



## Hypermarket Segmentation based on Lifestyle Criteria of VALS, to Identify the Customers' Requirements Using Kano Model and Prioritize Their Motivational Needs Using DANP (DEMATEL and ANP) Case Study: Daily Chain hypermarket

Monireh Ahmadimanesh<sup>a\*</sup>, Mohammad Hossein Helaliyan<sup>b</sup>

<sup>a</sup> Department of Management, Faculty of Humanities, Sadjad University, Mashhad, Iran.

<sup>b</sup> Department of Industrial Engineering, Faculty of Industries and Mechanics, Sadjad University, Mashhad, Iran.

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### ABSTRACT

The purpose of this research is to segment the hypermarket market according to the lifestyle of VALS and identify their needs. In this research, hypermarket customers were first classified according to the VALS lifestyle model; in the second step, the needs of each of the lifestyle categories were determined according to the Kano model; and in the last step, to determine the dominant lifestyle needs of store managers, the motivational needs of the dominant group were prioritized and weighted according to the three indicators of customer satisfaction, customer dissatisfaction, and implementation cost using the combination of DEMATEL and ANP techniques. To carry out the work, after identifying the needs of the customers of the store based on the theoretical basis and the opinions of the customers, two types of questionnaires were designed, and according to Cochran's formula, 400 questionnaires were distributed among the customers of the Daily Market store and 210 items were collected. In the final step, a questionnaire was given to store managers to implement the motivational needs of dominant customers so that they could prioritize the implementation of each need according to the store's facilities. The results indicated that the dominant group in this hypermarket has a hardworking lifestyle, that the features of product arrangement, appropriate behavior of employees, and clean environment are among the basic needs; diversity, quality, the performance of cashiers, the level of information of employees and neatness are among the functional needs and discounts, paper envelopes, online sales, having parking and courier are among the motivational needs for them. Also, according to the facilities and infrastructure of the store and the opinions of its managers, it was determined that the need to have a courier is one of the most important motivational needs that should be prioritized to implement and implement so that more audiences will have the desire to buy from this store.

### Keywords

Market segmentation, Lifestyle, VALS model, Kano model, Customer satisfaction, DEMATEL, ANP.

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\*Corresponding author

Email: [m.ahmadimanesh@sadjad.ac.ir](mailto:m.ahmadimanesh@sadjad.ac.ir)

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## 1. Introduction

Nowadays, paying attention to customers' needs and fulfilling their wishes are undeniable facts of today's business and competition world; Therefore, to earn profits and increase income, companies are forced to correctly understand the behavior of consumers and the factors that influence their buying behavior. In any market, buyers differ from each other in their needs, resources, attitudes, and buying habits. Through market segmentation, companies can achieve products and services that meet their unique needs with greater efficiency and effectiveness by dividing large and homogeneous markets into smaller categories. Market segmentation reveals the opportunities available in the company's market segmentation and is done to develop appropriate strategies for each market segment (Dehdashti and Pourhosseini, 2012). Segmentation is a tool that groups people based on their distinct needs to determine which types of consumers will be most receptive to a particular product or marketing message. These groups form a consumption model. To develop models, marketers categorize consumers based on specific sets of criteria, usually starting from demographic and geographic variables.

More complex models include psychological and behavioral variables, including attitudes, lifestyle, values, ideology, risk aversion, and decision-making patterns. Therefore, it is necessary to determine the target market of customers by identifying their lifestyles. Many companies that operate in the market research and advertising sector have presented a specific typology of style segmentation. In this division, the best and most well-known approaches and models are: activities, interests, opinions (AIO), values, attitudes and lifestyle system (VALS), and value list (LOV). In this research, considering the unique frameworks in the VALS lifestyle, this model has been used (Bakhshizadeh Borj et al., 2015).

In today's organizations, customer satisfaction is very important because customer satisfaction is the main factor and the organization's survival. For this reason, examining consumer behavior is considered very important. Paying attention to customer satisfaction and trying to improve it to create loyal customers who are responsible for promoting the business as promoters and a free marketing tool and are considered brand ambassadors. If organizations do not care about the satisfaction of their customers, they should not expect them to show interest and attention to their services and products. Providing quality services can capture the hearts and souls of customers and differentiate the brand from others. Therefore, companies must identify features of products or services that provide them satisfaction or happiness to the customer, and not providing them causes dissatisfaction in the customer. Since expectations vary from one customer to another, the features of the product or service that cause delight and those that only

prevent dissatisfaction need not be the same across market segments. Therefore, it is important to analyze the contribution of a specific product or service features to customer satisfaction or happiness on a market level (Kazemi et al., 2014). This study tries to segment a part of the hypermarket's target market using the psychological variable of lifestyle first according to the VALS model and to use the Kano model to determine the requirements of each of these segments and to implement the motivational needs. The dominant group of customers they were ranked. Therefore, at the end of this research, the following questions will be answered:

- 1- According to the geography of the store, what kind of lifestyle do the majority of customers of the Daily Market hypermarket have?
- 2- In which categories of the Kano model requirements are customers' expectations in each of the eight styles of VALS?
- 3- What is the prioritization of the motivational needs of the dominant group of customers for implementation?

## 2. Theoretical foundations and research background

### 2.1. Market segmentation

Segmentation is a management philosophy derived from the theory of microeconomics and the tendency towards customer requirements. Market segmentation is one of the basic principles of modern marketing. This concept was presented more than half a century ago by Smith (1956) (Mortazavi et al., 2009). Market segmentation is a wide range of methods. These methods can be divided into two main groups. The first group is based on known or observable characteristics, and the groups are selected from a community in advance and are considered as sections (such as socio-demographic characteristics, etc.); on the other hand, in the second group, post-hoc methods, multivariate analysis is used to identify sectors. To identify the segments, respondents are clustered based on their similarities on multivariate profiles. These methods include different attitudes and behavioral or personality characteristics (Hanafizadeh and Mirzazadeh, 2011).

Marketers need to better understand their customers based on their requirements and desires. Psychological is a subject that can be related to different types of customers with their differences and similarities. From the point of view of marketing, it means how, when and where people spend their money. For this purpose, market segmentation can be done based on psychological variables to gain better customer knowledge. As a marketing strategy, psychological segmentation can divide customers into different social segments and predict

people's future requirements and desires. There are main variables for market segmentation, such as geographic, demographic, psychological and expected benefits, lifestyle, etc., which will be briefly explained below:

1. **Geographical Segmentation:** The market is classified geographically into different regions in geographic segmentation. The company can operate in one or more geographical areas (Kotler, 2001).
2. **Demographic Segmentation:** In this segmentation, it means dividing the market into different groups, such as age, gender, income, occupation, and nationality. Demographic factors are the most common criteria for dividing the market into groups of different customers because often, the demands and requirements of each customer show a noticeable change due to the change in demographic variables (Kotler and Armstrong, 2005).
3. **Psychological Segmentation:** In this segmentation, buyers are divided into different groups based on their way of thinking, personality, or lifestyle. People in the same demographic group exhibit very different psychological characteristics (Kotler, 2001).
4. **Market Segmentation based on expected benefits:** Segmentation based on expected benefits focuses on the specific features of products and services that buyers consider in their purchases (Peltier and Schribrowsky, 1992).

Among the various variables that are the basis of market segmentation, some mentioned above, lifestyle is the variable used more in marketing and segmentation studies. This study's market segmentation has been done based on this variable, which will be discussed further.

## ***2.2. Lifestyle***

The concept of "lifestyle" was first used by a sociologist named Max Weber and a psychoanalyst named Alfred Adler (Cockerham, 2006). In 1960, Adler emphasized the uniqueness of people and stated that there are known similarities between people and their lifestyles (Matzler et al, 2004). In 1963 Laser introduced the concept of lifestyle to marketing (Füller Matzler, 2008) and it is based on the fact that people have specific life patterns that may affect their motives for buying products and brands (Xu and Ren, 2010). Past research has usually defined lifestyle by examining consumer attitudes, interests, and opinions. In fact, lifestyle is a psychological concept that can be presented by individual activities, way of thinking, type of life and life cycle, and functions in response to environmental stimuli, and also

lifestyle can be a set of behaviors that reflect concerns individual psychological (internal beliefs) and sociological consequences (external stimuli) are defined (Yu, 2011). In general, lifestyle can show consumers' characteristics and purchasing behavior. Also, lifestyle includes activities that spend money and time, people's interests, and opinions, including the customer's view of the surrounding environment and the world. Therefore, the lifestyle variable is related to the individual's knowledge that allows him to combine his characteristics with his behaviors (Gonzalez and Bello, 2002). In this segmentation, the best and most well-known approaches and models are Activities, Interests, and Ideas (AIO), VALS Psych mapping Lifestyle (VALS), and list of values (LOV) (Kotler and Armstrong, 2005). Segmentation (AIO) measures how people spend their time, interests, opinions, income, education, and where customers live. In VALS's method, consumers are defined based on their personality characteristics and use psychology to classify people with distinct personality traits. According to the LOV method, people have a list including nine values: self-respect, security, warm relationships with others, sense of achievement, success, sense of belonging, to be respected they observed, pleasure and happiness in life, and excitement (Afjeh and Bakshizadeh Borj, 2007). Considering the unique frameworks in the VALS lifestyle, this model has been used in this research.

### 2.2.1. VALS lifestyle

VALS stands for "values, attitudes, and lifestyle". As the first psychographic system based on theory, it was depicted to integrate social values into people's lives. The basic principle in VALS is that people express their personality through their behavior. VALS specifically defines consumer segments based on personality traits that influence market behavior. Eight features of the VALS model are summarized in Table 1.

Table 1. Personality classification based on VALS personality models

Row	The part	Lifestyle characteristics	Psychological characteristics	User profile
1	Innovators	Successful personal growth, Broad intellectual interests	Optimistic, extroverted, developmental, changeable, Confident	Welcome to new products Being pessimistic about advertising
2	Thinkers	Valuing travel and education, relatively active in society and politics	mature, satisfied, intelligent, To value Order and knowledge	Looking for value and durability, highly educated
3	Believers	Predictable, family-oriented, politically conservative	Traditional, cautious, ethical	Has an average income Looking for a deal

Row	The part	Lifestyle characteristics	Psychological characteristics	User profile
4	Achievers	Opposing too much change, formal social relations,	Goal-oriented, formal, controlled, conservative	Attracting superior products, interest in reading publications
5	Strivers	Limited interests, somewhat isolated, careless about health and nutrition, interest in new purchases	Disaffected, active, fun, looking for imitation	Buying without thinking beforehand, they prefer watching TV to reading, they usually have low education
6	Experiencers	Interested in sports and socializing, they like power and fame	Extroverted, active, energetic, and enthusiastic	They spend a lot of money on clothes and food, they are interested in fashion, the youngest group
7	Makers	Spending free time with family and friends.	Constructive, committed, satisfied Importance of self-sufficiency	They are not affected by sentences
8	Survivors	Their interests and activities are limited, their most important concern is safety and security, they have health problems and spend most of their time alone.	Conservative, traditional, risk-averse, and powerless	They trust advertisements, they spend most of their time watching TV, they use the Internet the least, have the lowest income, and are the oldest

**2.3. The Kano model**

Dr. Noriaki Kano, a professor at Rika University in Tokyo and one of the most prominent experts in the science of quality management, proposed a model that is used in most customer satisfaction models today. The Kano model develops the Traditional thinking of Quality Services. This model is useful for understanding customers' needs by identifying and classifying the quality attributes. He proposed the concept of Kano's two-dimensional quality model and a new idea with attractive and essential quality. This Model includes the four quarters and five categories. Must-be (M), One-Dimensional (O), Attractive (A), Indifferent (I), and reverse (R), which we will discuss below. The Kano Model is used to classify the features of products or services and is used as a way to fulfill the needs of customers (Tang et al., 2021).

- a) Must-be factors: These are the first requirements provided in the product. Failure to approve them in the product will lead to user dissatisfaction
- b) one-dimensional factors: these factors lead to satisfaction in the case of high efficiency and dissatisfaction in the case of low efficiency.
- c) Attractive factors: These factors surprise the user and arouse his enthusiasm.
- d) Indifferent factors: These are features that do not affect customer satisfaction.
- e) Reverse factors: These features lead to customer dissatisfaction (Mamghani and Izadpanah, 2012).

Figure 1 shows kano's model and its factors. The vertical axis shows the level of customer satisfaction, and the horizontal axis shows the level of providing the quality requirements desired by the customer. The highest and lowest points of the graph's vertical axis represent customer satisfaction and customer dissatisfaction. The intersection of the horizontal and vertical axis represents the place where the customer is in a state of balance in terms of satisfaction and dissatisfaction. The right side of the horizontal axis indicates the place where the expected quality requirement is fully supplied, and the left side of the horizontal axis is the point of providing a product that does not have the expected quality characteristics. The desired quality requirement is not included in the product or service in any way. (Lai et al., 2004).

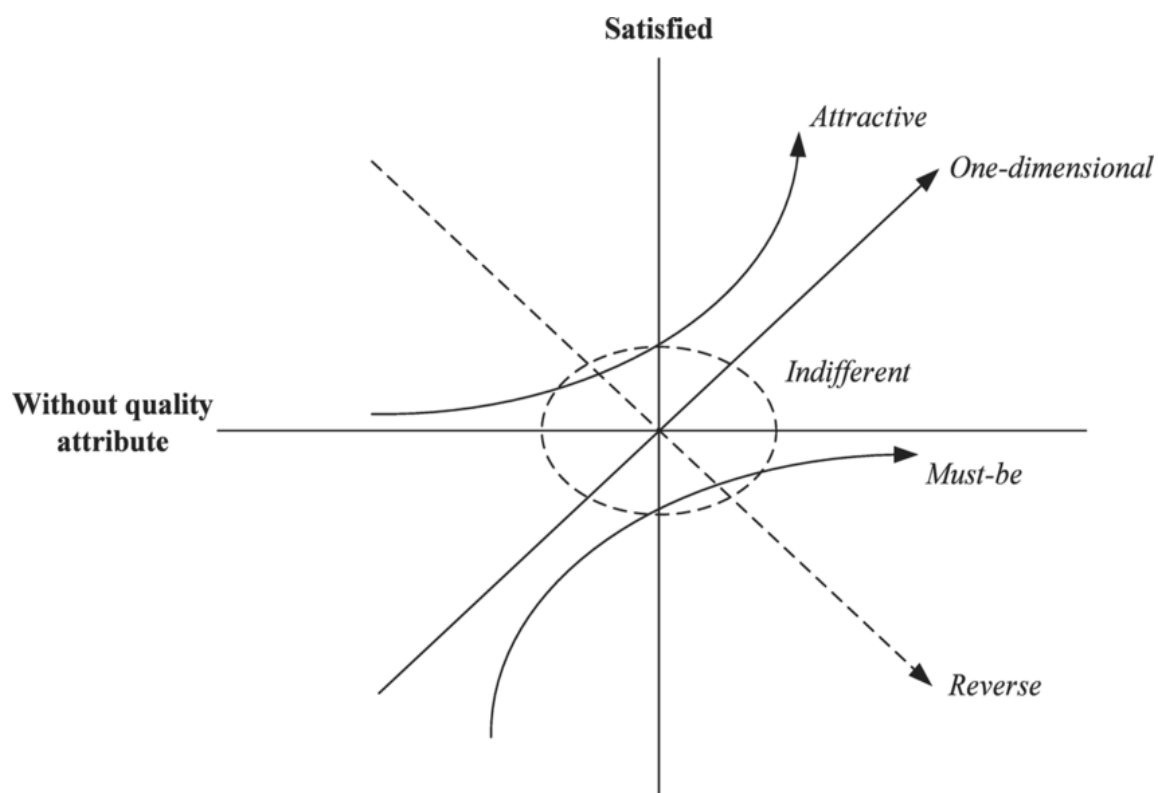


Figure 1. Kano's diagram

One of the most effective factors in prioritizing the customer's requirements is Kano's categories. (Xu et al., 2009) add about this, the ultimate goal of customer need analysis is to provide decision support for product (service) design. Although Kano's categories may improve designers' understanding of customer needs, they are not true decision-making criterion.

Therefore, Kano's classification to facilitate decision-making in product or service design priorities seems insufficient. Since decision-makers, whether they are customers or managers of the organization, are unaware of the scientific and theoretical assumptions of Kano's model, so their competence to determine the importance of Kano's main categories is questionable;



moreover, in academic and scientific studies such as (Tan and Pawitra, 2001) and (Li et al., 2009) do not have the same opinions about the existence of inherent superiority among Kano's main categories. Therefore, counting the factors that enable managers based on the main business strategies seems necessary for the work of their organization to determine their importance weights. On the other hand, the importance of factors such as customer satisfaction and dissatisfaction in prioritizing customer requirements in many studies (Berger et al., 1993), (Matzler and Hinterhuber, 1998), (Lai et al., 2004), and (Yang, 2005) has been specified and used. In addition, satisfaction and dissatisfaction factors are derived from the first dimension of Kano, which is the customer satisfaction axis. But the important factor considered in the study of Shan, Ton, and Shan is innovation in the product (service). They stated that based on the Kano model, attractive features must be implemented in the product or service to achieve an innovative product (service) (Shen et al., 2000)

#### **2.4. Previous studies**

Mortazavi et al. (2008) in their research, called the Market Segmentation of Mashhad Banks based on the Expected Benefits of Customers, examined factors such as the bank's reputation and fast and efficient service, etc. and directed them in different directions, focusing on their efforts exactly on the customers who have the highest chance to meet their expectations and demands. Kazemi et al. (2014) called laptop product market segmentation according to the segmentation based on lifestyle; VALS placed customers in seven groups of innovators, conscientious, believers, achievers, hard workers, experiencers, and creators. According to Kano's model, motivational, functional, and basic needs were determined in each group, and the level of satisfaction and dissatisfaction with each factor was also determined. Baghernjad (2019) divided travelers into seven categories, world-class, luxury relaxers, religious travelers, businessmen-professors, corporate travelers, easy Nature hunters, and adventurers. Raj and Sait (2015) divided consumers into eight VALS groups and identified their needs. This study attempts to assess a snapshot of the differences and similarities of smartphone users in a defined sample of the population and provide a glimpse into the early stages. Kim et al. (2020) divided consumers into 5 categories, fun, relaxed, inactive, prejudiced, and meditation. Target from this study use from data secondary to identification sections consumption doer older was that patterns similar from activities particle for direct object to subscription they put. Myun Kim and Kim (2020) have divided the elderly into 4 groups. Those who travel for education and those who travel for health, economic status, and marriage. Taraoktavia and Indravati (2021)



divided consumers into 3 categories, quality hunting consumers, non-committed consumers, and loyal consumers. This study was conducted with the aim of analyzing the distribution of crunchy almond products in Pawanko. [Ozdenerol and Seboli \(2021\)](#) by evaluating market segmentation systems, divided lifestyle into 5 categories, people from the city, rural outposts., the birthplace of scientists and patriots, bachelors of middle cities, and senior styles. The purpose of this study is to describe the relationship between lifestyle characteristics and the death rate of covid-19 in the United States and the impact of covid-19 in different cases.

According to the research background, it can be said that few studies in the field of hypermarkets have focused on segmenting the market based on the lifestyle of the waltz and identifying the requirements of customers accordingly. Also, in the studied models, the performance indicators of the studied needs have not been counted. However, first, this study tried to segment the hypermarket market based on the lifestyle of the VALS, and in order to identify the needs of the dominant groups of customers, the Kano model was used. To list the needs of customers that make them happy, implementation indicators are considered and according to them. The motivational needs of the dominant group of customers are ranked and weighted using the DANP technique (ANP method based on DEMATEL).

### 3. Methodology

The current research is applied in terms of purpose and survey-analytical in terms of method. Customers of one of the branches of Daily Market in Mashhad with an average purchase volume located in Elahia 7 street in 1400-1401 were selected for the statistical population. To estimate the sample size from Cochran's formula with an estimation accuracy and confidence level of 0.95, the sample size was determined to be 371 people. Due to the prediction of non-return of several questionnaires, 400 questionnaires were randomly distributed among customers, and 210 questionnaires were returned. Finally, 200 qualified questionnaires were used in the analysis process. The decision algorithm in this research is the market segmentation of hypermarket customers based on their lifestyle and determining the most important requirements of the dominant customer groups and includes the following four major steps:

1. Extracting the needs of the store's customers and checking the lifestyle of the customers according to the lifestyle of VALS
2. Investigating the relationship between customers' lifestyles and classifying their needs in the form of the Kano model

3. Determining the indicators affecting the implementation of the requirements of the dominant group of customers
4. Ranking the motivational requirements of the dominant group of customers based on the combination of DEMATEL and ANP (DANP) techniques.

Finally, the implementation steps of the proposed research process according Figure 2 are:

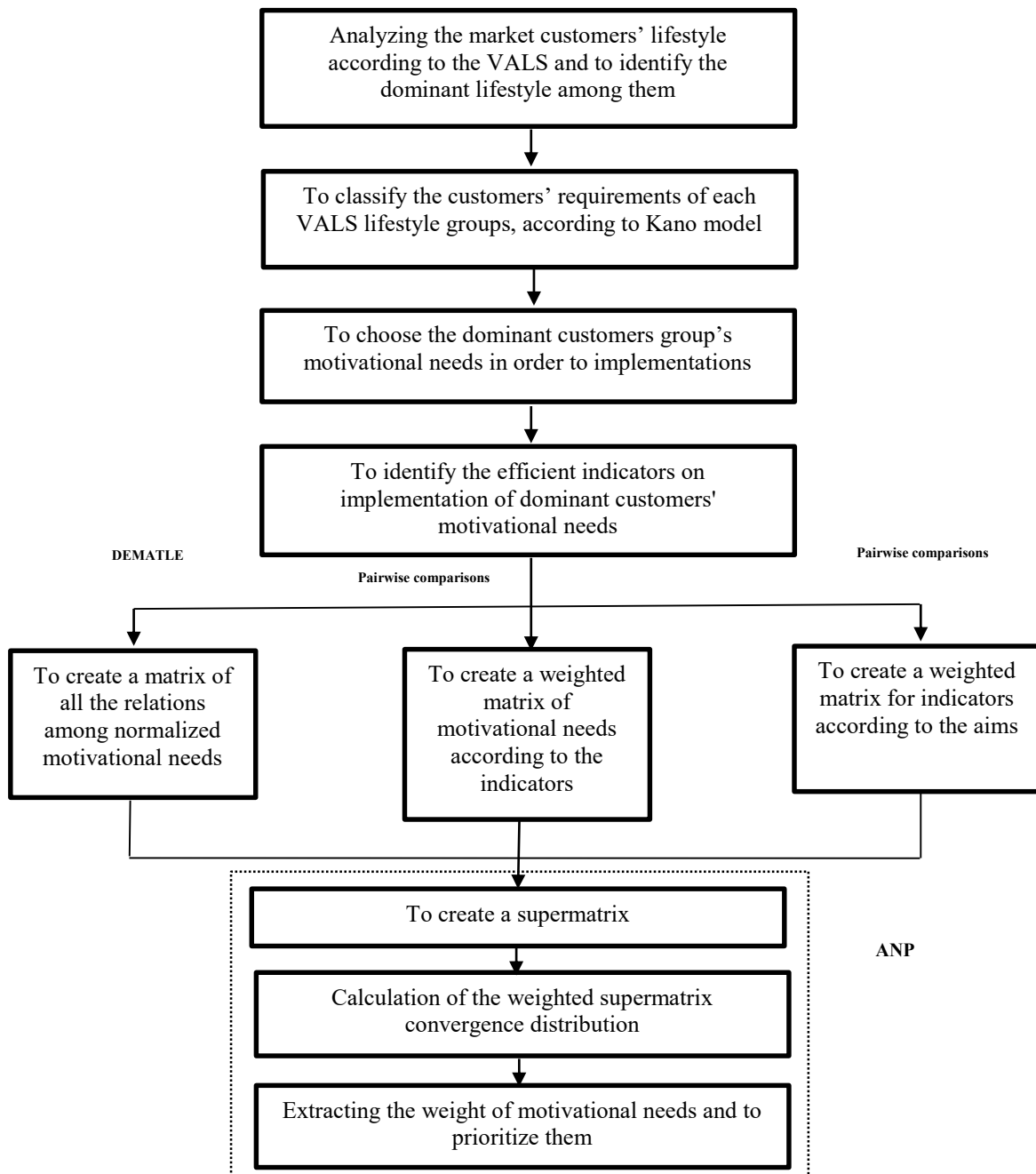


Figure 2. Research model

#### 4. Research findings

##### 4.1. *The first stage: extracting the needs of the store's customers and checking the lifestyle of the customers according to the lifestyle of VALS*

In the first step of the research, based on the theoretical foundations of studies and field research, customers' demands from a hypermarket were extracted. Then, based on the needs obtained on theoretical bases, a questionnaire was designed and given to the customers of the store, and they were asked to express the impact of these needs on repeat purchases and their satisfaction. The needs that gained the most frequency from the point of view of the consumers of different lifestyles were extracted and became the basis of the third stage questionnaire. 15 experts and Cronbach's alpha were also used for the validity and reliability of the consumer requirements questionnaire. The list of needs identified in this step is shown in Table 2.

Table 2. Recognized needs in field research

Row	Requirement name	Row	Requirement name
1	discount	9	Arrangement of products
2	variety	10	monthly draws
3	quality	11	Having a parking lot
4	Use of paper envelope	12	employee behaviour
5	Cashiers' performance	13	Grooming of staff
6	levels of employee information	14	Having a courier
7	price	15	clean environments
8	Internet sales		

In the continuation of this step, it was determined what kind of lifestyle each customer has according to the Valls Psych mapping questionnaire and its distribution among the customers of the store. According to this classification, customers are placed in eight types of lifestyles. But because the decision to implement store programs is targeted to plan for the future actions of the most frequent lifestyle among customers, it was chosen as the target market and became the basis of decisions. VALS's questionnaire was localized to be used in the context of Iranian society using the method of translation-back-translation. To ensure face validity, this questionnaire was given to experts after translation, all of whom confirmed its validity. Therefore, it was enough to standardize the questionnaire to perform reliability and validity. Based on the obtained results, it was found that the people studied in this research were placed in seven groups of the eight categories of VALS.

Table 3. Frequencies related to the VALS category

The name of the group	Hardworking	Experiencers	Makers	Innovators	Believers	Achievers	Thinkers
Abundance	78	73	12	19	6	8	4
Percentage	39%	36.5%	6%	9.5%	3%	4%	2%

Table 3 shows the frequencies of each type of lifestyle. The results showed that in the studied subjects, the highest frequency is related to the hardworking group and the analyzing group, and the lowest frequency is related to the conscientious group.

**4.2. The second stage: investigating the relationship between customers' lifestyles and classifying their needs in the form of the Kano model**

At this stage, based on the output of the questionnaire from the previous stage, the Kano questionnaire (two forms of functional and non-functional needs) was developed. The customers who had completed the questionnaire of the previous stage and their lifestyle was determined, their needs were classified according to the Kano model, and the needs of the customers of each type of lifestyle were determined according to the Kano model. An analysis was done to find out the desired needs of each group, the results of which are given in tables 4 to 6.

Table 4. Classification of factors for the group of hard workers, experiencers, makers

Store features	Hard working group	Level dissatisfaction	Level Satisfaction	Experiencers group	Level Dissatisfaction	Level Satisfaction	Makers group	Level dissatisfaction	Level Satisfaction
Mitigation	Attractive	-0.192	0.6944	Attractive	-0.414	0.6	Attractive	-0.414	0.6
Variety	One-dimensional	-0.747	0.587	One-dimensional	-0.694	0.5416	Must-be	-0.818	0.5454
Quality	One-dimensional	-0.872	0.525	Must-be	-0.79	0.4657	One-dimensional	-0.916	0.5833
Paper envelope	Attractive	-0.389	0.590	One-dimensional	-0.440	0.5932	One-dimensional	-0.444	0.7777
The performance of cashiers	One-dimensional	-0.714	0.5714	Must-be	-0.718	0.4084	Must-be	-0.909	0.4545
Level of employee information	One-dimensional	-0.658	0.5657	Must-be	-0.718	0.3239	Must-be	-0.75	0.5833
Price	Reverse			Reverse			Reverse		
online sale	Attractive	-0.432	0.6621	Indifferent			Indifferent		
Arrangement of products	Must-be	-0.628	0.4871	Must-be	-0.722	0.4583	Must-be	-0.833	0.4166
Monthly lottery	Indifferent			Indifferent			Indifferent		
Parking	Attractive	-0.372	0.5256	Attractive	-0.438	0.4931	Attractive	-0.333	0.75
Employee behavior	Must-be	-0.808	0.4615	Must-be	-0.821	0.3013	One-dimensional	1-	0.5454
Grooming	One-dimensional	-0.558	0.5324	Must-be	-0.708	0.3888	One-dimensional	-0.75	0.6666
delivery	Attractive	-0.387	0.6533	One-dimensional	-0.422	0.4507	Attractive	-0.363	0.6363
Clean environment	Must-be	-0.885	0.4615	Must-be	-0.875	0.3472	Must-be	-0.818	0.4545

The results of the table 4 show that for the first group, there are five factors in the group of functional needs, three factors in the group of basic needs, and five factors in the group of

motivational needs of the Kano model. For this group, one factor was classified as indifferent needs, and one was classified as reverse needs. The column of satisfaction coefficients also shows that the "discount" factor with a coefficient value of 0.69 has the highest satisfaction coefficient (close to one) for this group, and on the contrary, the two factors, "employee behavior" and "clean environment" have the lowest values. It has a positive coefficient (close to zero) of 0.461, which indicates the least impact on customer satisfaction if this feature is presented. The results of the customer dissatisfaction column show that the "clean environment" factor, with a value of -0.885, has the most negative number (close to negative one), which indicates that the lack of this feature has the greatest impact. It will affect the dissatisfaction of customers, and on the other hand, the "discount" factor has the lowest negative coefficient with an amount of -0.192. For the second group, there are three factors in the group of functional needs, seven factors in the group of basic needs, and two factors in the group of motivational needs of the Kano model. For this group, two factors were categorized as indifferent needs and one as inverse needs. The column of satisfaction coefficients also shows that the "discount" factor with a coefficient value of 0.6 has the highest satisfaction coefficient for this group.

On the contrary, the "employee behavior" factor has the lowest positive coefficient value of 0.3, which indicates the lowest the effect on customer satisfaction is if this feature is provided. The results of the customer dissatisfaction column show that the "clean environment" factor has the most negative number with a value of -0.875, which indicates that not providing this feature will have the greatest impact on customer dissatisfaction, in contrast to the factor "discount" has the lowest negative coefficient with -0.414. For the third group, there are four factors in the functional needs group, five factors in the basic needs group, and three factors in the motivational needs group of the Kano model. For this group, two factors were categorized as indifferent needs and one as inverse needs. The column of satisfaction coefficients also shows that the "paper envelope" factor with a coefficient value of 0.77 has the highest satisfaction coefficient for this group, and on the contrary, the "product arrangement" factor has the lowest positive coefficient value of 0.41, which indicates the least impact. It is in the satisfaction of customers if this feature is provided. The results of the customer dissatisfaction column show that the "employee behavior" factor has the most negative number with a value of -1, which indicates that not providing this feature will have the greatest impact on customer dissatisfaction, in contrast to the "parking" factor. It has the lowest negative coefficient, with -0.333.

Table 5. Classification of factors for the group of innovators, believers, and achievers

Store feature	The group of Innovators	Level dissatisfaction	Level Satisfaction	The group of believers	Level dissatisfaction	Level Satisfaction	Achievers group	Level dissatisfaction	Level Satisfaction
Mitigation	Attractive	-0.473	0.6842	Must-be	-0.75	0.25	Must-be	-0.5	0.25
Variety	Must-be	-0.947	0.4210	Must-be	-0.6	0.4	One-dimensional	-0.75	0.75
Quality	One-dimensional	-0.894	0.5789	Must-be	-0.8	0.2	One-dimensional	-0.875	0.5
Paper envelope	Indifferent			One-dimensional	-0.75	0.75	Indifferent		
The performance of the cashier	Must-be	-0.789	0.2631	Must-be	-0.6	0.2	Must-be	-0.857	0.1428
Level of employee information	Must-be	-0.789	0.3157	Must-be	-0.5	0.25	Must-be	-0.75	0.125
Price	Reverse			Reverse			Reverse		
online sale	One-dimensional	-0.473	0.5789	Indifferent			Must-be	-0.625	0.5
Arrangement of product	Must-be	-0.789	0.3684	Must-be	-0.6	0	Must-be	1-	0.125
Monthly lottery	Indifferent			Attractive	0	0.6	Indifferent		
Parking	Must-be	-0.5	0.45	Attractive	-0.4	0.6	One-dimensional	-0.5	0.625
Employee behavior	Must-be	-0.947	0.4736	Must-be	-0.8	0.2	Must-be	1-	0.125
Grooming	Must-be	-0.736	0.3684	Indifferent			Must-be	1-	0.125
Delivery	Attractive	-0.578	0.6315	Attractive	-0.166	0.5	Must-be	-0.5	0.375
Clean environment	Must-be	-0.944	0.4444	Must-be	-0.833	0.3333	Must-be	1-	0.1428

The results of the table 5 show that for the first group, two factors are in the functional needs group, eight factors are in the basic needs group, and two factors are in the motivational needs group of the Kano model. For this group, two factors were classified as indifferent needs and one factor as reverse needs. The column of satisfaction coefficients also shows that the "discount" factor with a coefficient value of 0.68 has the highest satisfaction coefficient for this group, and on the contrary, the "cashiers' performance" factor has the lowest positive coefficient value of 0.26, which indicates the least impact. It is in the satisfaction of customers if this feature is provided. The results of the customer dissatisfaction column show that the two factors, "variety" and "employee behavior", have the most negative number with a value of -0.947, which indicates that the lack of this feature will have the greatest impact on customer dissatisfaction. Compared to the two factors "discount" and "online sales" with the amount of -0.47, it has the lowest negative coefficient. For the second group, there is one factor in the functional needs group, eight factors in the basic needs group, and three factors in the motivational needs group of the Kano model. For this group, two factors were classified as indifferent needs and one as reverse needs. The column of satisfaction coefficients also shows that the "paper envelope" factor with a coefficient value of 0.75 has the highest satisfaction

coefficient for this group. On the contrary, the "product layout" factor has the lowest positive coefficient value of zero, which indicates the least impact. It is in the satisfaction of customers if this feature is provided.

The results of the customer dissatisfaction column show that the "clean environment" factor has the most negative number with a value of -0.833, which indicates that the lack of this feature will have the greatest impact on customer dissatisfaction, in contrast to the factor "monthly lottery" has the lowest negative coefficient with zero. For the third group, there are three factors in the functional needs group and nine factors in the basic needs group of the Kano model. For this group, two factors were categorized as indifferent needs and one factor as inverse needs. The column of satisfaction coefficients also shows that the "variety" factor with a coefficient value of 0.75 has the highest satisfaction coefficient for this group, and on the contrary, the four factors "employee information level", "product layout", "employee behavior" and "decoration" It has the lowest positive coefficient value of 0.125, which indicates the least impact on customer satisfaction if this feature is provided. The results of the customer dissatisfaction level column show that the four factors "arrangement of products", "behavior of employees", "decoration" and "clean environment" have the most negative number with a value of -1, which indicates the lack of provision. This feature will have the greatest impact on customer dissatisfaction and has the lowest negative coefficient compared to the three factors "discount", "parking", and "peak" with a rate of -0.5.

Table 6. Classification of factors for the thinkers group

Store features	A group of Thinkers people	Level of dissatisfaction	Level of Satisfaction
Mitigation	Must-be	-0.6666	0.3333
Variety	Must-be	-0.5	0.25
Quality	One-dimensional	-0.5	0.75
Paper envelope	Attractive	0	1
The performance of cashiers	One-dimensional	-0.75	0.5
Level of employee information	One-dimensional	-0.75	0.75
Price	Indifferent		
Online sale	Indifferent		
Arrangement of products	One-dimensional	-1	0.75
Monthly lottery	Attractive	-0.25	0.75
Parking	Attractive	-0.5	0.75
Employee behaviour	One-dimensional	-0.75	1
Grooming	One-dimensional	-0.6	1
Delivery	Attractive	0	0.75
Clean environment	One-dimensional	-1	1

The table 6 results show that for this group, there are seven factors in the group of functional needs, two in the group of basic needs, and four in the group of motivational needs of the Kano



model. For this group, two factors were classified as indifferent requirements. The column of satisfaction coefficients also shows that the four factors "paper envelope", "employee behavior", "neatness", and "clean environment" with a coefficient value of 1 have the highest satisfaction coefficient for this group. On the contrary, the "variety" factor has the lowest positive coefficient value of 0.25, which indicates the least impact on customer satisfaction if this feature is presented. The results of the customer dissatisfaction column show that the two factors "arrangement of products" and "clean environment" with a value of -1 have the most negative number, which indicates that the lack of this feature will have the greatest impact on customer dissatisfaction. And on the other hand, the two factors "paper envelope" and "courier" have the lowest negative coefficient with a value of zero.

#### ***4.3. The third stage: determining the indicators that affect the implementation of the requirements of the dominant group of customers***

In the second stage, where the results of the customers' needs were analyzed in the Kano model, it was determined how much each of the requirements affected the satisfaction and dissatisfaction of the customers. At this step, the indicators affecting the implementation of customer needs were calculated according to the opinion of store managers (experts). In this regard, three indicators of customer satisfaction, customer dissatisfaction, and the cost of achieving each need were considered. But since the store was in its introduction stage and needed to attract more customers, the research team decided to consider the motivational needs of the majority of the store's customers and, according to the indicators of implementing these needs, prioritize to implement so that the store can identify the needs that make the customer happier and put them in priority for implementation.

#### ***4.4. The fourth stage: ranking the attractive requirements of the dominant group of customers based on the combination of DEMATEL and ANP techniques***

In the final step, to prioritize the implementation of each of the motivational needs of the dominant group (hardworking), the DANP method was used. Based on the nature of the problem, customers' needs are not completely independent from each other, and there are connections between them; Therefore, it is necessary to pay attention to the connections between these indicators based on a network structure. On the other hand, the DEMATEL technique has been used to determine the relationships and effective weights of each dimension and criterion.

The final output of this method is a matrix that expresses all direct and indirect relationships between indicators and motivational needs. The output of the final step of the research determines for the store managers which requirements to prioritize based on the considered indicators that have the greatest benefit for the store. To rank the requirements of the dominant groups of customers according to the DANP model, the following actions were taken:

#### 4.4.1. The first step: creating a network structure

According to the output of the second stage of the research, the motivational requirements of the hardworking group include discounts, paper envelopes, online sales, parking, and courier. Also, the indicators of implementing these requirements were identified with the titles of customer satisfaction, customer dissatisfaction, and the cost of implementing the requirement. Table 7 shows the symbols of motivational needs and the indicators of implementing these needs, and Figure 3 shows the structural model of the related problem.

Table 7. Symbols of indicators and motivational needs of hard workers

Symbol	Indicator
$C_1$	Satisfaction The level of
$C_2$	The level of dissatisfaction
$C_3$	Implementation cost
Symbol	Motivational needs
$A_1$	Discount
$A_2$	Paper envelope
$A_3$	Online sale
$A_4$	Parking
$A_5$	Delivery

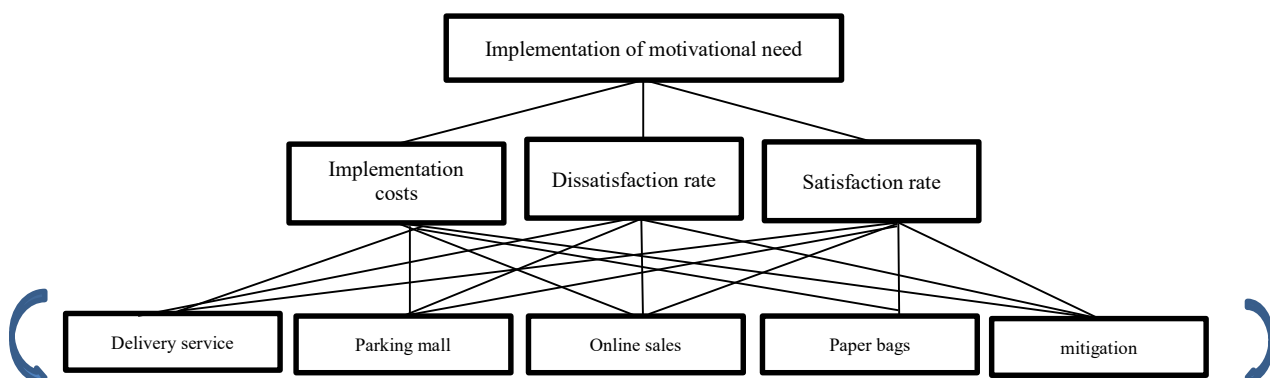


Figure 3. Attractive requirements of a hardworking group

4.4.2. The Second step: determining the overall relationships between the requirements using DEMATEL

Next, direct relationships between Attractive requirements were surveyed by store managers as experts. Then the obtained matrix was normalized, and at the last stage, the T matrix was obtained, which indicates the intensity of direct and indirect relationships between Attractive requirements.

$$T = \begin{matrix} A_1 \\ A_2 \\ A_3 \\ A_4 \\ A_5 \end{matrix} \begin{bmatrix} 0 & 0 & 0.271 & 1.400 & 0 \\ 0 & 0 & 0.088 & 0 & 0 \\ 0.473 & 0.121 & 0 & 0 & 0.456 \\ 0.280 & 0 & 0 & 0 & 0 \\ 0.252 & 0.283 & 0.408 & 0 & 0 \end{bmatrix}$$

Table 8 shows different analyses extracted from the entire relations in the matrix. The total of rows of the elements of this matrix represents the effectiveness of each requirement, and the total of columns of the elements represents the effectiveness of each requirement. Based on the obtained results, it was found that the mitigation is the most effective, and the parking lot is the most effective. On the other hand, the mitigation item has the highest correlation with the relation (C-R).

Table 8. Determining the degree of relationship and impact of requirements

D	R	D-R	D+R
1.6712755	1.0058763	0.6653992	2.6771517
0.0881438	0.4044245	-0.316281	0.4925683
1.0508123	0.7673695	-0.2834428	1.8181818
0.2799862	1.3999309	-1.119945	1.679917
0.9436571	0.4562738	0.4873833	1.3999309

In Figure 4, the influence-relationship map (IRM) is also shown. This diagram graphically shows the relationships between different motivational needs. According to the value of C-R in the vertical axis of the diagram, it can be said that the needs for discounts, online sales, and having a courier are in the group of reasons (with a positive value of C-R), and other requirements are in the group of disabilities (with a negative value of C-R).

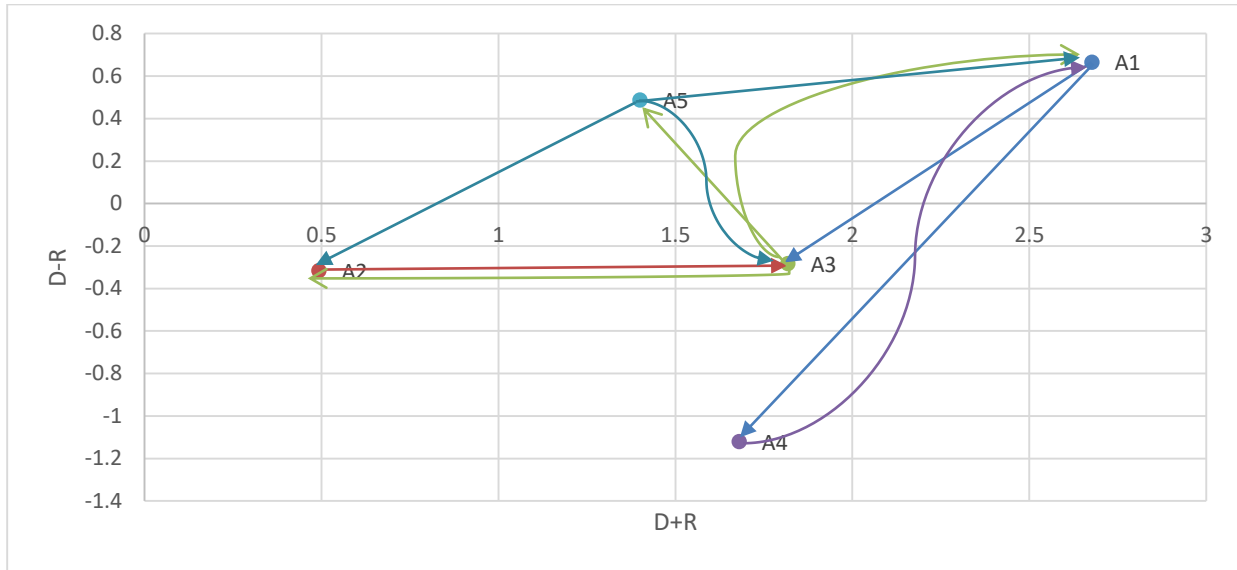


Figure 4. DEMATEL impact relationship diagram for requirements

#### 4.4.3. The third step: forming the supermatrix

To use the total matrix of relationships in the supermatrix related to the problem, the obtained matrix  $T$  is normalized (by dividing each element by the sum of the elements of the corresponding column). Table 9 represents the supermatrix related to the structure of the problem, in which the matrix of the relative weights of the indicators based on the goal, the matrix of the total relations between the normalized requirements, and the matrix of the relative weights of the requirements relative to the indicators are specified next to each other.

Table 9. Initial supermatrix

	Goal	$C_1$	$C_2$	$C_3$	$A_1$	$A_2$	$A_3$	$A_4$	$A_5$
Goal	0	0			0				
$C_1$	0.107	I			0				
$C_2$	0.776								
$C_3$	0.117								
$A_1$	0	0.621	0.341	0.061	0	0	0.354	1	0
$A_2$		0.053	0.053	0.027	0	0	0.115	0	0
$A_3$		0.224	0.458	0.205	0.471	0.300	0	0	1
$A_4$		0.037	0.088	0.474	0.278	0	0	0	0
$A_5$		0.064	0.061	0.233	0.251	0.701	0.531	0	0

Since the sum of the elements of the columns of the supermatrix, in some cases, is more than one; Therefore, in table 10, each element is divided by the total of the corresponding column.

Table 10. Normalized supermatrix

	Goal	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	A <sub>4</sub>	A <sub>5</sub>
Goal	0	0	0	0	0	0	0	0	0
C <sub>1</sub>	0.107	0	0	0.5	0	0	0	0	0
C <sub>2</sub>	0.776	0	0.499	0	0	0	0	0	0
C <sub>3</sub>	0.117	0.500	0	0	0	0	0	0	0
A <sub>1</sub>	0	0.311	0.170	0.0305	0	0	0.354	1	0
A <sub>2</sub>	0	0.0265	0.0264	0.0135	0	0	0.115	0	0
A <sub>3</sub>	0	0.112	0.228	0.1025	0.470	0.300	0	0	1
A <sub>4</sub>	0	0.018	0.0439	0.237	0.279	0	0	0	0
A <sub>5</sub>	0	0.032	0.0304	0.116	0.251	0.700	0.531	0	0

Finally, the weighted supermatrix is brought to power until its normal distribution reaches convergence. As it is clear from the following relation, the convergence of the weighted supermatrix has been established in the sixteenth power. Table 11 shows the results of this supermatrix.

Table 11. Convergent weighted supermatrix

	Goal	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	A <sub>4</sub>	A <sub>5</sub>
Goal	0	0	0	0	0	0	0	0	0
C <sub>1</sub>	0.0418	0.0418	0.0418	0.0418	0.0418	0.0418	0.0418	0.0418	0.0418
C <sub>2</sub>	0.249	0.249	0.249	0.249	0.249	0.249	0.249	0.249	0.249
C <sub>3</sub>	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059
A <sub>1</sub>	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176
A <sub>2</sub>	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034
A <sub>3</sub>	0.144	0.144	0.144	0.144	0.144	0.144	0.144	0.144	0.144
A <sub>4</sub>	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
A <sub>5</sub>	0.229	0.229	0.229	0.229	0.229	0.229	0.229	0.229	0.229

4.4.4. The fourth step: extracting the weight of requirements and ranking

The weights related to attractive requirements can be extracted based on the final matrix obtained. As shown in Table 12, having a courier has the most weight and importance for the customers of this store. Other priority requirements include mitigations, online sales, parking, and paper envelopes.

Table 12. Prioritization of attractive indicators and requirements

Attractive requirements	Rank
A1	2
A2	5
A3	3
A4	4
A5	1

## 5. Discussion and conclusion

In this research, 15 characteristics were investigated in general, and 10 factors were obtained through field research, which include discounts, variety, cashiers' performance, employee behavior, online sales, product layout, quality, parking, courier, and clean environment. Five factors were also obtained through library studies which include monthly lottery, paper envelope, price, level of information of employees, and grooming of employees. In the following, the customers of this store were classified according to the VALS lifestyle pattern, and according to the results, more than 75% of them have a hardworking or disintegrating lifestyle.

In the next step, all the needs of customers with different lifestyles were examined, and their needs were determined according to the Kano model. In the end, to meet the needs of the dominant customers, three indicators of the level of customer satisfaction, the level of customer dissatisfaction, and the cost of implementing each need were set as indicators considered by the store managers, and based on these indicators, the needs of the dominant customers were ranked (hard lifestyles). It should be mentioned that due to the new nature of the store and the need to attract the attention of its customers, only the motivational needs of the hardworking group, who were among the dominant customers of the store, were evaluated and ranked using the combination of DEMATEL and ANP techniques. The results of this ranking indicate that having a motor courier has the greatest effect on making the customers of this store happy and willing to buy. Other motivational needs include discounts, online sales, parking, and paper envelopes. According to the obtained results, in the first stage, managers should set up a courier for the store to have the greatest impact on sales growth. Also, because the dominant style of the customers is hard workers, paying attention to all the basic and functional needs of this type of customer should be prioritized in the store's executive plans.

In this research, in addition to the fact that the needs of the customers have been calculated, attention has also been paid to the level of implementation and the priority of their implementation, which has not been paid attention to in other studies. The results of this study can help store management to go through its growth phase as quickly as possible and attract more customers.

### Disclosure statement

No potential conflict of interest was reported by the author(s).

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