Identifying and ranking factors influencing market research on sales

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Abstract

Marketing research is one of the important factors that affect marketing performance. Marketing research has several roles in marketing activities such as tracking changes in the market, producing, refining and evaluating marketing measures and monitoring marketing. The medical device market is influenced by several trends and drivers that shape its growth path, including technological advancements, changing consumer behavior, the regulatory environment, macroeconomic considerations, and the emergence of new markets.is. Marketing research can be used for a business Work to determine what new products or services Or Products and services that are currently available, They may be profitable. The purpose of this research is to identify and rank the influencing factors of market research on sales for medical equipment companies in Tehran. The research method is descriptive-survey in terms of practical purpose, in terms of causal method and in terms of data collection. The statistical population of this research is medical equipment companies in Tehran, which has a statistical sample of 210 people who use the formulaQ10 has been obtained. The data collection tool in this research was a questionnaire in three stages, this research was carried out using the structural equation method in two exploratory and confirmatory stages and has 4 hypotheses. The first, second and fourth hypotheses have not been rejected and the third hypothesis titled "customer analysis has a significant effect on sales" has been rejected. The results of this research are suggested for use in medical equipment companies.

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Introduction

Today, the needs and interests of people and each business are with each other is different(Qurbani et al., 1400)[1]. An important foundation of this stream is the study of organizational buying behavior, which is used to inform customer segmentation, product development, and sales management, as well as an approach called marketing engineering tools that address electronic sales channel solutions and electronic market decisions. Provides, is used(Christian Mullerand Aino Hallinen, 2022)[2].Since most human activities are recorded using various technologies, big data has become ubiquitous, thus creating huge databases on various platforms such as social media. Human activities are reflected in these databases, making them suitable for various researches that were conducted based on more traditional research approaches such as survey research. Market research is also affected by big data, because social media has become one of the most dominant communication tools in various fields and is used as one of them[3]. Marketing research includes collecting and processing information about market processes and events, as well as searching and storing. It includes a systematic analysis of the collected materials, theoretical and practical conclusions, and finally, predictions for future development[4]. In the process of marketing research, analytical databases are created for marketing decision-making in a competitive environment. Marketing is focused on market interests based on consumer preferences, therefore, sufficient knowledge is needed to perform managerial tasks[5]. In this knowledge, one should have an idea of the customer's demand and motivation, the product's market potential[6]. There are elements for the successful launch of medical devices, which can be mentioned as value proposition, partnership, strategic pricing and budget. When combining these elements, entrepreneurs must emphasize partnerships to ensure product consistency, impact, and financial sustainability[7]. These considerations can serve as a basic framework for innovators to ensure that a medical device is financially and culturally appropriate and tested for a specific market segment, resulting in product sustainability[8]. In this research, we will first identify the variables of market and sales research and then relate them to medical equipment companies in Tehran so that they can achieve their maximum profit according to the economic, social and cultural conditions that have arisen[9]. The structural model of the market research on the sale of medical equipment is addressed through which the factors are locally identified and their relationship is presented and designed through a structural model, so the main question of this research is: "Identification and ranking of the effect factors" The transfer of marketing research to sales is the case of medical equipment companies[10].

Materials &Method

The purpose of the current research is to identify and rank the influencing factors of market research on sales for medical equipment companies in Tehran. In this research, from the point of view of the method, Ali, which in this method explores the causes or factors of the occurrence of an event or incident or the desired phenomenon, and from the point of view, it is practical to find solutions for certain problems by analyzing empirical evidence. and also descriptive in terms of data, and since the data are collected in the field, it is a survey that is a method to obtain information about the views, beliefs, opinions, behaviors, motives or characteristics of a group of members of the society in question. It is possible through scientific research. In general, the research method is descriptive-survey. Survey surveys are widely used in research for several reasons, including the fact that the answers to questionnaire questions can be quantified and analyzed more easily than the information collected by most other methods. It is also possible to study a large number of people and if the questionnaire is standardized, important differences between views. Respondents may be ignored. The survey method is one of the methods of collecting, organizing and analyzing data. In this research, the statistical sample was obtained from the 10 Q method, which is

based on the formula of the statistical sample of content analysis, which is based on the number of variables obtained for the design of questionnaire questions, which is our Q or items, and based on 10 times the number Our questionnaire variables are created. Also, the sampling method is simple in a probabilistic manner. In this method, each community unit has an equal chance to be selected. Here are the probability rules that determine which units or individuals will be selected from the parent population. At first, 210 variables were counted from the source studies, and then the experts' questionnaire as follows
It has been designed and provided by 10 experts.

contract method

The survey method means to be in the field, which is used through a researcher-made questionnaire, the variables are counted and placed in the form of experts' review, then the variables are converted into a questionnaire and distributed.

Survey is one of the methods of data collection in which information is collected through people who are called respondents and answer the questions. The survey method is a method to obtain information about the views, beliefs, opinions, behaviors, motivations or characteristics of a group of members of a society, this is a statistical method that is possible through scientific research. In fact, the survey can be considered as a tool used to collect data and the processes used when using that tool[11].

Survey methods are also divided into two branches according to the sampling methods used to form research samples: probability and non-probability sampling. Each individual from a population should be considered as part of a survey research sample. Probability sampling is a method in which the researcher selects elements based on probability theory. The survey method is the best method available for those social researchers who are interested in collecting primary data to describe very large populations that cannot be directly observed[12].

Result and Discussion

The main goal of any research is to answer the questions and hypotheses formulated by the researcher to identify external realities. In most research that relies on collected information; Data analysis is one of the main and most important parts of research. The raw data has been analyzed using statistical techniques and after processing it has been provided to the users in the form of information. For statistical analysis and answering the formulated problem, or making a decision about rejecting or confirming the hypotheses formulated by the researcher, from He has used different methods. The use of each of these methods depends on the conditions that the researcher must consider in relation to his research.

First, the data collected through the questionnaire will be checked in terms of demographic characteristics (age, gender, education), then the processed data will be analyzed in spss software and Smart PLS software, and the questions will be answered.

In this research, for the validity of two formal and structural modes, the formal mode is considered through the examination of the supervisor and experts, who are the experts who have sufficient information about the field of study and based on education, experience and willingness to cooperate. The state of the structure is through structural equations and also for reliability through Cronbach's alpha. tested a set of regression equations simultaneously, it is used to model and test hypotheses through Spss and smart pls software.

In this research, the statistical method used 2 ways, descriptive statistics and inferential statistics, which in descriptive statistics examines the statistics of research variables such as: mean, skewness, charts of the statistical population in demographic indicators such as: age, experience (years), education In the inferential statistics of the structural equations that are used to investigate the cause and effect relationships, as well as an analysis based on several variables from the multivariable regression family, which makes it possible to apply a set of regression equations simultaneously. The test was done by Spss and smart pls software.

0/804	Indicator KMO
2/812	Load value
39	Degrees of freedom
0/000	Significance level

The first output is KMO index, statistical value of Bartlett's test, degree of freedom and level
It shows the significance of the test. Since the value of KMO index is equal to 0.804, almost
one number of samples is enough for factor analysis, also the significance level of Bartlett's
test is less than 0.05, it shows that factor analysis is suitable for identifying the factor model.

Chart of factor loadings and path coefficients

In diagram 1, the factor loadings and path coefficients, which express the intensity of the
relationship, are displayed. The path coefficients are actually the beta coefficients (β)
obtained from the regression model between the variables. The numbers inside the circles
also represent the explained variance (R2) in the exploratory factor analysis, which shows
how many percent of the changes in the dependent variable (sales) are explained by the
independent variables. Based on the next output of the smart pls software, the factor loadings
related to the research variables can be explained in table number (4-14). It is specified in the
table. As it is clear from the findings of the table, most of the questions explaining the criteria
are higher than 3. 0 there is a confirmation connection.

The present research has investigated the impact of market research on sales in medical
equipment companies in Tehran using a descriptive-survey method.

- Due to the fact that the first hypothesis titled "Strategic product has a significant effect on
sales" has not been rejected, therefore it is suggested to pay attention to the identification and
analysis of competitors on sales.

First, identify the main competitors and identify their products in terms of quality and service,
and then examine their sales tactics and results through the examination of sales channels,
geographic areas, the extent of involvement of sellers in sales, and also the price of the
product or service. And their discounts should be considered. Website review is the fastest
way to evaluate marketing efforts for competitor analysis as well. The attractiveness of
competing content to readers should be examined by how their target audience reacts to the
published content in terms of the number of comments, shares and likes.

- Due to the fact that the second hypothesis titled "data collection technology has a significant
effect on sales" has not been rejected, therefore it is suggested to pay attention to increasing
the use of new methods of data collection technology such as advertising. Advertising has
had a wide impact on many businesses. One of the methods is to specify the location of the
business on Google Maps so that they can be seen in searches conducted near them, as well
as using internet advertising such as advertising banners, advertising on social networks
(Instagram, Telegram, YouTube), reporting.

Advertisement to increase business sales. Creating a blog with useful content in the field of
health, innovation, medical equipment and also creating useful advertising campaigns to
increase sales.

- Due to the fact that the third hypothesis with the title "customer analysis has a significant
effect on sales" has been rejected, therefore attention and implementation of strategy
formulation is suggested. Formulating a strategy helps you plan a strategy to achieve your
goals. By doing this

process, you can more accurately analyze your strengths and weaknesses, identify new
opportunities and predict risks that may cause problems. May the four methods of market
growth, product development, market development and competition with competitors be
discussed, in each of which the production and development of new products, product quality
improvement and price reduction are discussed. Understanding the environment of the
payment industry, although the hypothesis of "customer analysis has a significant effect on

sales" has been rejected, it is still of particular importance and should be paid attention to, although other criteria may be prioritized. - Considering that the fourth hypothesis titled "organizational identity has a significant effect on sales", it is suggested to use new marketing methods and communication with customers for branding and special identity of medical equipment. For branding, it is necessary to first identify the audience, values and competitors. The most key element of a brand's identity is its logo, because customers pay more attention to logos. In fact, the logo should be presented in the form of images, text or shapes that introduce the name and purpose of the brand, and for a harmonious identity, the same selected design should be used in every field. One of the essential components of brand identity is its shape and form. So that the product packages reach the customers with a memorable shape and form and all people recognize it as a symbol of the collection.

Conclusion

Advertising has had a wide impact on many businesses. One of the methods is to specify the location of the business on Google Maps so that they can be seen in searches conducted near them, as well as using internet advertising such as advertising banners, advertising on social networks (Instagram, Telegram, YouTube), reporting. Advertisements should be made to increase the sales of businesses. Create a blog with useful content in the field of health, innovation, medical equipment and also create useful advertising campaigns to increase sales. Formulating a strategy helps you to plan a strategy to achieve your goals. By doing this process, you can more accurately analyze your strengths and weaknesses, identify new opportunities, and predict risks that may cause problems. One of the strategies formulation methods strategizing is similar to the four methods of market growth, product development, market development and competition with competitors. It should be discussed that in each of them, the production and development of new products, the improvement of product quality, and the reduction of prices are discussed. It is also possible to identify the ecosystem of competitor analysis and to understand the industry environment. Although the hypothesis of "customer analysis on sales" has a significant effect" has been rejected, but it is still of special importance and should be paid attention to, although other criteria may be prioritized.
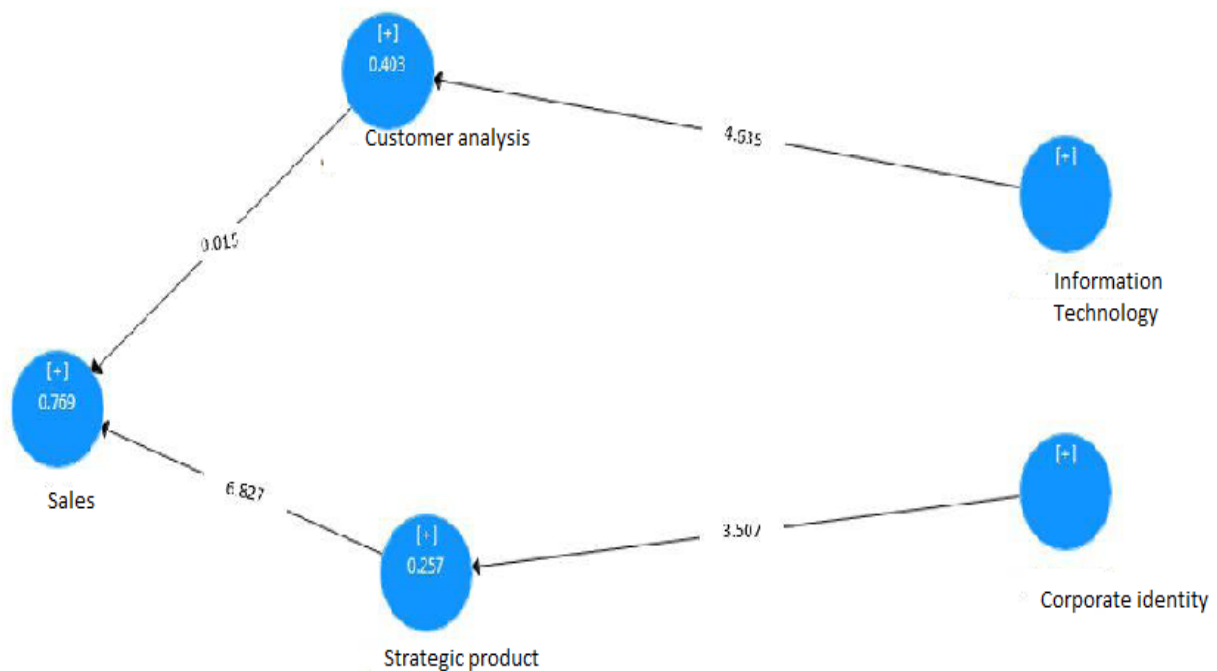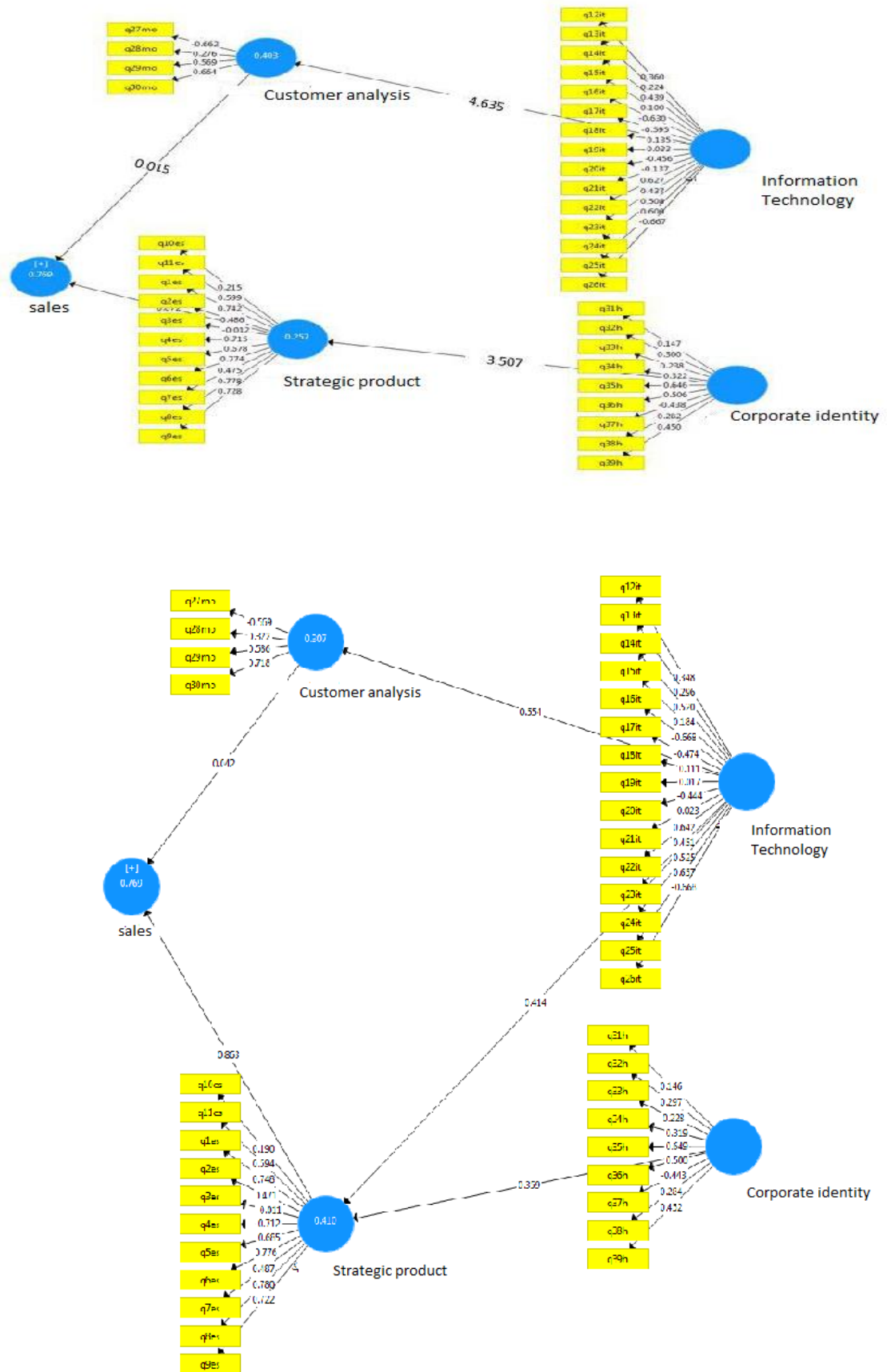
Fig 1: Significance level diagram

Table 1
Component Transformation Matrix

Component	1	2	3	4	5	6	7	8
1	.868	.396	.202	-.104	.034	.136	.045	-.084
2	-.265	.766	-.270	.363	.022	.276	-.049	-.047
3	-.161	-.089	.594	.203	.595	.328	.198	-.084
4	.033	.134	-.443	-.300	.711	-.370	.098	.059
5	-.037	.134	.177	-.207	.032	.004	-.568	.628
6	-.100	.238	.321	-.264	-.210	-.430	.478	.103
7	.108	-.161	-.182	-.005	.188	.326	.281	.463
8	.134	-.200	-.397	.010	-.178	.294	.363	.031
9	-.267	.166	.050	-.682	-.123	.481	.155	.038
10	.018	.085	.068	.384	-.110	-.145	.340	.585
11	-.191	.234	.069	-.029	-.007	-.175	.214	-.127

Component Transformation Matrix

Component	9	10	11
1	-.045	.067	.041
2	.126	-.165	-.117
3	.240	.080	.017
4	.092	.004	.175
5	.286	.278	-.173
6	.322	-.290	-.324
7	-.405	-.210	-.534
8	.613	.392	-.062
9	-.147	-.031	.374
10	-.121	.075	.574
11	-.393	.772	-.245

Extraction method: principal component analysis
Rotation method: Varimax with Kaiser normalization.

Scree Plot
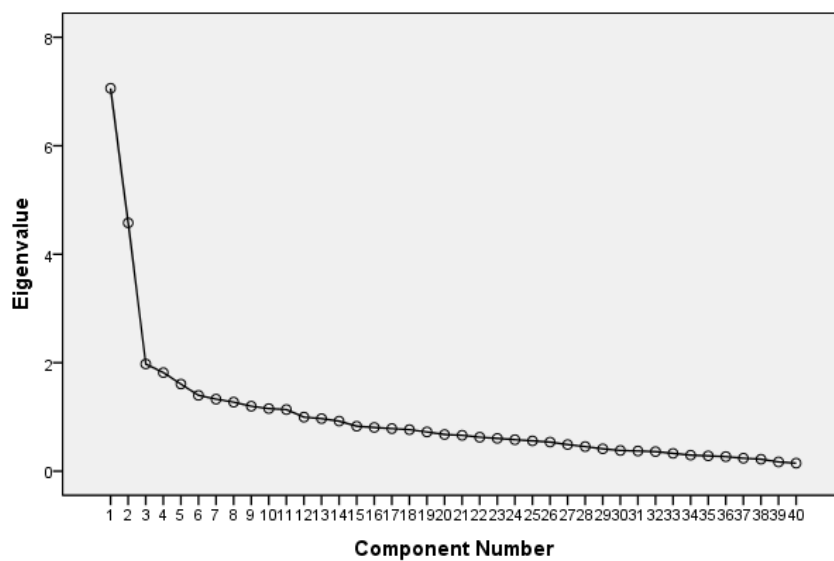
Scare diagram of factors
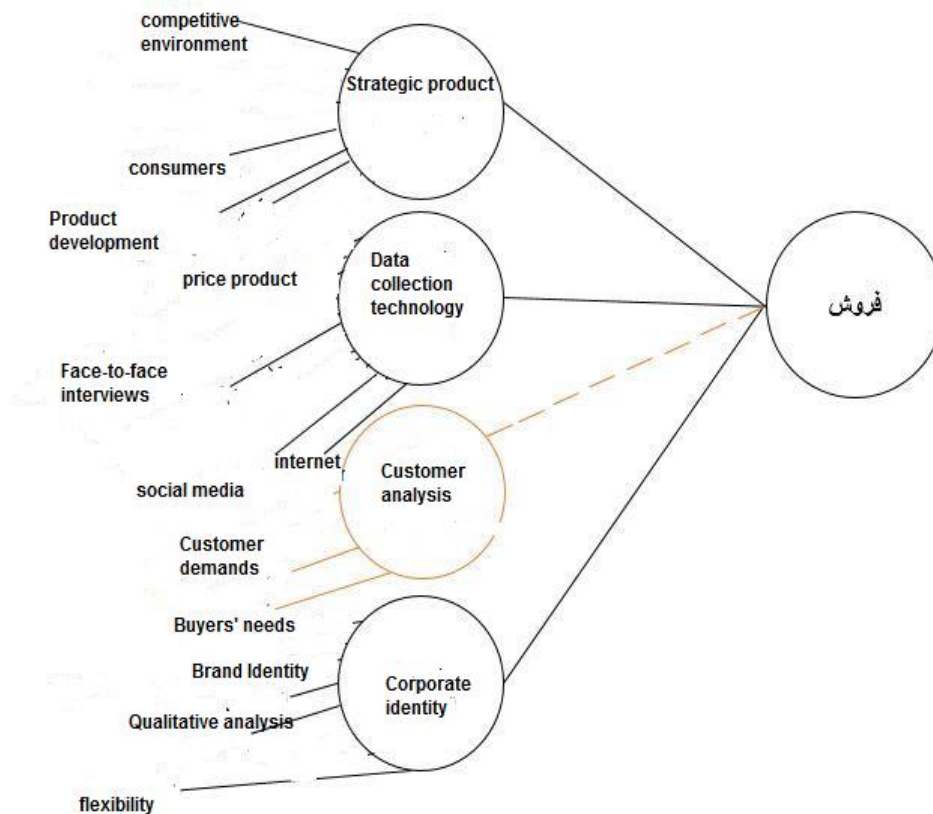
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