (Formal Internet Site of Iran Trading Development Organization). So, the examination of producer positioning in the industry has a great importance in survival and growth on domestic and international markets. This paper tries to propose an appropriate model for positioning with the use of product's differentiating features among competitive products in detergent and hygienic products industry. In order to achieve these aims, the perceptual map technique is applied along with factor analysis techniques to obtain customers' mental knowledge and to recognize competitors' weaknesses and strengths which in turn, results in appropriate decision making about the product positioning selection.

Key words: Targeting in market, positioning, differentiating, product differentiating features, factor analysis, perceptual map.

INTRODUCTION

Today, we live in a century known as technology and information era in which modern communication devices and equipment has caused the information to be the most important power and advancement weapon almost available for all people; and the word's big companies are no longer able to dominate easily on various markets due to the increasing application of such information. In the era with fierce competition – with respect to time and space- between producers for achieving innovation and

higher market share and for penetrating to new markets, the companies' survival in this inevitable competition strongly depends on environment appreciation and more importantly, the recognition of company competitive position in comparison to its competitors. In the present rivalry marketing environment, the positioning concept is one of the most important elements in the marketing management (Arnott, 1992, 1993; Blankson and Kalafatis, 2001). Positioning as a company strategy tells the world that the company's products are unique (Swerdlick, 2007). For this reason, the long term achievement of companies and their products strongly depends on how much successes they have attained in their positioning efforts (Brookbank, 1994; Mazanec, 1995).

*Corresponding author. E-mail: n-najafi@iau-arak.ac.ir. Tel: +98 861 2247308. Fax: +98 861 2770045.

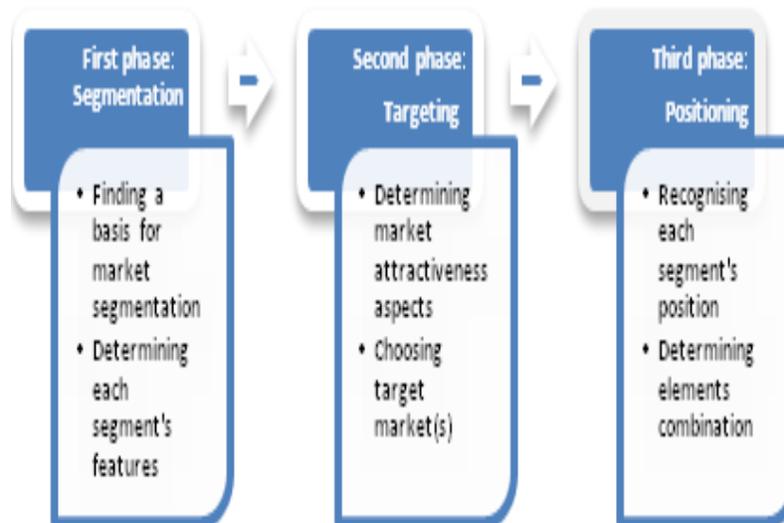


Figure 1. Segmentation, targeting and positioning phases (Kotler and Armstrong, 2004).

Product positioning refers to “the activities undertaken by the marketer to communicate the features and the benefits of the product and the image of the brand to the actual and potential customers” (Johansson 2006). In our country Iran, some industries have recently achieved remarkable changes and so, due to the attractiveness of such industries, a huge number of competitors have entered these industries.

One of these industries is hygienic and detergent production industry in which well-known companies compete with each other and they have even extended their operations beyond the country boundary and are now present in abroad markets. This competition has resulted in the development of hygienic products such that most of these products are now produced according to the world accepted standards. As it was mentioned, the attractiveness of the industry market provides a way for new competitors to enter and creates tight competition among mature competitors such as Golrang, Pak Rokh, etc. Since that outstanding advances of hygienic producers along with similarity of their products quality to foreign counterparts are needed grounds for entering into the world markets and increasing non-oil exportation, any effort to improve this industry can be appreciated by experts and specialists. The present research aims at presenting an analytic model for detergents using extant positioning models in the scientific validate papers and drawing relative competition position of five big hygienic products companies based on perceptual map technique.

Positioning in market management process

Philip Kotler writes in his book Marketing principles

that: “The real marketing is awareness about the product which should be produced not to be sold”, this sentence is one of the most important principles or even frameworks and bases for today’s marketing efforts, but there are too many people who still have a limited perspective about marketing. They assume that marketing is an art to achieve intelligent ways for selling the firm’s products. Based on the aforementioned principle, a firm in a targeted market should pass through three strategic phases (Figure 1). The first phase is “market segmentation”. “One of the most important strategic concepts contributed by the marketing discipline to business firms and other types of organization is that of market segmentation” (Bowen, 1998). Kotler and Keller (2006) suggested segmentation based on geographic, demographic, psychographic and behavioral variables. However, segmentation means partitioning of market into individual buyer groups; these buyers seek individual products or a combination of marketing elements. In this respect, the firm follows different methods for market segmentation and determination of common features in each of its segments. The next phase in the targeted marketing is “targeting”. It means the evaluation of each segment’s attractiveness and selection of one or more segment(s) for the firm entering.

The third phase is “positioning” in the market place. Positioning means the determination of a competitive position for a product along with a combination of marketing elements.

Positioning

Among the three mentioned strategic phases, the

positioning phase has an exceptional significance. A strong position for a brand or product in the consumer mindset would be a big achievement for the firm. In contrast, lack of a strong position equally or even more profoundly results in all marketing efforts to be wasted, the firm and its products be overlooked by customers and market share be lost leaving the competition scene for competitors and ultimately, the firm recession and closed up would be happened.

In the research, having an appropriate perspective about the position is known as the best tactic. A "position" in fact is the present and potential customers' view points and opinions about a specific brand, product or organization, compared to competitors (Etzel et al., 2004). In the product positioning process, marketers often try to transmit all advantages and benefits which are appropriate for the target market. Since positioning strategies are effective on long term financial survival and successes of firm (McAlexander et al., 1993), researchers seek to find some positioning methods which guide them in the selection of suitable strategies for the firm positioning. Following the review of products and services advertisement in the scientific journals, Crawford (1985) proposed that firms are trying to create a position for their products and/or brand in the minds of customers through advertisement using three positioning strategies: 1) positioning based on product features, 2) positioning based on various products benefits and 3) positioning based on surrogate value. The surrogate value in fact is the product value for potential customers without specifically determined nature of the value (Eastingwood and Mahajan, 1989). The mentioned authors believe that product-related positioning strategies are different from service-related ones. Blankson and Kalafatis (2001) however criticized the research due to its ignorance of customer views and so they developed a positioning typology derived from customers' opinions. The instrument used in their model has eight dimensions as follows:

1. Priority among equal level products
2. Having value-added in compared to product price
3. Reliability
4. Attractiveness
5. Country of origin
6. Innovation
7. Brand
8. Product social class

In the mentioned research, authors claim that this type of delimitation of positioning study is appropriate for products as well as services. Similar efforts have been undertaken by Lewis (1990) in hospitality industry. He used advertisement as a positioning strategy and divided positioning activities in this industry into two groups: objective positioning and subjective positioning. In the objective positioning, the focal point in creating a mental

image about the hotel is physical features and specifications, while the subjective positioning deals with customer mental and intellectual processes (Lewis, 1990). Echtner and Ritchie (1993) discovered some features and specifications which determine the mental image or positioning in the tourism industry. They enumerated eight factors as follows:

1. Convenience and safety
2. Interest and adventure
3. Natural circumstances
4. Tourism facilities
5. Accommodation
6. Cultural gap
7. Low prices
8. Language barriers removed

The perceptual map was introduced in the companies to determine positioning strategies which its basis was a set of important features according to customers' views and opinions (Lovelock and Wright, 2001). A perceptual map "which is used by marketers to visually depict consumer perceptions and prioritizing of brands and their perceived attributes" can be applied (Wilson and Gilligan, 2005). Some valuable researches have been carried out about the positioning with the use of drawing the perceptual map and multi variable statistic techniques (Mazanec, 1998). Calantone et al. (1989) provided the position of Singapore and other pacific countries with respect to products' country of origin using the perceptual map.

Research positioning strategy

The positioning strategies are divided into three classifications as follows (Brooksbank, 1994):

1. Target customers
2. Target competitors
3. Competitive advantages

Target customers

Actually, the selection of target customers indicates the importance degree of market segmentation phase and its various segments as was mentioned earlier.

The target customers are customers with the highest attractiveness for the firm who bring the highest gains for the firm according to final analysis. In this way, marketers must identify various consumer, industry, intermediate, government and international markets as well as different customers such as potential customers, final customers or consumers, whole sellers, retailers, etc.

Target competitors selection

In today's rivalry markets, competitors are among the

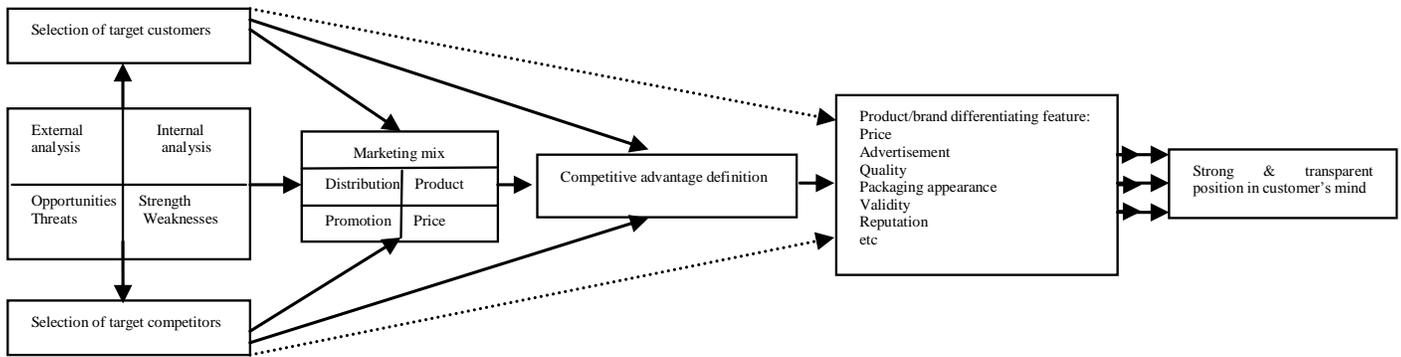


Figure 2. Research conceptual model: positioning strategy and product/brand's differentiating features.

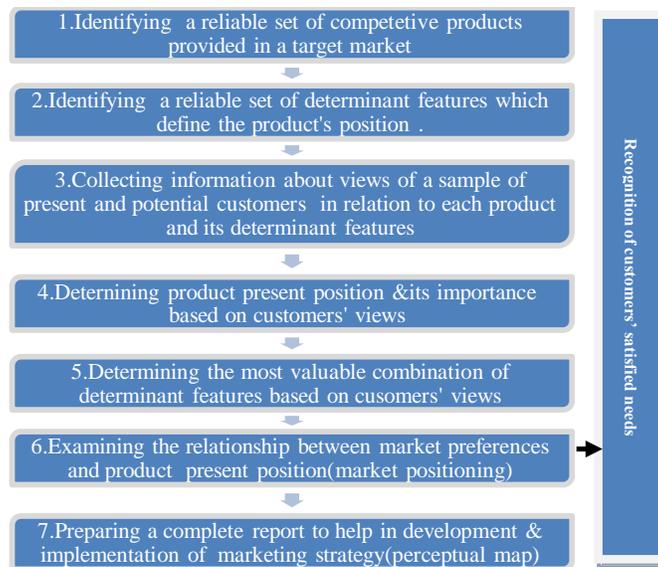


Figure 3. Positioning process steps (Walker et al., 2001).

most effective factors on the firm survival in the competition scene. Without a doubt, the firm's selection of competitor(s) must be based on precise evaluation and analysis of operational methods weaknesses and strengths used by competitors. Ignorance of competitors due to inappropriate recognition of rivalry environment would be detrimental for all firms.

Competitive advantage

The competitive advantage depends on how much a firm is able to establish its position as a value provider compared to its competitors. This position may be achieved through lower prices or higher benefits justifying high prices. In order to create a strong competitive advantage, the firm must always try to recognize new potential benefits (Kotler and Armstrong, 2004).

This research tries to clarify the positioning model and its constructs relationships. In addition, this model specifies relationship between three main phases in positioning of target customers, target competitors and competitive advantages focusing on differentiating features (Figure 2).

Positioning process

Walker et al. (2001), in his book, "Marketing strategy", provides a model to show various steps of positioning process. In the present research, the model is used in the determination of competitor position (Figure 3).

At the end of the process, it is necessary to prepare a complete report for precise measurement and determination of firm position as it is shown in the model. One of the ways of measuring the firm position is the

mapping method or perceptual map method.

Selection of a feature/concept in positioning

To position a product, a marketer needs to answer the following question: What is important for the target market? Marketers are required to carry out necessary researches and studies to find out who are the target market members and what are their views about the important aspects of products or competitor producers.

Selection of differentiating aspects

It is necessary for industrial marketers to decide about some aspects (benefits or variables) which differentiate the firm or its products from competitors. Most of the companies take a specific feature into account such as "the best quality", "the best services" or "the most advanced technology". Some other firms emphasize on two aspects and a few try to consider three aspects or variables simultaneously. Following the marketing research, industrial marketers take three important factors into account when deciding about positioning strategy. Firstly, which features or aspects will be important for target customers when they decide about product and service ordering? Secondly, what is the perception of target customers with respect to the main features and aspects? Thirdly, what is the perception of target customers in relation to competitors' products and services regarding the same aspect (Abdolvand and Nikoomaram, 2006)? Eventually, after finding the aforementioned questions and understanding customers perception based on marketing researches, the statistic analysis is undertaken.

This leads industrial marketers toward a technique named as perceptual map which help her/him decide about the positioning strategy. The most important features or effective factors are development of positioning strategy. Differentiation depends on the following features:

- (i) Importance: It means that differentiating feature must be important for customers.
- (ii) Distinctiveness: It means that differentiating feature must be outstanding in comparison to competitors.
- (iii) Superiority: It means that it is not easy for customers to obtain the differentiating feature from other competitors.
- (iv) Communicability: It means that differentiating feature must find its niche in the customer perception.
- (v) Exclusiveness: It must not be easily imitable by competitors.
- (vi) Low price: Price can be as a differentiating feature and also the low price causes a product to be differentiated.

Irwin (1996) enumerates the following features as

differentiating aspects in positioning situation:

- (i) Country of origin
- (ii) Price/quality
- (iii) Product shape
- (iv) Product components
- (v) Brand
- (vi) Green product (environment- friendly)
- (vii) Its gains and advantages
- (viii) Its applicability
- (ix) Product support's component
- (x) Production process
- (xi) Product class
- (xii) Competitive advantages

Blankson and Kalafatis (1999) discovered that positioning is obtained through various dimension:

1. Product features dimension
2. Price/quality with respect to product application
3. Product user with regard to product class and level
4. Considered competitors

As it is seen, these two researchers have found similar features effective on positioning. Schellase (2000), a German researcher, considers two general aspects in positioning. The first aspect includes some features such as product class, price, distribution policy, market environment, marketing back up and promotion activities. The second aspect deals only with information management process between the producer and retailer along with customer satisfaction.

Michel Porter proposed a view in relation to positioning and consequently (Porter, 1996), Kotler (2003) has emphasized on this theory in his book. Porter and Kotler believe that to create an appropriate position in the customer mind at the target market, it is necessary for the firm to differentiate itself from other competitors and to achieve a competitive advantage which in turn results in an acceptable position among consumers. They provide a 15 item list in relation to products and services: 1. Consumer training; 2. Product varieties; 3. Product durability; 4. Product style; 5. Delivery; 6. Installation; 7. Customer consultation; 8. Competence; 9. Trustworthiness; 10. Performance; 11. Maintenance; 12. Designing; 13. Coordination and adaptability; 14. Reparability and 15. Easy order (Porter, 1996; Kotler, 2003).

This theory has been mentioned generally by Havaldar (2003) (Figure 4). The researcher believes that differentiation is one of the necessary conditions for positioning. They propose four general aspects or main variables in differentiation process. The theory importance was reemphasized in the Hair's (2006) research, but he substituted employee and service variables by advertisement and direct marketing variables (Hair et al., 2006).

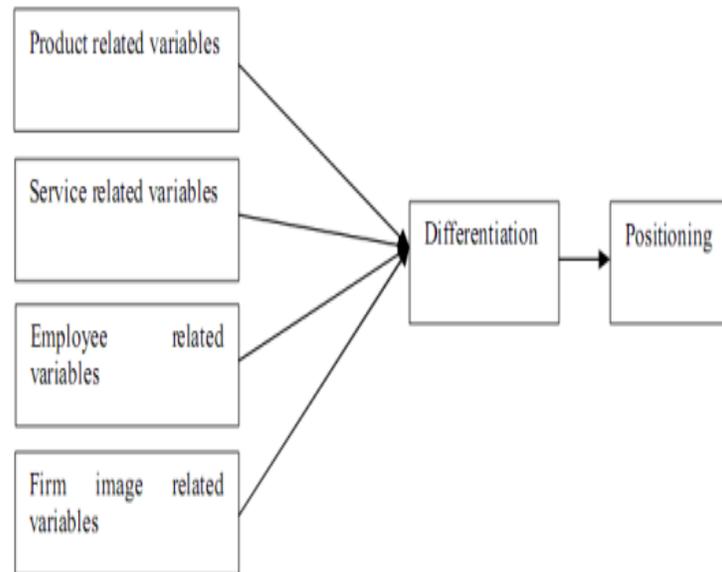


Figure 4. Positioning (Havaladar, 2003).

Lavie and Fiegenbaum (2003) in their research paper focused on strategic positioning of multinational companies (MNCs) and studied the Israeli industries. They compared MNCs with their local competitors regarding strategic positioning. They proposed three main hypotheses: The first hypothesis measured the relationship between a strong position and internal and external adaptability. The second hypothesis devoted to measurement of relationship between a strong position and the product value and price. The third hypothesis compared the strong position and customer satisfaction.

Another research in this field tries to study the strategic position and industrial dynamic in the wireless communication industry. The research points to the fact that firms recreate their position through some differentiating features and this position varies according to its variable demands. He examines the features with the highest preferences in the Vodafone telecommunication company regarding the creation of a collaborative relationship between employees and customers which results in the firm's strategic position. The studied features in the mentioned research are expertise and experience, market share, technology, wireless network and work content (Dodourova, 2003). As it can be seen, various researches strongly provide a common list of main variables and the difference between secondary variables is due to the nature of product and industry about which the studies are undertaken, so these features are industry- or product-specific.

By 2006, a research was carried out in relation to expertise-based positioning among Romani business high education institutes. Although the under study area was fundamentally different from above mentioned variables, but the resulted pattern was the same. In the

research, two stand points were examined with regard to expertise-based positioning, that is, pragmatic/logical and emotional views. Both views have been studied in relation to positioning. Firstly, the target market segmentation was examined and then, positioning in the market was evaluated. Students' perceptions data about specialization in the institute's courses were collected through questionnaire which was distributed among 344 students of Romani's high education institutes. The obtained data was used in drawing the perceptual map. The map resulted information reveals three main segments of target market in relation to specialization: 1) first segment seeks the applications and functions of expertise; 2) second segment seeks sociality and 3) the third segment contains diploma hunters (Niculescu, 2006). Although all mentioned researches have guided the researchers in the present work, the following cases provide more transparent patterns in relation to positioning and their statistic procedures are more close to the selected method for the present research in data clarification. In addition, these researches and papers have been issued recently such as Hartmann et al. (2005) research under the topic of "Green marketing and green brand positioning". They enumerate some strategic features for green brand positioning based on functional brand attributes and/or emotional benefits. Their abstraction from the proposed factors and features are carried out using factor analysis and the resulted summary is displayed on the perceptual map. The proposed hypotheses are as follows:

H_1 : Relationship between the operational features and brand position;

H_{1a} : Relationship between the emotional features and

brand position; and

H_{1b}: Relationship between a combination of these two relations and creation of brand position.

The research results show that the highest perceptual effects in the green positioning strategy are due to a combination of operational features and emotional benefits (Hartmann et al., 2005).

In a research focused on relative positioning of American airlines with respect to service quality features, researchers propose 40 main features for the quality of airline services which following the questionnaire distribution and data analysis, perception analysis and preference analysis, this list was reduced to four important factors or features. Each of these factors contains various less important features. Eventually, two perceptual maps were drawn for ten airlines regarding these four factors and each airline's competitive position was displayed according to customer's views (Gursoy et al., 2005).

Wood and Pierson (2006) compared the competitive position of two shopping centers (ALDI and Sainsbury) among the biggest chain shopping centers in the US using positioning and perceptual map techniques. The factor analysis showed two main factors, that is, price and quality with the highest scores. The research proposed two hypotheses as follows:

H₂: The price's impact on positioning of ALDI shopping center, and

H_{2a}: The quality's impact on positioning of Sainsbury shopping center.

In the mentioned research, quality and price are considered as independent variables and shopping center position is known as dependent variable. Based on data analysis, the first hypotheses are accepted but the other one is rejected (Wood and Pierson, 2006).

Finally, here, another research paper is mentioned which is somehow similar to the present research with respect to the studied subject and considered product (hygienic and detergent products). The research was published in 2006 at Brand and Product Management Journal. It focuses on product positioning of teeth whitening products. After proposing a variety of features, only four main features are enumerated according to conjoint analysis. The research main question is, which of the main features are effective on teeth whitening brands positioning? The resulted features are as follows:

- (i) Product shape (gel or tape)
- (ii) Reported side effects
- (iii) Quality of results
- (iv) Price
- (v) Durability
- (vi) Taste

The model proposed in the present research is based on

reviewing previous positioning models as well as specific features of detergent products.

Perceptual map

Rothschild developed two specialized and important techniques for the evaluation of consumer perception regarding competitors' products. Both techniques are known as perceptual maps and also are named as brand maps, positioning maps or spatial maps (Rothschild, 1987).

Mowen and Minor (2001) point out that the main challenge for marketers is the evaluation of brand or product position and its best solution is drawing the perceptual map. The perceptual map reveals that how consumers assume various products/brands position in a graph format which its axes are formed through the main product features compared to other competitors. The map is drawn according to consumers' views for ranking variety of similar products based on some specific features. For the perceptual map to have more than two dimensions, the multi dimensional measurement scales are employed using a PC for example to create a three dimensional map. The perceptual map for instance can be used to show why the consumption of meat has been decreased during the past 15 years. One of such maps advantages is revealed in answering to the following question: Are consumers able to differentiate various products?

The creation of product value relays on whether consumers are able to differentiate various products or not. The improvement of perceived value is important for the increase of various elements levels in the marketing communication mix. Thus, the product differentiation with respect to pricing for example can result in higher prices for the considered product. In the advertisement and promotion field, the product differentiation perceived would result in employee creativeness for proposing ideas about commercials which its consequence is revealed in the considered product promotion in comparison to competitor products. Mercedes Benz Company is an example which shows how the brand differentiation can bring apparent claims for the firm. The company relies on its engineering technology and brings about an amazing claim for its manufactured autos. It is due to the fact that Mercedes Benz Company is able to differentiate its product from other brands in the US, so its pricing policy in the US is very much higher than Germany. The perceptual map adds another aspect of analysis to the market and marketing information. The map main idea is focused on collecting consumers' views about the various dimensions of product and its comparison with competitor products; then, the information is drawn in a spatial map. The map makes it possible to show the relative difference between various products in the same category but according to different dimensions. A two dimensional evaluation has more applicability in the perceptual map

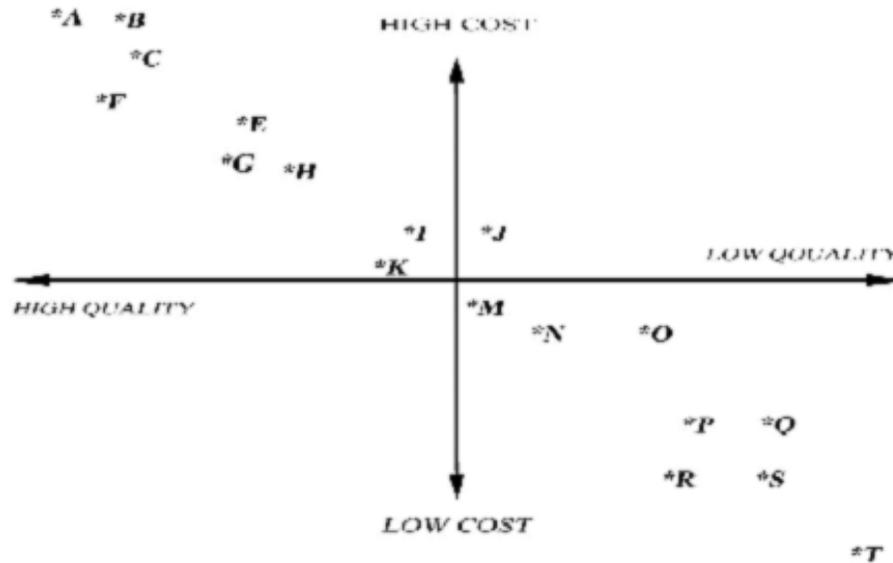


Figure 5. An example of perceptual map (Pickton and Braderich, 2001).

which is used easily in drawing a clear and explicit map. The maps with more than two dimensions are created in a cube space. This three dimension technique is beyond the human being imagination and so it may be treated as a risk for easy application of the map as a marketing tool box in creating useful marketing relations (Pickton and Broderick, 2001).

Application of perceptual map in positioning

The most common application of perceptual map in finding an appropriate position and its establishment in the consumer's mind is revealed through searching some gaps. Every producer in the production process faces some gaps in one of the map's dimensions and so this tool makes it possible for the producer to find and fill these gaps. Each gap in fact indicates two possibilities:

1. There is no product to meet a special need or a set of needs which it means a market opportunity,
2. There is no one who has discovered the need. It means that there is no opportunity for the firm.

If there is an opportunity, the management must ask these questions:

- (i) Is it possible to deliver services to this segment of market?
- (ii) Is there necessary resources and skills to do the task?
- (iii) Is the segment large enough to create return?
- (iv) Has the segment high growth rate?
- (v) Are we able to communicate with buying decision makers in the segment?

The technique is not only useful for positioning of brand or product but also it is used for repositioning of organization or firm as a whole. Today, with increasing variability of information and technology advances, the repositioning is frequently happened in many companies. The following figure shows an example of market two-dimensional map. Of course, the assumed sample is based on consumer perceptions from various autos. The primary data was collected through survey and its classification was undertaken using measurement techniques. Data analysis was carried out through statistic tools such as factor analysis, cluster analysis and conjoint analysis (Hauser and Koppelman, 1979).

In this map, it is assumed that autos' brands are close to each other according to quality and price dimensions. The distribution manner forms some clusters or groups which is possible to be labeled and segmented in the market place as various segments. As it can be seen from the map, autos in position S are different from ones in position B with respect to demographic features and life style of customers. So it is necessary to design and implement some appropriate but different marketing relations with the two groups (Figure 5). A perceptual map has the following features:

- i. The dichotomy gap between the product alternatives directly indicates the closeness or distance of products based on consumers' perception,
- ii. A vector in the map shows both the frequency and direction in the market space. Vectors in the perceptual map usually indicate the geographical features in the map space,
- iii. The map vectors are in fact a set of specific vectors indicative of the most important dimensions and features

with which consumers differentiate various products (or brand, firm, etc.).

RESEARCH METHODOLOGY

A research is a set of regular activities aiming at discovering a fact or passing through diminutive knowledge to complete knowledge. In other words, a research is a follow up regular task for discovering and acquisition of knowledge which results in a generalization theory (Sanger, 1996). As a whole, the research methodologies are classified according to two aspects:

1. Classification based on objectives,
2. Classification based on methods.

A scientific research is classified into five groups according to its objectives: fundamental, applied, evaluative, research and development and pure scientific researches. The present research is classified as an applied research. Based on the methodology, researches are classified as descriptive (non-experimental) and experimental researches.

The descriptive research includes a set of methods with the aim of describing specific phenomena or conditions. The descriptive research is also subdivided into various subsets such as survey researches. The survey aims at examining features distribution in a specific statistic sample (Bazargan, 1997). From the methodology view, the present research is a descriptive survey research. In addition to above mentioned methods, the present research is classified as a cross-sectional research because it examines data at a specific time interval.

Research sample

A set of units with at least one common industry is known as the statistic sample indicated by letter N (Khaki, 2003). The considered sample includes all real or assumed members which researchers generalize its findings accordingly, it is known as target sample (Nikoomaram et al., 2006). In the present research, the studied sample includes two parts based on the research purposes: one part contains 60 sale specialists for cosmetic, hygienic and medical equipment distributors in Markazi province who answered the questionnaire about differentiating features of detergent products. At the next step, the second part of the sample including 110 drugstores and big supermarkets in the province as distributors of such products are surveyed with respect to the main features obtained from the research's first part. This step is carried out to determine the product brand's competitive position.

Validity and reliability of measurement tools

With regard to the adjustment of two questionnaires based on the obtained variables, the validity of variables and their related questions are reviewed many times by experts and specialists in the field of detergents distribution. Ultimately, final variables are determined which are also common in the previous positioning literature:

- i. Price (positioning) (Schellhase, 2000; Lavie and Fiegenbaum, 2003; Blankson and Kalafatis, 1999; Hair et al., 2006; Irwin, 1996; Arora, 2006; Aaker and Shansby, 1982; Niculecu, 2006; Havaladar, 2003; Wood and Pierson, 2006).
- ii. Variety of product size and shape (positioning) (Lavie and Fiegenbaum, 2003; Havaladar, 2003; Blankson and Kalafatis, 1999; Kotler, 2003; Irwin, 1996; Porter, 1996; Hair et al., 2006; www. Indianmba.com).
- iii. regarding standards and international certificates

(positioning) (Niculecu, 2006; Kotler, 2002; Irwin, 1996; Porter, 1996; www. Indianmba.com)

-Advertisement (positioning) (Gursoy et al., 2005; Niculecu, 2006; Hair et al., 2006; Schellhase, 2000; Lavie and Fiegenbaum, 2003; www. Indianmba.com)

-Aesthetic appearance of packaging (positioning) (Lavie and Fiegenbaum, 2003; Aaker and Shansby, 1982; Hair et al., 2006; Irwin, 1996; Blankson and Kalafatis, 1999; Kotler, 2003; Havaladar, 2003; Porter, 1996; www. Indianmba.com)

-Adverse side effects (positioning) (Hartmann et al., 2005; Gursoy et al., 2005; Porter, 1996; Aaker and Shansby, 1982; Blankson and Kalafatis, 1999; Arora, 2006; Irwin, 1996; Kotler, 2003; www. Indianmba.com)

-Quality (positioning) (Arora, 2006; Irwin, 1996; Blankson and Kalafatis, 1999; Lavie and Fiegenbaum, 2003; Wood and Pierson, 2006; Havaladar, 2003; Aaker and Shansby, 1982).

The final adjusted questionnaires are distributed among 30 sample respondents. The Cronbach's alpha formulation and SPSS software were used for data analysis and as a result, the calculated alpha was 0.909 which is close to unity and so indicates a high degree of questionnaires reliability.

Research procedure and statistic analysis

As it was aforementioned, according to the research purpose which is drawing a perceptual map for various detergent brands positioning, at first it is necessary to discover the main differentiating factors. The factor analysis has been employed for the purpose. The factor analysis is a common name for some multi variety statistic methods which their objective is data abstraction. The method deals with the examination of inner correlation between numerous variables and eventually it clarifies and classifies them in a set of limited common factors (Kalantari, 2006). This technique is based on some key concepts as follows:

Community: It is degree of common variance between a variable and other variables used in the analysis.

Eigen value: It indicates the specific variance degree that is clarified by each factor.

Factor: It is a linear combination of the main variables which shows abstract aspects of the observed variables.

Factor loading: It is the correlation between the main variables and factors. The factor loading's square root indicates that what percent of a variable variance is explained by the considered factor.

Factor matrix: It is a table which shows the variables factor loading in each factor.

Factor rotation: It is a process for factor axes adjustment which results in meaningful and plain factors.

Factor score: The factor analysis summarizes main variables in limited number of factors.

Different models have been proposed in the factor analysis among which principle component analysis and common factor analysis are the most common models (Kalantari, 2006). Based on the research objective, the principle component analysis is used for variable abstraction and factor limitation. In addition to the analysis model, there are two methods for factor derivation: orthogonal and inclined factors. Here, the orthogonal factors are used as independent factors with 90.0 factorial axes which result in satisfactory analytic process. In the present research, the factor analysis is employed to calculate variables correlation matrix. The analysis model is summarized in Figure 6.

DATA ANALYSIS

At the first step, 11 main differentiating variables for detergent

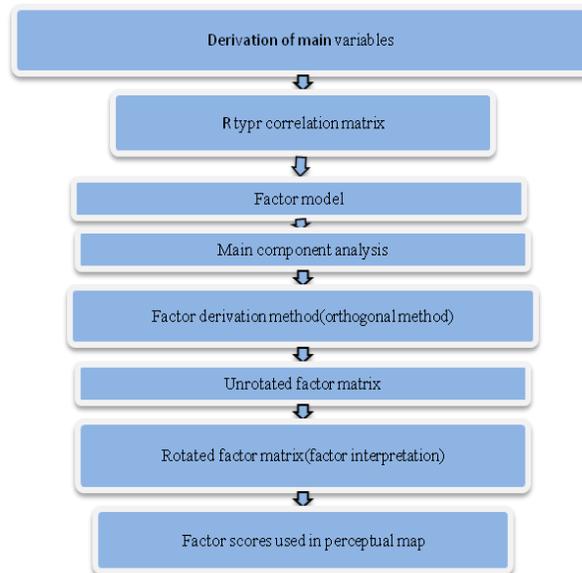


Figure 6. Summary of analysis model.

Table 1. KMO index and results of Bartlett’s test correlation matrix.

KMO index	Calculated R ²	Meaningfulness level for Bartlett’s test
0.795	2199.188	0.000

Table 2. Variables communalities.

Variable	Initial value	Derived common variance
Cleansing power	0.596	1.000
Price	0.374	1.000
Smell	0.742	1.000
Adverse side effects	0.641	1.000
Product volume	0.428	1.000
Size and quantity diversity	0.609	1.000
Advertisement	0.561	1.000
Standards	0.592	1.000
Aesthetic appearance and packaging quality	0.659	1.000
Reputation and popularity	0.650	1.000
Softening power	0.506	1.000

products are obtained according to the first questionnaire data, experts opinions, and previous literature: cleansing power; price; smell; advertisement; aesthetic appearance and packaging quality; softening power; adverse side effects; volume to price ratio (grammage); size and quantity diversity; validity regarding certificates and standards; reputation and popularity.

Two tests - Kaiser-Meyer-Olkin (KMO) and Bartlett’s test of sphericity - were used to ensure the possibility of applying factor analysis for the obtained data and data adequacy. For the KMO index (Table 1), the nearer the value to 1, the more appropriate data for factor analysis would be. The calculated KMO index is

0.795 which indicates data high fitness for factor analysis. Following the factor analysis, it should be noted that the results interpretation is based on rotated factor structure matrix. The most notable feature of rotated and un-rotated factor matrix is factor loading which determines the correlation of a variable and a factor and its interpretation is similar to other correlation methods. After factor analysis for the research’s 11 main variables at the first step, the initial Eigen values as well as common variance values were obtained for each variable (Table 2).

It is worth mentioning that the factors matrix is rotated orthogonally and based on varimax method, the Kaiser criterion is

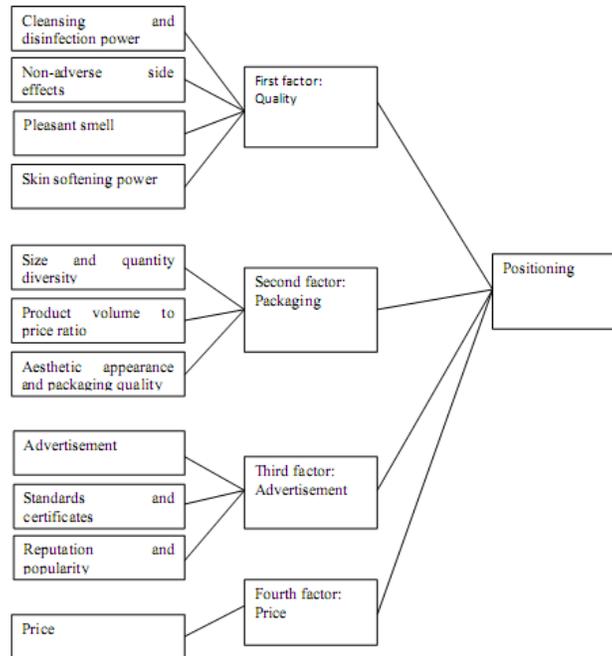


Figure 7. Effective factors on detergents positioning.

Table 3. Rotated component matrix.

Variable	Factor			
	1	2	3	4
Cleansing power	0/210	-0/171	0/038	0/827
Price	0/786	-0/165	-0/103	0/305
Smell	0/186	0/215	-0/234	0/832
Adverse side effects	0/199	0/324	0/083	0/745
Product volume	0/217	0/103	0/721	0/187
Size and quantity diversity	0/109	-0/157	0/643	0/108
Advertisement	0/204	0/775	0/112	0/071
Standards	0/199	0/753	0/095	0/243
Aesthetic appearance and packaging quality	0/277	0/111	0/886	0/177
Reputation and popularity	0/208	0/705	0/217	0/231
Softening power	0/114	0/118	-0/070	0/670

used for the classification of 11 variables in four individual groups. In fact, four general variables are achieved as discussed thus.

The first factor is quality which includes cleansing and disinfecting power, lack of adverse side effects, pleasant smell and softening power. The second factor is packaging which contains some variables such as variety of size and quantity, volume to price ratio (grammage), aesthetic appearance and packaging quality. The third factor is advertisement which includes advertisement, reputation and popularity as well as validity with respect to related certificates and standards. Finally, the fourth factor is price which only includes price (Figure 7).

Tables 3 and 4 show the factor matrixes before and after rotation. In fact, the factors matrix is indicative of factor loadings. The factor loadings are correlation coefficients between the variables (rows)

and factors (columns) and the factor labeling is undertaken based on these coefficients. Usually, the higher than 0.6 loads are known as strong and conversely, less than 0.5 are weak loads. Because of easy interpret of rotated matrix elements and with respect to the fact that factors rotation without changes in communality value simplifies factor interpretation; most of the researchers use the rotated elements.

In Tables 5 and 6, factor loadings less than 0.5 have been deleted and only effective factors loadings are shown in which the factors rotated matrix indicates individual factor variables.

As a whole, 64.085% of changes are explained through four new factors that are known as an acceptable value in the factor analysis. Tables 7, 8 and Figure 8 reveal the variables Eigen values and total variance explained before and after rotation.

Table 4. Unrotated component matrix.

Variable	Factor			
	1	2	3	4
Cleansing power	0/808	0/154	0/276	0/243
Price	0/386	0/396	0/176	0/671
Smell	0/739	0/206	0/234	0/234
Adverse side effects	0/644	0/186	0/312	0/234
Product volume	0/310	0/681	0/197	0/299
Size and quantity diversity	0/309	0/566	0/208	0/216
Advertisement	0/212	0/310	0/638	0/239
Standards	0/415	0/205	0/647	0/321
Aesthetic appearance and packaging quality	0/301	0/784	0/285	0/234
Reputation and popularity	0/198	0/237	0/576	0/212
Softening power	0/570	0/191	0/195	0/173

Table 5. Component matrix before rotation.

Variable	Factors			
	1	2	3	4
Cleansing power	0/808			
Price				0/671
Smell	0/739			
Adverse side effects	0/644			
Product volume		0/681		
Size and quantity diversity		0/566		
Advertisement			0/638	
Standards			0/647	
Aesthetic appearance and packaging quality		0/784		
Reputation and popularity			0/576	
Softening power	0/570			

Table 6. Rotated component matrix.

Variable	Factor			
	1	2	3	4
Cleansing power	0/827			
Price				0/786
Smell	0/832			
Adverse side effects	0/745			
Product volume		0/721		
Size and quantity diversity		0/643		
Advertisement			0/755	
Standards			0/753	
Aesthetic appearance and packaging quality		0/886		
Reputation and popularity			0/705	
Softening power	0/670			

Research second step: The use of factor analysis results in drawing perceptual map

At the second step, the results of the research first part were

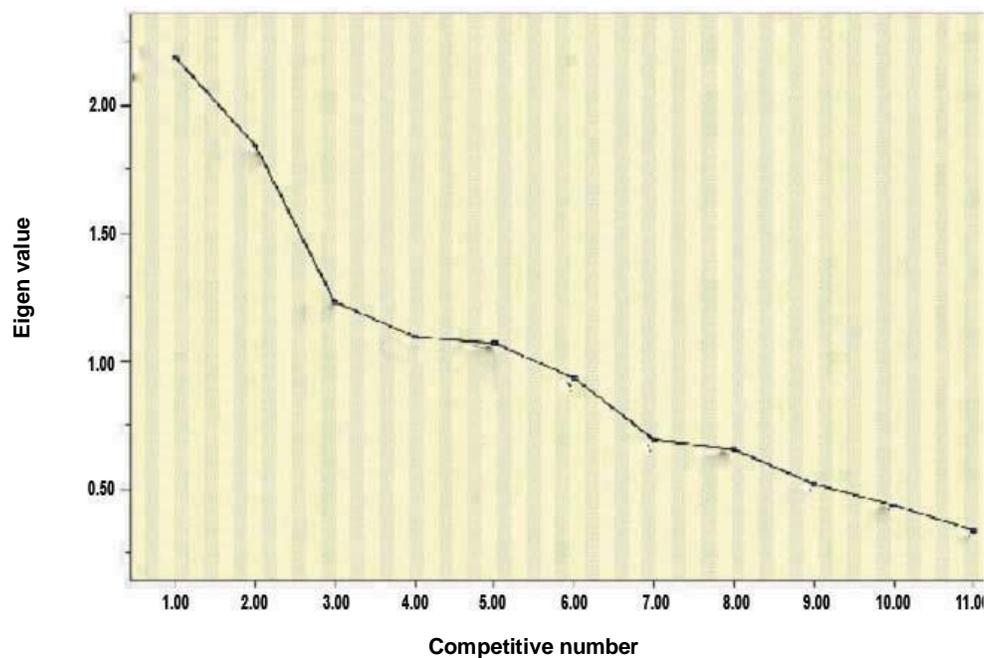
employed according to operational and applied purposes. The main objective was positioning of five big producers of detergent and their comparison using the main factors and initial differentiating components. The obtained differentiating factors were used to draw

Table 7. Total explained and rotated factor loadings square.

Factor	Total of explained factor loadings square			Total of rotated factor loadings square		
	Total	Explained variance percent	Summed up variance percent	Total	Explained variance percent	Summed up variance percent
1	2/190	19/913	19/303	1/773	18/390	18/390
2	1/843	17/752	36/841	1/653	17/029	35/419
3	1/231	14/694	51/535	1/467	13/340	48/759
4	1/095	16/918	68/453	1/466	15/326	64/085

Table 8. Total variance explained and Eigen values before rotation.

Factor	Initial Eigen value		
	Total	Explained variance percent	Summed up variance percent
1	2/190	19/303	19/303
2	1/843	17/538	36/841
3	1/231	14/694	51/535
4	1/095	16/918	68/453
5	1/070	7/730	76/183
6	0/932	5/472	81/655
7	0/692	4/291	85/946
8	0/654	5/344	91/290
9	0/519	3/722	95/012
10	0/436	2/615	97/627
11	0/338	2/373	100/000

**Figure 8.** Total variance explained and Eigen values before and after factors rotation.

corresponding perceptual map. The second questionnaire was distributed among a sample including 110 supermarkets and

distributors of detergents in the Markazi province. The respondents' views about the position of five big producers were surveyed with

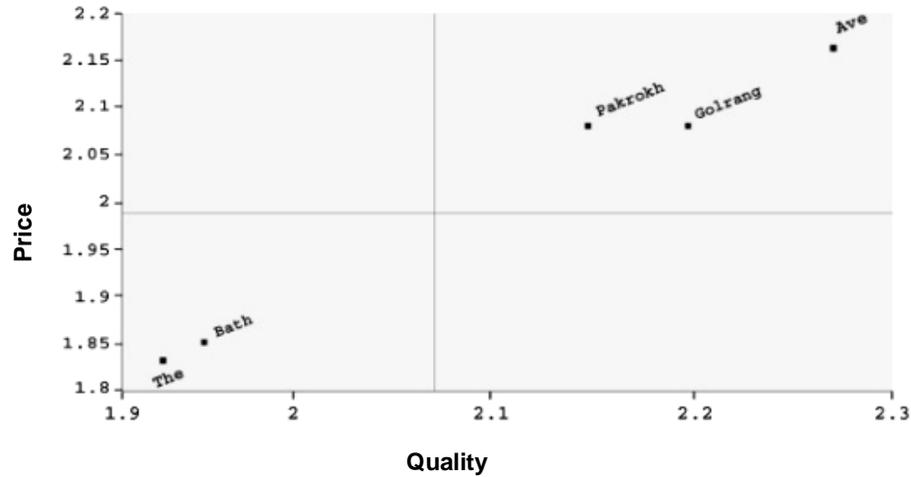


Figure 9. Perceptual map with respect to quality and price factors.

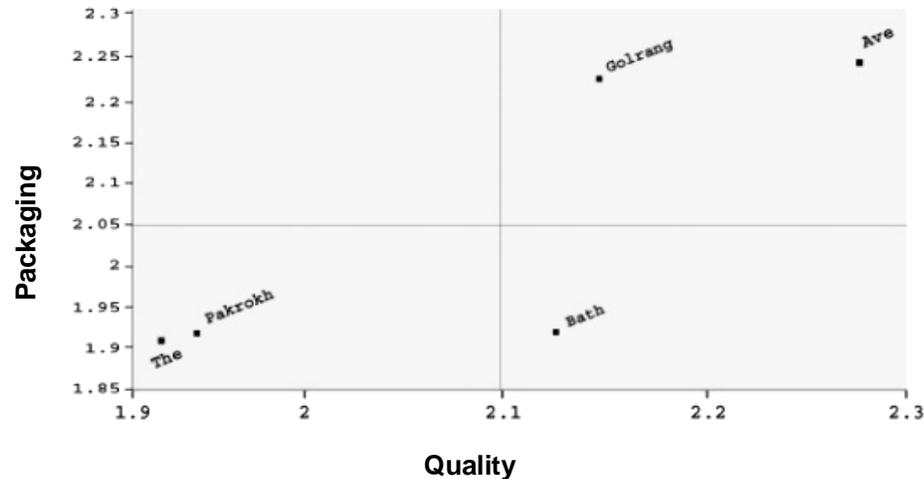


Figure 10. Perceptual map with respect to quality and packaging factors.

respect to discovered factors at the first step of the research. Drawing the perceptual map needs the weight average of each factor for every specific brand, so the following formulation was used for the purpose:

$$\sum_{i=1}^n w_i \bar{x}_{ik} = \text{Weight average}$$

Where i th variable average in a factor for k th brand = \bar{x}_{ik} , factor loading for i th variable = w_i , and n is the number of variables contained in the considered factor. The aforementioned value is calculated for each factor with respect to individual brands and then the resulted values are displayed as length and width of a specific point in the map. The lines which divide the map into four quadrants are drawn according to factors total average obtained from all brands. The top right quadrant is ideal area and the bottom left quadrant indicates the most undesirable area in each map. Because the quality is the most important factor, the next

perceptual map for three other factors is drawn according to the first factor (Figures 9 to 11).

DISCUSSION AND RESULTS

As it was mentioned earlier, the research aims at examining the relative position of five most popular brands in detergent industry. At first, the brands differentiating factors were discovered and then their relative positions based on these factors were used to draw the perceptual map. As the final results displayed in the three resulted perceptual map (Figures 9 to 11) indicate, Aveh Company's position in placed in the first quadrant of each three maps and has the highest competitive position. The fact reveals that the company has succeeded in differentiating its products regarding four differentiating factors. Golrang Company stands at

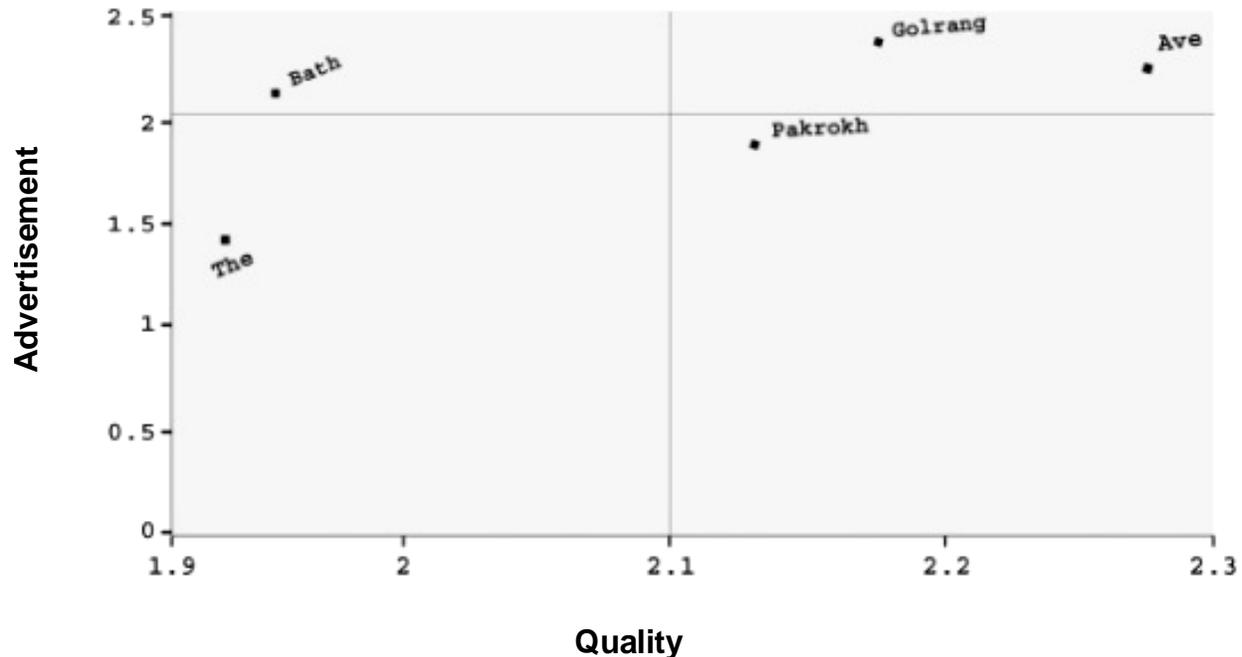


Figure 11. Perceptual map with respect to quality and advertisement factors.

the second rank; similar to Aveh Company its position is at the first quadrant of three maps but with lower values. Pak Rokh follows Golrang regarding price, quality and advertisement but for packaging factor it shows a weak performance and its average value for the factor is 1.91. Bass and Day Companies have weak competitiveness except that Bass has a strong performance with respect to advertisement with average value of 2.2. As it can be seen, price and quality of all brands are placed in two quadrants of perceptual map and two other quadrants are blank. It indicates that it is possible for Day and Bass Companies to improve their quality through the increase of price and so reposition themselves in other areas of the map. Pak rokh and Golrang are also able to increase their prices to compete with the market leader according to quality factor. For example, packaging quality map reveals that Bass Company has an acceptable quality close to Golrang company but some activities such as new packaging design, size and capacity variation and the product volume are very weak and no development has been undertaken in this respect. In this way, Golrang Company with factor average weight near to 2.5 leads Aveh Company. The research results are useful for top managers of mentioned companies to improve their positions in the market place. The research results also pave the way for i) comparison of various brands in different industries, ii) recognition of important differentiating factors in business positioning, iii) finding the main competitors, iv) evaluation of company position with respect to its competitors and finally v) determination of weaknesses and strength regarding the main

constructs and in comparison with competitors through an abstract graph.

REFERENCES

- Abdolvand H, Nikoomaram M (2006). International Marketing, IAU University press, Tehran, Iran
- Aaker D, Shansby J (1982). Positioning your product, Business Horizons (25):56-62.
- Arnott DC (1992). Base of financial services positioning in the personal pension, Life Assurance and Personal Equity Plan Sectors, PhD. Thesis, University of Manchester, UK
- Arnott DC (1993). Positioning: Redefining the Concept, Warwick Business School Research Papers. (81):24
- Arora R (2006). Product positioning based on search, experience and credence attributes using conjoint analysis. J. Prod. Brand Manage. IS/S 285-292.
- Bazargan A (1997). Behavior sciences research methodology, Agah Publication
- Bowen JT (1998). Marketing segmentation in hospitality research: No longer sequential process. Int. J. Contemp. Hospital. Manage. 10(7):289-296.
- Brooksbank R (1994). The Anatomy of Marketing Positioning Strategy, Market. Intellig. Plan. 12(4):10-14
- Blankson C, Kalafatis SP (1999). Issues and challenges in the positioning of service brands: a review. J. Prod. Brand Manage. 8 (2):106-118.
- Blankson C, Kalafatis SP (2001). The development of a consumer/customer-derived generic typology of positioning strategies. J. Market. Theory Practice 9(2):35-53
- Calantone RJ, Benedetto CA, Hakam A, Bojanic DC (1989). Multiple multinational tourism positioning using correspondence analysis. J. Travel Res. (28):25-32.
- Crawford CM (1985). A New Positioning Typology, J. Prod. Innovat. Manage. (4):243-253
- Dodourova M (2003). Industry dynamics and strategic positioning in the wireless telecommunications industry: the case of Vodafone Group Plc. J. Manage. Decis. 41(9):859-870.

- Easingwood CJ, Mahajan V (1989). Positioning of Financial Services for Competitive Strategy, *J. Prod. Innovat. Manage.* 6 (9):207-219
- Etzel MJ, Walker BJ, Stanton WJ (2004). *Marketing*. McGraw-Hill, Irwin. 13th Edition.
- Echtner CM, Ritchie JR (1993). The measurement of destination image: An empirical assessment. *J. Travel Res.* 31(3):3-13
- Gursoy D, Chen MH, Kim HJ (2005). The us airlines relative positioning based on attributes of service quality. *J. Tour. Manage.* (26):57-67.
- Hartmann P, Ibanez VA, Sainz FJ (2005). Green branding effects on attitude: functional versus emotional positioning strategies, *marketing Intelligence planning.* 23(1):9-29.
- Hawaldar K (2002). *Industrial Marketing* (1st ed.), TATA McGraw-Hill Publishing Co Ltd, New Delhi
- Hair JF, Black WC, Babin BJ, Anderson RE, Tatham RL (2006). *Multivariate data analysis*. 6th ed. NJ: Prentice Hall
- Hauser JR, Koppelman FS (1979). Alternative Perceptual Mapping Techniques: Relative Accuracy and Usefulness, *J. Market. Res.* 16(4):495-506.
- Johansson KJ (2006). *Global Marketing: Foreign Entry, Local Marketing & Global Management*. 4th ed., Boston: McGraw-Hill.
- Irwin DA (1996). *Against the Tide: An Intellectual History of Free Trade*. Princeton: Princeton University Press.
- Kalantari K (2006). Data processing and analysis in social-economical researches using SPSS software, *Sharif Con Eng*, 2th ed
- Kotler P (2002). *Marketing Management* Prentice Hall (11th edition)
- Kotler P, Armstrong G (2001). *Principles of Marketing*, NJ: Prentice Hall, 9th ed,
- Kotler P, Keller KL (2006). *Marketing management* (12th edition). Upper Saddle River, NJ: Pearson Prentice Hall.
- Khaki GR (2003). *Research methodology with thesis approach*, Baztab Publication, 1th ed
- Lavie D, Fiegenbaum A (2003). The Dominant strategic positioning of foreign MNCs: a Typological Approach and the Experience of Israeli Industries. *J. Bus. Res.* 56:805-814
- Lewis RC (1990). Advertising your hotel's position. *The Cornell Hotel and Restaurant Administration Quarterly.* 31 (2):84-91
- Lovelock C, Wright L (2001). *Principles of service marketing and management* (2nd edition). Upper Saddle River, NJ: Prentice Hall.
- Mazanec JA (1995). Competition among European tourist cities: a comparative analysis with multidimensional scaling and self-organizing maps. *J. Tour. Econ.* 1: 283-302.
- Mazanec JA (1995). Positioning analysis with self-organizing maps. *Cornell Hotel and Restaurant Administration Quarterly.* 36:80-95.
- Mazanec JA (1998) A multi-factor portfolio model, in: Hartvig-Larsen, H. (ed.), *Cases in Marketing*, *J. Int. Tour. Market.* 115-141.
- McAlexander J, Becker B, Kaldenberg D (1993). Positioning health care services: Yellow Pages Advertising and Dental Practice Performance. *J. Health Care Market.* 13(4):54-57
- Mowen J, Minor M (2001). *Consumer behavior*, Prentice Hall; 5th edition
- Niculescu M (2006). Strategic position in Romanian higher education. *J. Organ. Change Manage.* 19(6):725-737.
- Nikoomaram M, Heidarzadeh K (2006). *Research Method*, IAU university press, Tehran, Iran
- Porter M (1996). *What is Strategy?* Harvard Business Review, USA.
- Pickton D, Broderick A (2001). *Integrated marketing communications*, Financial Times Management; 1st edition
- Rothschild ML (1987). *Advertising: from fundamental of strategies*, D.C. Heath Co. Toronto.
- Sanger J (1996). *A field Research Guide to Observation*, Flamer Press.
- Schellhase R (2000). Customer satisfaction in business to business marketing, *J. Bus. Indust. Market.* 15 (9):108-118.
- Swerdlick M (2007). Prime positioning, *J. Market. Health Serv.* 27 (3):12-12.
- Walker CO, Boyd WH, Mullins J, Larreche JC (2002). *Marketing strategy: A Decision-Focused Approach* McGraw – Hill/ Irwin: 4th Edition
- Wood LM, Pierson BJ (2006). *The brand description of Sainsbury's and ALDI: Price*.
- Wilson RMS, Gilligan C (2005) *Strategic marketing management: Planning, Implementation and control*, 3rd ed., Oxford: Elsevier Butterworth-Heinemann