

Prioritization of Business Strategies and Marketing Resources Using the Analytic Network Process (ANP) Approach

A. Tohidi¹, M. Ghorbani^{1*}, A. R. Karbasi¹, A. Asgharpourmasouleh², and B. Hassani-Mahmooei³

ABSTRACT

Today, with the growing competition in domestic and international markets, the ability of agribusiness companies to survive and to grow depends on choosing and implementing a sustainable business strategy. However, this task actually is not as easy as it seems, because it is important to consider various criteria and interrelations between them for choosing the best business strategy. Additionally, matching business strategy with organizational resources is essential for gaining a competitive advantage. Using the ANP model, the purpose of the current study was to select the most suitable business strategy for one of the largest saffron companies in Iran. The results revealed that differentiation strategy had the highest priority with 39% of the influence. Another finding was that managerial capabilities among organizational resources were relatively more important in choosing a business strategy. According to the findings of the study, it is suggested that agribusiness firm managers pay special attention to three important elements, namely, improving the financial condition, knowing the needs of customers, and creation of new innovative products or services, to implement a differentiation strategy.

Keywords: Agribusiness, Competitive advantage, Differentiation strategy, Organizational resources, Resource-based view.

INTRODUCTION

Competitive advantage stems from the capabilities that provide the groundwork for distinguishing the organization from its rivals (Marinagi *et al.*, 2014). Achieving competitive advantage is critical because it determines the strategic focus of the overall marketing plan (Ferrell and Hartline, 2011). To achieve competitive advantage, a firm should: (1) Pursue a clear and specific business strategy (Porter, 1980), (2) Acquire and develop resources that cannot be easily imitated or duplicated by competitors (Eddleston *et al.*, 2008), and (3) Match its capabilities and resources with the requirements of the

business strategy (Wu *et al.*, 2010b). In the following, each of these requirements is explained more in detail.

The results of previous studies (eg., Acquah *et al.*, 2008; Anh *et al.*, 2017; Arasti *et al.*, 2014) have suggested that business strategy has a direct and significant effect on corporate performance. Business strategy is the behavior of a firm in the market, which includes policies, plans, and procedures (Ritter and Gemünden, 2004). In fact, business strategy is a foundation on which the firm achieves competitive advantage over its competitors (Lim *et al.*, 2005). So far, several frameworks have been proposed in relation to business strategies (Miller, 1986; Porter, 1980; SubbaNarasimha, 2001). Many researchers

¹ Department of Agricultural Economics, Faculty of Agriculture, Ferdowsi University of Mashhad, Islamic Republic of Iran.

² Department of Social Sciences, Faculty of Letters and Humanities, Ferdowsi University of Mashhad, Islamic Republic of Iran.

³ Strategic Analytics, Monash University, Australia.

*Corresponding author; e-mail: Ghorbani@um.ac.ir

and managers believe that Porter's generic competitive strategies are one of the main and applicable frameworks for developing strategic choices and studying the strategic behavior of business firms (Gomes *et al.*, 2014). According to Porter's strategy theory, companies should choose one of these three strategies in which to compete in the marketplace: overall cost leadership, differentiation, and focus. Cost leadership strategy implies that companies can increase their market share by offering a product that is equivalent to the products supplied by competitors, but more efficient than them (Hallgren and Olhager, 2009). A cost leader firm does not focus on many of the market segments, determines the position or location of the products in such a way as to meet the average demand of customers, never seeks to produce high-cost products, and does not offer different types of goods in different segments of the market (Hill and Jones, 2013). The basis of the second strategy, namely, differentiation, is the avoidance of direct competition with rivals by offering differentiated products or services to deliver higher value to the customer (Hallgren and Olhager, 2009). In contrast, a firm that adopts the focus strategy uses its core competencies to meet the needs of a specific segment of the market such as a specific group of customers, a different part of the product line, or a market located in a different geographic location (Hitt *et al.*, 2016).

In addition to business strategy, valuable, unique, durable, and rare resources play an important role in achieving competitive advantage and superior performance (Jafari *et al.*, 2011; Singh, 2012). It is believed that companies that use marketing resources can be in a superior position for market success. The role of resources in creating a competitive advantage is in line with the Resource-Based View (RBV) of strategic management. The RBV argues that the competitive advantage of a company derives from the capture and development of resources that are somewhat superior to those of rivals (Hooley *et al.*, 2005).

Based on RBV and Porter's strategy theory, marketing resources and business strategy are essential for gaining a competitive advantage,

but there must be a match between these two requirements. Internal resources are the key drivers of corporate business strategy because they help companies to gain a competitive advantage in the marketplace (Davicik and Sharma, 2016).

Porter's model of generic strategies has been used mainly in studies of manufacturing (Mohaghar *et al.*, 2012), hospitality (Wu *et al.*, 2010a), and service (Lin *et al.*, 2009; Lin *et al.*, 2009; Lin and Wu, 2008; Wu *et al.*, 2010b) industries, but it has been less applied to the selection of business strategy for agribusiness firms. Therefore, the main contribution of this study is to prioritize business strategies and marketing resources for one of the agribusiness enterprises in Iran. Given the marketing resources, choosing a business strategy is not as easy as it seems, because: (1) Marketing resources are related to each other, (2) Each marketing resource has its own items (or elements) that should be considered in the decision-making process, and (3) The relative importance of marketing resources is not necessarily the same. Given the complexity of issues associated with a strategic marketing system, comprehensive management of such a system is not easily possible through a specific set of rules or a decision model. Therefore, it is advisable to use Multi-Criteria Decision-Making (MCDM) methods to effectively solve problems (Wu *et al.*, 2010b). Decision-making plays an important role in many agribusiness activities, such as organizing agricultural production, choosing technology, selecting and using economic resources, etc. Therefore, MCDM methods can be used to solve a wide range of decision-making situations. However, few studies have used MCDM techniques to solve problems in the field of agribusiness (Francik *et al.*, 2017). Liang *et al.* (2010) investigated six aspects of financing strategies of Taiwanese agribusiness firms. Based on the MCDM model, the authors identified the most important agribusiness finance instruments. Using MCDM approaches, Demirel *et al.* (2012) prioritized and selected the agricultural strategies for Turkey. The authors concluded that MCDM methods could consider all factors affecting the outcome of a decision. Zarafshani *et al.* (2015) used a SWOT-MCDM framework to assess strategic aspects of the

vermicompost agribusiness in Iran. They found that the proposed model provides valuable insights for both farmers and agricultural policymakers. Mohammadi *et al.* (2017) prioritized and ranked the marketing mix in each stage of the product lifecycle using an MCDM technique. The authors concluded that using MCDM methods is useful for better allocation of marketing resources.

The Analytic Network Process (ANP) technique, as one of the most widely used multi-criteria decision-making approaches, includes a network structure. Each decision-making network consists of clusters, their elements, and the relationships dependence and feedback between them (Büyüközkan *et al.*, 2017).

Thus, in this paper, an ANP approach was proposed to prioritize business strategies and marketing resources. Accordingly, another contribution of this research is a better understanding of the importance of elements related to marketing resources.

MATERIALS AND METHODS

Over the years, MCDM methods, with different theoretical frameworks, have been proposed to solve problems in different fields (Pavan and Todeschini, 2008). Among the MCDM methods, the Analytic Hierarchy Process (AHP) and the ANP are two important and common approaches, which were proposed by Saaty (1980, 1996). ANP is a generalization of AHP that replaces the hierarchies with networks and it can be used to consider the interdependence and feedback among criteria (Shen *et al.*, 2011). The main steps to solve an MCDM problem using the ANP method are as follows:

Step 1- ANP structure and formulation of the problem: The decision problem can be described as a network structure. The structure of the network in the ANP model is based on the understanding of the decision problem and the relationship between the various elements in the decision-making process. In the ANP model, the network structure consists of various clusters (groups of elements) and elements that are connected to each other.

These connections represent the interdependencies between clusters and elements in the decision-making process (Van Horenbeek and Pintelon, 2014).

Step 2- Pairwise comparisons: In this step, the relationships between the elements should be determined using the pairwise comparisons method. Accordingly, experts are asked to respond to a series of pairwise comparisons designed to compare two clusters, or two elements, or two decision alternatives. These pairwise comparisons are made by asking the question "How much influence/importance does one element have compared to another element with respect to our preferences or interests?" The relative importance of each element or cluster is determined using Saaty's 1-9 scale (see Table 1

), where "1" represents the equal importance and "9" indicates extreme importance (Fazli *et al.*, 2015).

Step 3- Priority vector determination and consistency assessment: After establishing pairwise comparison matrices for all elements and clusters, the priority vector for each matrix is calculated using different methods. Among the proposed methods, the principal eigenvector is the only acceptable candidate for deriving weights or priorities from a pairwise comparison matrix. Using the principal eigenvector method, the local priority vector is calculated as follows:

$$Aw = \lambda_{\max} w \quad (1)$$

Where, A is pairwise comparison matrix, w is the priority vector (or eigenvector) and λ_{\max} is the maximal eigenvalue of matrix A. The principal eigenvector indicates the priority scores of each element in the pairwise comparison matrix. The local priority vector can be obtained by normalizing the eigenvector. When making judgments in pairwise comparisons, conflicting preferences may be expressed, which leads to incorrect decisions. For this reason, the consistency of judgments can be checked by calculating the Consistency Ratio (CR). CR can be defined as follows:

$$CR = \frac{CI}{RI} \quad \text{with} \quad CI = \frac{\lambda_{\max} - n}{n - 1} \quad (2)$$

Where, CI is defined as Consistency Index and RI is the Random Index. Judgments by decision makers are acceptable if the

consistency ratio is less than 0.10 (Van Horenbeek and Pintelon, 2014).

Step 4- Supermatrix Construction and overall priority computation: At this step, the supermatrix can be created using the outcome of the previous step. The general form of the supermatrix is shown in Equation (3), where C_k represents the k th cluster ($1 \leq k \leq N$), each of which contains n_k elements identified as $e_{k1}, e_{k2}, \dots, e_{kn}$. In Equation (3), the sub-matrix W_{ij} is known as the principal eigenvector and represents the influence priority of the elements of the i th cluster on those of the j th one (Ju et al., 2015).

$$w = \begin{matrix} & \begin{matrix} c_1 & & c_2 & & \dots & & c_m \end{matrix} \\ \begin{matrix} e_{11} \dots e_{1n_1} \\ e_{12} \dots e_{1n_2} \\ \vdots \\ e_{1n_1} \end{matrix} & & \begin{matrix} e_{21} \dots e_{2n_2} \\ \vdots \\ e_{2n_2} \end{matrix} & & \dots & & \begin{matrix} e_{m1} \dots e_{mn_m} \\ \vdots \\ e_{mn_m} \end{matrix} \\ \begin{matrix} c_1 \\ \vdots \\ c_2 \\ \vdots \\ c_m \end{matrix} & \begin{bmatrix} w_{11} & w_{12} & \dots & w_{1m} \\ w_{21} & w_{22} & \dots & w_{2m} \\ \vdots & \vdots & \ddots & \vdots \\ w_{m1} & w_{m2} & \dots & w_{mm} \end{bmatrix} & & & & \end{matrix} \quad (3)$$

In general, the sum of the elements of each column of supermatrix is not normalized to one; in fact, W is called the unweighted supermatrix. Therefore, in order to obtain a stochastic or weighted supermatrix (i.e., a matrix whose sum of the elements in each column is equal to one), it is necessary to multiply the blocks of the unweighted supermatrix by the corresponding cluster weight. Next, in order to derive the global priorities, the weighted supermatrix is raised to a large power as in Equation (4). The resulting

matrix is referred to as the limit supermatrix (Fazli et al., 2015).

$$w_{limit} = \lim_{x \rightarrow \infty} (w_{weighted})^x \quad (4)$$

Where, x is a sufficiently large number.

The Empirical Case Study of an Iranian Agribusiness Firm

Iran with a variety of climates, vast land areas, and enough sunshine is considered as an active country in the production of agricultural products. Hence, agribusiness in Iran has a high potential for growth and development (Rezaei et al., 2017). Among agricultural products, saffron is considered as a strategic and important plant in national economy, regarding its special role in employment and creating foreign exchange earnings. Having more than four-fifths of global production and three-fifths of shares of global markets, Iran is the biggest producer and exporter of saffron in the world (Zare Mehrjerdi and Tohidi, 2014). However, the Iranian agricultural sector has been facing major problems in regard to the post-production and the main source of these problems is the lack of relevant business strategies (Mohammadi et al., 2017). This problem has caused some suppliers to fail to introduce their products to saffron markets and not be able to achieve a good ranking in these markets. Other countries import Iranian saffron in bulk at cheap prices and then export it to other countries with different brand names at a higher price (Aghdaie and Roshan, 2015). The lack of a competitive business strategy in domestic and international markets is one of the most important problems of Iranian saffron

Table 1. Saaty's 1-9 scale for pairwise comparison.

Intensity of importance	Definition	Explanation
1	Equal importance	The two activities contribute equally to the objective
3	Moderate importance	Experience and judgment slightly favor one activity over another
5	Strong importance	Experience and judgment strongly favor one activity over another
7	Very strong or demonstrated importance	An activity is favored very strongly over another; its dominance demonstrated in practice
9	Extreme importance	The evidence favoring one activity over another is of the highest possible order of affirmation
2,4,6,8	Intermediate values	Used to represent the compromise between the priorities listed above

companies. Given the high contribution of Iran to global saffron production, it is essential to plan and execute business strategies to better utilize market opportunities (Aghdaie *et al.*, 2012). To prioritize business strategies and marketing resources, an Iranian saffron company has been chosen as a case study for a number of reasons. First, there are different perspectives within the company for choosing a business strategy and the consensus is a challenging issue. Second, when a decision is made within the company, it is necessary to consider different criteria, which may be related to each other. Third, each of the decision-making criteria includes two or more sub-criteria, which are often conflicting.

The prioritization of marketing resources helps corporate executives to recognize the company's core competencies to choose a business strategy. The resources and capabilities of a company determine the main direction of the business strategy, and they can be considered as the primary source of firm profitability. According to Grant (1991), a business strategy is suitable if it is consistent with the company's key resources. Consequently, in this study, marketing resources are considered as decision-making criteria. To determine the key capabilities of the company under consideration, the ANP method is used in this study. The ANP method can measure the interrelations between decision-making criteria and prioritize them according to their importance. Also, using this method, the relative importance of sub-criteria with respect to corresponding criteria can be easily computed. Finally, another advantage of the ANP method is that it can integrate individual views into a single representative judgment for the entire group. In this study, the weighted geometric mean is used to aggregate expert opinions, since this is the most common approaches in MCDM models. In this study, based on pairwise comparisons and Saaty's 9-point scale (see step 2 of the ANP methodology), a questionnaire was designed and distributed individually among 30 company experts (including top managers, middle managers, supervisors and administrative staff). The questionnaires were analyzed using Super Decision software.

Determination of Criteria, Sub-Criteria, and Alternatives

Porter's model of generic strategies is one of the most commonly used instruments for studying the strategic behavior of organizations involved in the industry. In fact, this theory is considered as the dominant paradigm in the competitive strategy literature. In addition, Porter's framework of generic strategies is in line with other classifications. Accordingly, inferences derived from Porter's strategy theory can be also obtained using other classifications (Wu *et al.*, 2015). Traditionally, price cuts have been the main strategy of most agribusiness companies in domestic and international markets. However, low prices, without reducing costs, have weakened the profitability of agribusiness firms and gradually eliminated them from markets. Accordingly, Porter's generic strategies can be useful for these companies to compete successfully in the marketplace. The study of business strategies suggested by Porter is an interesting opportunity to analyze the strategic advantages of agribusiness companies. In addition, the focus on generic strategies provides valuable insights and initiatives. Therefore, in this study, Porter's generic strategies were used as decision-making alternatives.

In the ANP method, the selection of criteria and sub-criteria has a significant impact on the final ranking of alternatives, because these are the key components of the model structure. Over the past two decades, the Resource-Based View (RBV) has been recognized as one of the most practical and powerful theories in the field of organizational studies. The RBV has raised new perspectives in agribusiness environments. Given the need to match the business strategy with the organization's resources, in this study, the RBV theory is used to determine the criteria and sub-criteria.

According to the RBV theory, the term marketing resources refers to those resources that create value for the organization. Accordingly, any attribute, physical or human, tangible or intangible, intellectual or relational is defined as a marketing resource if it is usable by the company to gain a competitive advantage. In this study, five marketing

resources are considered as decision criteria: (1) Managerial capabilities, (2) Customer relationship capabilities, (3) Market innovation capabilities, (4) Human resources, and (5) Reputational assets.

Due to real-world empirical applications, the five criteria mentioned above have been accepted and used by researchers to select the most appropriate business strategy. The description of the decision elements is given in Table 2. These criteria and sub-criteria have been selected based on previous studies and the experts' opinions (e.g., Altuntas and Yilmaz, 2016; Hooley *et al.*, 2005; Lin *et al.*, 2009).

RESULTS AND DISCUSSION

In accordance with the descriptions given in the "Materials and Methods" section, Table 2 shows the structure and scheme of the decision problem. As listed in Table 2, The ANP network structure consists of six clusters, each of which contains its own element(s).

After specifying the main structure of the decision problem, using Saaty's fundamental scale, pairwise comparisons can be constructed to determine the relationships between the elements of the network. For brevity, all pairwise comparisons matrices are not reported in tables, and only four representative pairwise comparisons are presented. For instance, Table 3 shows pairwise comparisons of criteria with respect to the overall goal. For example, the number 1.6210 in the first row and second column of Table 3 means that "managerial capabilities" are more important than "customer relationship capabilities" by a factor of 1.6210.

The second sample matrix is shown in Table 4. Considering the "managerial capabilities" as a benchmark for comparison, this matrix reflects the interrelationships among the other four criteria. Table 5 indicates the sample matrix of pairwise comparisons in the third level of the ANP model. At this level, Table 5 shows pairwise comparisons of four sub-criteria related to "managerial capabilities". At the lowest level of the ANP model, the alternatives are compared pairwise with respect to each of the sub-criteria. A sample matrix in Table 6 illustrates the

pairwise comparisons of three alternatives with respect to "financial condition".

After performing all pairwise comparisons, the next step is to calculate the priority vector for each judgment matrix. Using the principal eigenvector method (see Equation 1), the local priorities of each element can be calculated. Accordingly, the last column of the pairwise comparison matrices represents the relative importance of each element. For example, the values of the priority vector in Table 3 show that "managerial capabilities" are more important than other criteria in choosing the most appropriate business strategy. CR is a parameter that specifies the consistency of the pairwise comparisons. This parameter shows whether or not pairwise comparisons performed by decision makers are actually reliable. For all judgment matrices, the CR values are less than 0.1, so the judgments are acceptable.

By integrating the calculated eigenvectors or matrix of priorities derived from the pairwise comparisons among clusters and elements, the unweighted supermatrix can be constructed in block form. The weighted supermatrix is obtained by multiplying the unweighted supermatrix by the corresponding cluster weight. Subsequently, the weighted supermatrix is raised to limiting powers to get the final priority vector. Accordingly, the cumulative influence of each element on every other element with which it associates is computed. Figure 1 shows the final priority of each element in its own cluster.

In the pie-diagram of Figure 1, the relative importance of resources is specified for prioritizing the business strategy. In the "resources" cluster, "managerial capabilities" and "customer relationship capabilities" are the most important in comparison with other resources. This is in line with expectation because strategic choices and performance levels are strongly influenced by managerial capabilities (Anning-Dorson *et al.*, 2017). Therefore, if company managers have a close relationship with customers, it is expected that they will make better judgments and business decisions that are more precise (Altuntas and Yilmaz, 2016). On the other hand, it is believed that powerful managerial capabilities accelerate the development of other resources and make them superior and distinct (Hingley and Vanhamme, 2009). As shown by the blue

Table 2. Main structure of the decision problem.

Decision clusters	Decision elements	Description
Goal	G	Choosing the most suitable business strategy
Resources	C1: Managerial capabilities	It refers to the capabilities of the company's management team to build, integrate, and reconfigure the resources and capabilities of the organization.
	C2: Customer relationship capabilities	It represents the creation and management of durable relationships with customers.
	C3: Market innovation capabilities	It reflects the company's capacity to develop successful new products and services.
	C4: Human resources	It represents the ability of an organization to retain staff and keep them motivated.
	C5: Reputational assets	It refers to the reputation of the company among its customers, partners, suppliers, and distributors.
C1: Managerial capabilities	SC1: Financial condition	It refers to the company's liquidity and financial situation.
	SC2: Effective human resource	It refers to processes that are related to training, education and other professional initiatives in order to increase the levels of knowledge, skills, abilities, and motivations of employees.
	SC3: Operation management technology	It refers to processes of effective planning and regulating the routine operations of the company.
	SC4: Service management	It refers to improving the organization, management, and quality of services.
C2: Customer relationship capabilities	SC5: High levels of customer service	It is a range of services that the company offers to its customers.
	SC6: Building close relationship with key target customers	It reflects the company's ability to establish and maintain close and long-term relationships with key target customers.
	SC7: Knowing the needs and requirements of consumers	It represents the company's knowledge of customer needs and requirements.
	SC8: Creating relationships with customers	It represents the ways that the company communicates with customers, such as advertising, direct marketing, packaging, and public relations.
	SC9: Maintaining and promoting relationships with customers	It refers to the process by which a firm develops and maintains enduring customer relationships.
C3: Market innovation capabilities	SC10: The ability to develop and to launch new products and services	It refers to the company's ability to successfully develop and offer new products and services to markets.
	SC11: Efficiency of the development process of new products and services	It measures the degree to which the company achieves its goals (such as increasing sales and market share) through product development.
C4: Human resources	SC12: Levels of employee job satisfaction	It measures the degree of employees' satisfaction based on factors such as salaries, rewards, work condition, and promotion.
	SC13: Levels of employee organizational retention	It refers to the company's ability to retain its employees.
C5: Reputational assets	SC14: Company or brand name and reputation	It refers to the public's viewpoint about the company's capability to create value compared to its competitors.
	SC15: Credibility of the company from the customer's point of view	It refers to the extent to which customers believe that a company can design and offer products that satisfy their needs.
Alternative	A1: Overall cost leadership strategy	It is a competitive strategy used by companies to increase efficiencies and reduce production and distribution costs relative to their competitors.
	A2: Differentiation strategy	It is a competitive strategy used by companies to distinguish their products or services from other similar products offered by competitors.
	A3: Focus strategy	It is a competitive strategy used by companies to meet the needs of a specific segment of the market.

Table 1. Pairwise comparison matrix among criteria with respect to the overall goal.^a

Goal	C1	C2	C3	C4	C5	Priority vector
C1	1	1.6210	2.9468	3.1597	2.6842	0.3704
C2	0.6169	1	2.3627	2.6307	2.2320	0.2713
C3	0.3393	0.4233	1	1.0252	1.1851	0.1244
C4	0.3165	0.3801	0.9754	1	1.1117	0.1171
C5	0.3726	0.4480	0.8438	0.8995	1	0.1169

^a The symbols used in the table are defined in Table 2.

Table 2. Pairwise comparison matrix among criteria with respect to C1.^a

C1	C2	C3	C4	C5	Priority vector
C2	1	2.4547	2.0893	2.3903	0.4344
C3	0.4074	1	1.1613	1.2572	0.2040
C4	0.4786	0.8611	1	1.0404	0.1876
C5	0.4184	0.7954	0.9110	1	0.1740

^a The symbols used in the table are defined in Table 2.

Table 3. Pairwise comparisons of sub-criteria related to C1.^a

C1	SC1	SC2	SC3	SC4	Priority vector
SC1	1	1.5868	1.6843	2.2400	0.3704
SC2	0.6302	1	0.9614	1.9459	0.2466
SC3	0.5937	1.0401	1	1.7004	0.2394
SC4	0.4464	0.5139	0.5881	1	0.1436

^a The symbols used in the table are defined in Table 2.

Table 4. Pairwise comparisons of alternatives with respect to SC1.^a

SC1	A1	A2	A3	Priority vector
A1	1	0.9557	0.9875	0.3264
A2	1.0463	1	1.3652	0.3737
A3	1.0127	0.7325	1	0.2999

^a The symbols used in the table are defined in Table 2.

bar graph, the final priorities indicate that “financial condition” (0.3704) is the most important factor among the elements related to “managerial capabilities” and is, therefore, ranked first. This finding suggests that a favorable financial condition in the

company under research has a significant impact on improving managerial capabilities. Appropriate access to financial resources helps managers to better respond to new opportunities and threats.

The rankings of elements related to “customer relationship capabilities” indicate that “building close relationship with key target customers” (0.293) and “knowing the needs and requirements of consumers” (0.3096) have the highest priority (see orange bar graph in Figure 1). Building close relationship with key target customers is one of the best ways to grow and to increase the value of the company because a high percentage of the company's revenue comes from this group of customers. On the other hand, the success of the firm in maintaining and attracting the key target customers (making loyalty) depends on identifying and meeting their needs and requirements. In fact, it is believed that meeting customers' needs and wants is one of the key tasks of strategic managers (Pishbin *et al.*, 2015). In the “market innovation capabilities” cluster, the importance of “the ability to develop and to launch new products and services” is higher than “efficiency of the development process of new products and services”. This finding implies that with rapid changes in various areas of technology as well as in the needs and requirements of customers, the managers of the company under study should pay special attention to the development of new products and services. In this sense, through the development of new products and services, the company can supply diverse products in accordance with customers' or markets' needs.

The yellow bar graph in Figure 1 represents that, in the development of human resources, “levels of employee organizational retention” (0.5208) is more important than “levels of employee job satisfaction” (0.4792). In today's business environment, strategic human resource management is essential to the success of any organization. By improving technology and intensifying competition among organizations, employees face many alternative job opportunities. In fact, with the increase in the job-leaving rate, the organization will incur all the costs associated with recruiting and training new employees. Hence, retaining current employees is a critical issue for the company. According to research findings, the degree of importance of “company or brand name and reputation” is greater than “credibility of the company from the customer's point of view”. This finding suggests that a well-known brand name (and reputation) will increase the number of key target customers, which will help the firm to gain more stable sales. Accordingly, reputation and brand name are significant intangible assets to achieve competitive advantage, because the company can thereby set higher prices for its products, make better business leverage, increase the margin profit of the products, and reduce its vulnerability in competition (Aaker and Joachimsthaler, 2012).

The relative importance of the sub-criteria, regardless of the cluster to which they belong,

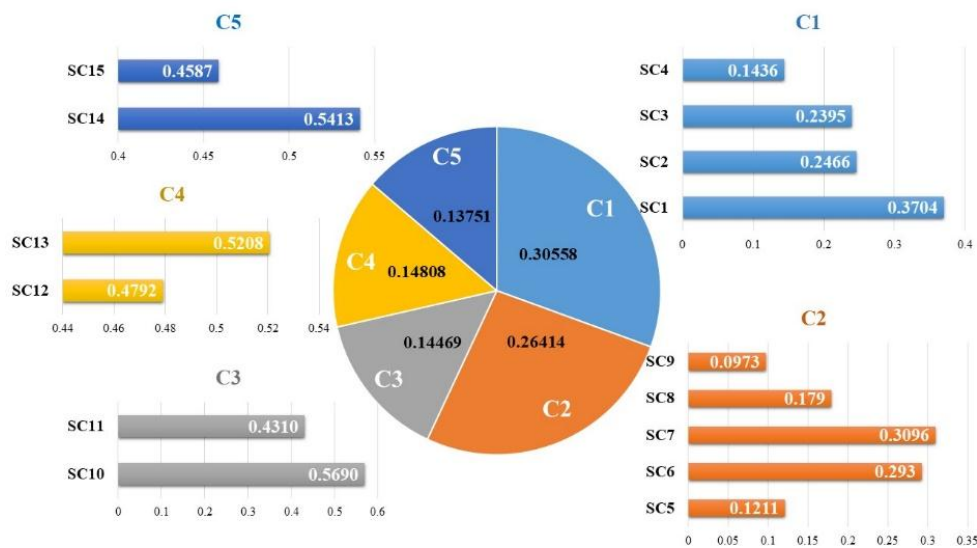


Figure 1. The final priorities of the elements in the ANP model (symbols are defined in Table 2).

is presented in Figure 2. Based on the final weights, among the 15 sub-criteria, “financial condition”, “the ability to develop and to launch new products and services” and “knowing the needs and requirements of consumers” are, respectively, the most important.

Taking into account all the criteria and sub-criteria required to select the most appropriate business strategy, the final priority of each of the strategic options is shown in Table 7. According to the present findings, “differentiation strategy” has the highest priority with 39 percent of the influence, “focus strategy” has the second highest priority, and “overall cost leadership strategy” has the lowest priority. In the differentiation strategy, similarities in resource requirements among competing firms will increase competition. In general, successful product/service differentiation is achieved in two ways: (1) Providing superior customer service and (2) Creating innovations and progress among different parts of the supply chain. Based on the differentiation strategy, the company emphasizes the quality improvement in operational units instead of cost reductions. By choosing a differentiation strategy, the firm can charge a higher price for

its products, because it relies on the loyalty of its key target customers. Customers of the firm also tend to buy differentiated products and pay more for better quality.

CONCLUSIONS

Due to resources constraints, strategists have to determine which business strategies can bring the most benefit to the organization. In a relatively long-term, the business strategy commits the organization to produce specific products/services, to operate in a given market, and eventually to exploit certain resources and technologies. The precondition for the success of the selected strategy is that the business strategy is commensurate with the resources and capabilities of the organization. In fact, the failure of many companies is due to the incompatibility between the business strategy and organizational resources. Today, many agribusiness firms face the challenges and opportunities of the growing competition in domestic and international markets. Thus, choosing a business strategy commensurate with the organization's resources is essential for agribusiness companies. In this sense, agribusiness firms should be aware of their

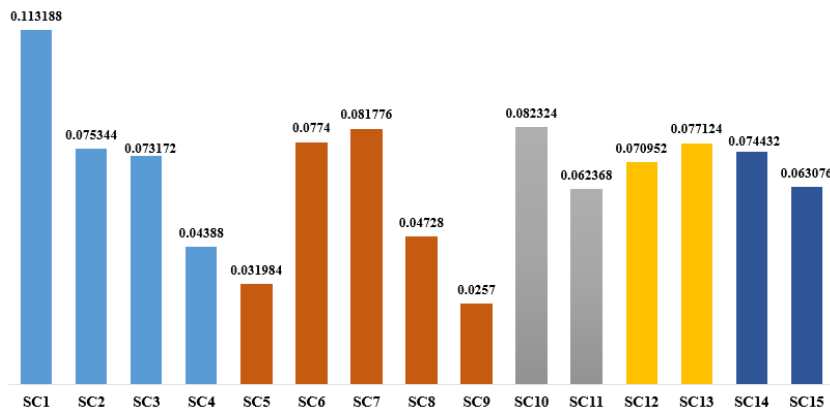


Figure 2. The relative importance of the sub-criteria (symbols are defined in Table 2).

Table 7. Alternative rankings.

Graphic	Alternatives	Normal	Ranking
	Overall cost leadership strategy	0.2889	3
	Differentiation strategy	0.3977	1
	Focus strategy	0.3135	2

core competencies and develop their business strategy accordingly. However, the decision to choose a business strategy is simply not feasible because many criteria and sub-criteria play a key role in decision-making. Furthermore, some criteria may be related to each other, and it is necessary that these relationships be taken into account in the decision-making process. The ANP model is one of the most commonly used multi-criteria decision-making methods for solving decision-making problems in the real world. Using the ANP model, the purpose of the current study was to select the most suitable business strategy for one of the largest saffron companies in Iran. In this regard, Porter's strategy theory and RBV were used to prioritize strategic choices and decision criteria, respectively. The results of the study showed that the differentiation strategy has the highest priority among the strategies introduced by Porter. For simple products, such as saffron, differentiation strategy is implemented through improving product esthetic and design, so that saffron supplied to the market can be readily distinguished from those offered by rivals. Thus, according to the tastes, perceptions, and needs of consumers, various types of saffron products can be packaged in different weights, configurations, and packages. In addition to the physical features of saffron products, the type and scope of marketing activities, providing superior customer service, use of technology in the production process, and product quality are other sources of creating differentiation and preference in the minds of customers. To evaluate the company's ability to implement differentiation strategy, it is necessary to identify the important resources of the organization. The results of the prioritization of the clusters showed that "managerial capabilities" are relatively more important than other resources to choose a business strategy. In accordance with this finding, it can be argued that the distinctiveness and superiority of an organization's marketing resources depend crucially on how they are managed. Managerial capabilities are considered as a marketing support resource because they play an important role in integrating the activities of a company within

the framework of a supportive system that improves the level and quality of the market-based resources of the firm. Another interesting finding is that our results seem to point to the fact that, in choosing a differentiation strategy, managers should pay particular attention to three critical elements: "financial condition", "the ability to develop and to launch new products and services" and "knowing the needs and requirements of consumers". In general, implementation of a business strategy for producing differentiated products is costly, so, having sufficient financial resources is essential for firm growth and survival. Using technology, new saffron products can be produced to meet the needs of the customers. In fact, the development of new products and services is one of the requirements for implementing the differentiation strategy. Further, the customers' opinions are a rich and reliable source of information for the development of new products/services. By knowing the needs and requirements of consumers, it can be determined whether the supply of new products to the market is successful. Thus, awareness of customers' needs and requirements is one of the main ways to meet their demand for saffron products. In order to reduce the number of pairwise comparisons, five main criteria and 15 sub-criteria were used to build the ANP network of our case study. In fact, the small number of decision elements is the limitation of this study. Thus, it is suggested that future studies should consider more criteria, sub-criteria, and alternatives for strategic decision-making. In summary, the findings of this study can be useful for most agribusiness companies, because they can use the method discussed in this paper for their own strategic decisions.

REFERENCES

1. Aaker, D. A. and Joachimsthaler, E. 2012. *Brand Leadership*. Simon and Schuster, New York. Pages?
2. Acquah, M., Adjei, M. C. and Mensa-Bonsu, I. F. 2008. Competitive Strategy, Environmental Characteristics and Performance in African Emerging

- Economies: Lessons from Firms in Ghana, *J. Afr. Bus.*, **9(1)**: 93-120.
3. Aghdaie, S. F. A. and Roshan, J. 2015. Investigating Effective Factors on Iran's Saffron Exportation. *Int. Rev. Manag. Bus. Res.*, **4(2)**: 590-600.
 4. Aghdaie, S.F.A., Seidi, M. and Riasi, A. 2012. Identifying the Barriers to Iran's Saffron Export by Using Porter's Diamond Model. *Int. J. Market. Stud.*, **4(5)**: 129-138.
 5. Altuntas, S. and Yilmaz, M. K. 2016. Fuzzy Dematel Method to Evaluate the Dimensions of Marketing Resources: An Application in SMEs. *J. Bus. Econ. manag.*, **17(3)**: 347-364.
 6. Anh, P. C., Tuan, N. P. and Hoa, H. T. 2017. Relationship between Manufacturing Strategy and Firm Performance: The Empirical Study of Vietnamese Manufacturing Plants. *Econ. Ann. XXI.*, **166(7-8)**: 41-45.
 7. Anning-Dorson, T., Odoom, R. K., Acheampong, G. and Tweneboah-Koduah, E. 2017. Innovation and Organizational Development: The Role of Organizational Leadership. *Afr. J. Econ. Manag. Stud.*, **8(3)**: 338-351.
 8. Arasti, Z., Zandi, F. and Bahmani, N. 2014. Business Failure Factors in Iranian SMEs: Do Successful and Unsuccessful Entrepreneurs Have Different Viewpoints?. *J. Global Enterpren. Res.*, **4(1)**: 1-14.
 9. Büyüközkan, G., Güleriyüz, S. and Karpak, B. 2017. A New Combined IF-DEMATEL and IF-ANP Approach for CRM Partner Evaluation. *Int. J. Product. Econ.*, **191**: 194-206.
 10. Davcik, N. S. and Sharma, P. 2016. Marketing Resources, Performance, and Competitive Advantage: A Review and Future Research Directions. *J. Bus. Res.*, **69(12)**: 5547-5552.
 11. Demirel, N. Ç., Yücenur, G. N., Demirel, T. and Muşdal, H. 2012. Risk-Based Evaluation of Turkish Agricultural Strategies Using Fuzzy AHP and Fuzzy ANP. *Hum. Ecol. Risk Assess. Int. J.*, **18(3)**: 685-702.
 12. Eddleston, K. A., Kellermanns, F. W. and Sarathy, R. 2008. Resource Configuration in Family Firms: Linking Resources, Strategic Planning and Technological Opportunities to Performance. *J. Manag. Stud.*, **45(1)**: 26-50.
 13. Fazli, S., Kiani Mavi, R. and Vosooghizaji, M. 2015. Crude Oil Supply Chain Risk Management with DEMATEL-ANP. *Oper. Res.*, **15(3)**: 453-480.
 14. Ferrell, O. C. and Hartline, M. D. 2011. *Marketing Strategy*. Fifth Edition. South-Western Cengage Learning, Mason, OH.
 15. Francik, S., Pedryc, N., Knapczyk, A., Wójcik, A., Francik, R. and Łapczyńska-Kordon, B. 2017. Bibliometric Analysis of Multiple Criteria Decision Making in Agriculture. *Tech. Sci.*, **20(1)**: 17-30.
 16. Gomes, C. F., Yasin, M. M., Lisboa, J. V. and Small, M. H. 2014. Discerning Competitive Strategy through an Assessment of Competitive Methods. *Serv. Indust. J.*, **34(12)**: 974-998.
 17. Grant, R. M. 1991. The Resource-Based Theory of Competitive Advantage: Implications for Strategy Formulation. *Calif. Manage. Rev.*, **33(3)**: 114-135.
 18. Hallgren, M. and Olhager, J. 2009. Lean and Agile Manufacturing: External and Internal Drivers and Performance Outcomes. *Int. J. Oper. Prod. Manag.*, **29(10)**: 976-999.
 19. Hill, C. W. L. and Jones, G. R. 2013. *Strategic Management: An Integrated Approach*. Tenth Edition. South-Western, Cengage Learning, Mason, OH.
 20. Hingley, M. K. and Vanhamme, J. 2009. *The Crisis of Food Brands: Sustaining Safe, Innovative and Competitive Food Supply*. Gower Publishing, Ltd., London.
 21. Hitt, M. A., Ireland, R. D. and Hoskisson, R. E. 2016. *Strategic Management. Concepts and Cases: Competitiveness and Globalization*. 12 Edition. Cengage Learning, Boston.
 22. Hooley, G. J., Greenley, G. E., Cadogan, J. W. and Fahy, J. 2005. The Performance Impact of Marketing Resources. *J. Bus. Res.*, **58(1)**: 18-27.
 23. Jafari, M., Aghaei Chadegani, A. and Biglari, V. 2011. Effective Risk Management and Company's Performance: Investment in Innovations and Intellectual Capital Using Behavioral and Practical Approach. *J. Econ. Int. Fin.*, **3(15)**: 780-786.
 24. Ju, Y., Wang, A. and You, T. 2015. Emergency Alternative Evaluation and Selection Based on ANP, DEMATEL, and TL-TOPSIS. *Nat. Hazards*, **75(2)**: 347-379.
 25. Liang, L. W., Shih, K. H. and Chung, Y. H. 2010. Financing Instruments and Strategies of Agribusiness: Evidence from Taiwan. *Afr. J. Bus. Manag.*, **4(3)**: 320-332.

26. Lim, G., Lee, H. and Kim, T. 2005. Formulating Business Strategies from a Stakeholder's Perspective: Korean Healthcare It Business Cases. *Int. J. Inform. Tech. Decis. Making*, **4(04)**: 541-566.
27. Lin, C. T., Lee, C. and Chen, W. Y. 2009. Using Fuzzy Analytic Hierarchy Process to Evaluate Service Performance of a Travel Intermediary. *Serv. Indust. J.*, **29(3)**: 281-296.
28. Lin, C. T., Lee, C. and Wu, C. S. 2009. Optimizing a Marketing Expert Decision Process for the Private Hotel. *Expert Syst. Appl.*, **36(3)**: 5613-5619.
29. Lin, C. T. and Wu, C. S. 2008. Selecting a Marketing Strategy for Private Hotels in Taiwan Using the Analytic Hierarchy Process. *Serv. Indust. J.*, **28(8)**: 1077-1091.
30. Marinagi, C., Trivellas, P. and Sakas, D. P. 2014. The Impact of Information Technology on the Development of Supply Chain Competitive Advantage. *Procedia Soc. Behav. Sci.*, **147**: 586-591.
31. Miller, D. 1986. Configurations of Strategy and Structure: Towards a Synthesis. *Strat. Manag. J.*, **7(3)**: 233-249.
32. Mohaghar, A., Fathi, M. R., Zarchi, M. K. and Omidian, A. 2012. A Combined VIKOR-Fuzzy AHP Approach to Marketing Strategy Selection, *Bus. Manag. Strat.*, **3(1)**: 13-27.
33. Mohammadi, H., Saghaian, S. and Alizadeh, P. 2017. Prioritization of Expanded Marketing Mix in Different Stages of the Product Life Cycle: The Case of Food Industry. *J. Agr. Sci. Tech.*, **19(5)**: 993-1003.
34. Pavan, M. and Todeschini, R. 2008. Total-Order Ranking Methods. *Data handling Sci. Technol.*, **27**: 51-72.
35. Pishbin, S.A.R., Alambeigi, A. and Iravani, H. 2015. Investigation of the Role of Structural, Leadership, and Strategy Factors in Cooperatives Entrepreneurship. *J. Agr. Sci. Tech.*, **17(5)**: 1115-1125.
36. Porter, M.E. 1980. *Competitive Strategy: Techniques for Analysing Industries and Competitors*. Free Press, New York.
37. Rezaei, R., Karimi, A., Mangeli, N. and Safa, L. 2017. Effect of Entrepreneurial Orientation and Marketing Capabilities on Greenhouse Businesses Performance in Jiroft County, Iran. *J. Agr. Sci. Tech.*, **19(4)**: 771-783.
38. Ritter, T. and Gemünden, H. G. 2004. The Impact of a Company's Business Strategy on Its Technological Competence, Network Competence and Innovation Success. *J. Bus. Res.*, **57(5)**: 548-556.
39. Saaty, T. L. 1980. *The Analytic Hierarchy Process*. McGraw-Hill New York.
40. Saaty, T. L. 1996. *Decision-Making with Dependence and Feedback: The Analytic Network Process*. RWS Publications, Pittsburgh.
41. Shen, Y. C., Lin, G. T. R. and Tzeng, G. H. 2011. Combined Dematel Techniques with Novel Mcdm for the Organic Light Emitting Diode Technology Selection. *Expert Syst. Appl.*, **38(3)**: 1468-1481.
42. Singh, P. K. 2012. Management of Business Processes Can Help an Organization Achieve Competitive Advantage. *Int. Manag. Rev.*, **8(2)**: 19-26.
43. SubbaNarasimha, P. N. 2001. Strategy in Turbulent Environments: The Role of Dynamic Competence. *Manage. Dec. Econ.*, **22(4-5)**: 201-212.
44. Van Horenbeek, A. and Pintelon, L. 2014. Development of a Maintenance Performance Measurement Framework—Using the Analytic Network Process (ANP) for Maintenance Performance Indicator Selection. *Omega*, **42(1)**: 33-46.
45. Wu, C. S., Lin, C. T. and Lee, C. 2010a. Competitive Marketing Strategies Decision-Making Based on Marketing Resources and Capabilities: Evidence from the Hospitality Industry in Taiwan. *J. Qual. Assur. Hospit. Tour.*, **11(4)**: 219-238.
46. Wu, C. S., Lin, C. T. and Lee, C. 2010b. Optimal Marketing Strategy: A Decision-Making with ANP and TOPSIS. *Int. J. Product. Econ.*, **127(1)**: 190-196.
47. Wu, P., Gao, L. and Gu, T. 2015. Business Strategy, Market Competition and Earnings Management: Evidence from China. *Chin. Manag. Stud.*, **9(3)**: 401-424.
48. Zarafshani, K., Sahraee, M. and Helms, M. M. 2015. Strategic Potential of the Vermicompost Agribusiness in Iran: A Swot Analysis. *J. Agr. Sci. Tech.*, **17(6)**: 1393-1408.
49. Zare Mehrjerdi, M. and Tohidi, A. 2014. An Empirical Analysis of Exchange Rate Pass-through to Iran's Saffron Export Price. *Ethno Pharm. Prod.*, **1(1)**: 29-36.

اولویت‌بندی استراتژی‌های کسب و کار و منابع بازاریابی با استفاده از رهیافت فرآیند تحلیل شبکه‌ای (ANP)

۱. توحیدی، م. قربانی، ع. ر. کرباسی، ا. اصغرپورماسوله و ب. حسنی مهموئی

چکیده

امروزه با شدید شدن رقابت در بازارهای داخلی و بین‌المللی، توانایی شرکت‌های تجاری کشاورزی برای بقا و رشد بستگی به انتخاب به کارگیری استراتژی مناسب کسب و کار دارد. اما، در واقع این امر آنچنان که به نظر می‌رسد ساده نیست، زیرا برای انتخاب مناسب‌ترین استراتژی کسب و کار، در نظر گرفتن معیارهای متعدد و روابط میان آن‌ها حائز اهمیت می‌باشد. افزون بر این، تطابق استراتژی کسب و کار با منابع سازمان برای به دست آوردن مزیت رقابتی ضروری است. با استفاده از مدل ANP، انتخاب مناسب‌ترین استراتژی کسب و کار برای یکی از بزرگترین شرکت‌های زعفران در ایران هدف اصلی این مطالعه می‌باشد. نتایج مطالعه نشان داد که استراتژی تمایز با اثر ۳۹ درصد بیشترین اولویت را دارد. یافته دیگر مطالعه این است که قابلیت‌های مدیریتی در میان منابع سازمان به طور نسبی اهمیت بیشتری در انتخاب استراتژی کسب و کار دارد. با توجه به نتایج مطالعه، پیشنهاد می‌شود که مدیران برای اجرای استراتژی تمایز به بهبود وضعیت مالی، شناخت نیازهای مشتریان و ارائه محصولات و خدمات جدید نوآورانه توجه ویژه‌ای داشته باشند.