Identify, Rank, analyze and implement green supply chain management approach to change (Case Study: Iran Khodro Automotive Group)

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ABSTRACT

Objective: The population of this research managers and experts are active in Iran's automotive vehicle at the time of the study were 230 patients. Experts confirmed the content validity of the questionnaire academia and industry, to get the reliability, Cronbach's alpha coefficient has been obtained Cronbach's alpha reliability 86/0. **Methodology**: The method of analysis in this study will change the strategic management of knowledge in supply chain management by using models and methods such as SWOT green and fuzzy TOPSIS method, as a useful way to resolve conflicts and guiding managers to find the best way, we find. In fact, the traditional strategy of today's supply chain environment characterized by increased economic pressure and environmental responsibility on behalf of shareholders, not to work properly. **Results**: The aim of this study is the proper approach in order to intensify or modify a green supply chain strategy, supply chain strategies based on environmental, economic and social. **Conclusion**: After data analysis using descriptive statistics were the best strategy for the company's strategy ST (Aggressive) that prudent growth strategies or development with the participation of Iranian director Khodro discretionary and selective suggested.

1. Introduction

Today, unlike the past, people are more concerned with the environment and climate change are concerned. In the field of business and management, a commitment to increase the role of organizations in the community there (Sarkis, 2003). Their responsibilities, to minimize the environment (Govindan et al., 2014). One aspect of this issue, green supply chain management issues, and how organizations can your potential suppliers to adopt green supply chain management practices, maximize. Examples of green supply chain management practices could reduce packaging waste, evaluation of vendors in terms of environmental performance, development of environmentally friendly products and reduce carbon emissions related to the transportation of goods. In some cases, the supply of environmental improvement appears to be more profitable because it can reduce costs and improve organizational performance. Or to increase the company's credibility. Others offer environmental initiatives are viewed with skepticism. As a reaction to the government's environmental regulations such as waste reduction or as ease of cleaning green Along with the rapid changes in the scenario of global production, environmental and social issues in business management has become more important. And raise awareness about the worldwide trend of green environmental protection and protection of land resources and increased environmental protection as a result of overwhelming pressure on large companies to produce products according to green supply chain management, to create. It should be noted that more stringent government regulations and increasing consumer pressure on manufacturers can make to effectively enforce environmental concerns in their products and in their strategic planning agenda. With the challenges of economic, social and environmental organizations threatened in the past decade, a customer-oriented approach and focus on its demands and design strategy accordingly (in customer satisfaction) their ability to create advantages lost competitive organizations. Although in the past two decades Customer orientation was considered a competitive advantage today because of the challenges created through customer-oriented, organizations have the focus distance headache. The customer always the best product, the cheapest and fastest wanted it. It makes contamination of products and processes that have not been coordinated with the environment. In this regard, their survival organizations in three areas of responsibility in economic, social, and environmental issues have become. Green attitudes in organizations and organizational structures as green alternative units such as

quality assurance is guaranteed. Raw materials, production processes, distribution and transmission, delivery and finally consumption, waste management and reuse in order to record the amount of energy and resource efficiency along with performance improvements of green supply chain (Luthra et al., 2013). Green supply chain management (GSCM) is one of these innovative ideas to speed the development of environmental performance in the industry's attention. Green supply chain management approach to improve the performance of processes and products according to the requirements of environmental regulations. GSCM effective implementation in an organization plays an important role in obtaining and maintaining the environment. The effective implementation of SCM in an organization plays an important role in gaining and maintaining competitive advantage plays. GSCM recently emerged, including all stages of the product life cycle from design, production and distribution of products for use by consumers and disposal at the end of the product life cycle.

So the organization needs to focus on energy and resources to build supply chain is environmentally friendly. The aim of this study is to identify the various obstacles to implement GSCM. To classify these obstacles depending on the strength of dependence between variables based on interpretive structural model (ISM) will be designed. ISM is a good way for communication between specific variables to identify the problem or issue. Variables with the same obstacles to supply chain management, green for this study include lack of proactive attitude and voluntary organizations and suppliers on compliance with environmental standards and social responsibility, inability of suppliers (in terms of knowledge and technology and technical) to obtain ISO standard 14000, lack of tangible competitive advantage from implementing green supply chain, difficulty organizing and coordinating units to implement green supply chain, lack of adequate incentives from the government to achieve a green supply chain management, the cost of implementing green supply chain, lack of ICT infrastructure in order to facilitate the implementation of green supply chain, lack of knowledge and education about environmental issues, lack of support from senior management and the organization, absence and compete in global markets, the absence of environmental objectives and strategic plan the lack of adequate legal leverage to enforce environmental regulations, additional costs required to implement green supply chain management. This study seeks to answer the question: What are the barriers to green supply chain management and using structural modeling to analyze the effect of each of the obstacles to the implementation of green supply chain management practices to what extent.

1.1 Background research

Diabat & Govindan (2011) in a study titled, green supply chain management in the automotive industry's requirements to fulfill the identification requirements (triggers, constraints, actions and results) required to achieve a green supply chain management in the automotive industry of Iran. Then take the necessary measures to achieve a green supply chain management, mining and the measures to be finalized through questionnaires and finally put experts in enforcement actions by using fuzzy TOPSIS ranked.

Mathiyazhagan et al. (2013) In research as factors affecting green supply chain management in the tourism industry (travel agents in Tehran case study) to provide an analytical model in which the potential factors affecting a firm's strategic decision-making process and were evaluated included. The results showed that according to the terms of our travel agency, adopt green supply chain management is not associated with significant organizational benefits. External pressures environmental strategy is an effective factor for orientation Bourne. Moreover, the implementation of this strategy by some of the organizational factors and strategic myopia is limited.

Chen et al. (2012) The research, analysis of the barriers to green supply management in India Industry Association Dadnd.ayn hierarchical meta-analysis of working on identifying barriers to the implementation of centralized procurement supply chain management effectiveness. In total 47 prevents the ESA Sbz.br the exact literature and discussions with industry experts and shortened through a questionnaire-based study of various industrial sectors were identified. Important barriers were prioritized through the AHP.

Muduli et al. (2013) Study the role of behavioral factors in implementing green supply chain management of Indian Mineral Industries did. This study aimed to investigate behavioral factors affecting GCSM practices and their interaction that helps to achieve the requirements of green activities were carried out. In this study, interpretive structural modeling for extracting the relationships among behavioral factors were used to identify independent factors, it was found dependent and connected.

Al Zaabi et al. (2013) Environmental problems including the loss of resources, environmental pollution and ecological imbalances are an obstacle to socio-economic development in the 21st century has become industrial companies. Customer service, the level of costs, business process and business environment to identify and by a process of hierarchical analysis was weighted Atabey. In order to assess supply chain performance evaluation system of green than gray for evaluating electronic Nanotechnology four companies showed that this model is the basis for decision-making provides a green supply chain performance improvement.

Shen et al. (2013) in an article entitled "Evaluation Based on DEA supply chain success" indicators of inputs and outputs initially proposed by various researchers have used to assess supply chain performance.

Mangla et al. (2015) algorithm for DEA has been detected, then the method of green supply chain based on product-centric model used, this model consists of four levels. In the first phase, efforts are focused industrial companies to adapt to the environment. The second new product designed to reduce energy and resource consumption and pollution in the production and use of the product. The third level of resource and energy efficient design and production process based on the fourth stage of the delivery and distribution of the cofactor of the principles of waste management and recycling flow.

Cailon a performance evaluation system for evaluating the performance of the swine industry due to its importance in the Chinese economy the four aspects of environmental management, environmental investment, social benefits, quality hogs raised using the network model natural possible. The sample in this article five slaughter pigs and the proposed method in this paper has twelve indexes the results showed that scientific criteria were compatible with the case and can lead to the development of green supply chain performance (Diabat et al., 2013).

Lego in a paper entitled "Development of green supply chain performance measurement" a set of metrics to evaluate the performance of the car manufacturer gave a green supply chain company. He has to develop an effective and comprehensive framework for evaluating the performance of different backgrounds green supply chain Green supply chain performance evaluation, environmental management, traditional supply chain performance evaluation, and management of supply chain auto reviewed. Using a four-page questionnaire among experts and capabilities applicable to the development

of the importance of doing research. Results highlight the importance and the ability to run all aspects of the customer's wartime got worse as the most important criterion was recognized standards.

Luthra empirical evaluation criteria in the form of green supply chain management at the company investigated. And analyze random gray "a normal evaluation system for green supply chain performance. In this paper, an analysis of the proposed fuzzy green supply chain performance analysis techniques to fully assess Then a random gray that scientific evidence to develop chain performance green supply were analyzed (Luthra et al., 2015).

Charan et al. green supply chain performance evaluation of supply chain practice was key. In his article a new method for assessing the environmental performance of the supply chain using the Balanced Scorecard to assess supply chain performance cut the fuzzy comprehensive theory of the five dimensions of financial, customer, process, development, and environment is look (Charan et al., 2008).

2. Materials and methods

2.1 Theoretical Framework

The conceptual model is a conceptual model based on the theory that relationships among a number of factors about the importance of the study were diagnosed. Research Activities in the realm of theory to study the problem logically flows, each company has its own marketing mix 4 after mixed green marketing as traditional marketing, but marketing challenge, creative use of the 4 that follow include:

A) Green product: green product to protect and improve the natural environment by maintaining energy or resources and to reduce or eliminate the use of toxic substances, pollution and waste can help.

B) Green Price: Price is a key factor and an important green marketing mix. Most consumers are only willing to pay a higher price to realize the added value product. This value may improve performance, efficiency, design, visual appeal and taste it; or even due to the characteristics of green products including long-life and is harmless.

C) Promotion and propagation of green: green means promoting the transfer of real environmental information to consumers that are associated with company activities. The companies stated commitment to preserve natural resources to attract the target market.

D) Distribution of Green: Green Distribution picks up stuck in two dimensions: internal and external dimensions. The inner dimension, the company's internal environment be absorbed. After the supply of foreign places that have the least damage to the environment, points out, Green marketing strategy of significant scientific interest earned in the last two decades. Results of previous studies show that effective green marketing strategy must be confirmed by the principles of marketing, which refers to "a process for developing and implementing marketing activities beneficial in terms of entrepreneurship environmental and aims to generate income by providing economic transactions that satisfy a company's social performance objectives associated with. Adopt marketing companies in terms of their grade in line with the medium are different. Compatibility with the environment in a company consists of two main elements: environmental orientation and environmental strategy. Environmental orientation refers to senior managers' awareness of the importance of environmental issues facing their organizations; while environmental strategy refers to the extent to which environmental issues are integrated with a company's strategic plans. Companies not only to use relevant concepts and frameworks have begun to market their brands but will also benefit from the activities of partners in sourcing, product design, production and delivery in order to establish a green supply chain have benefited.
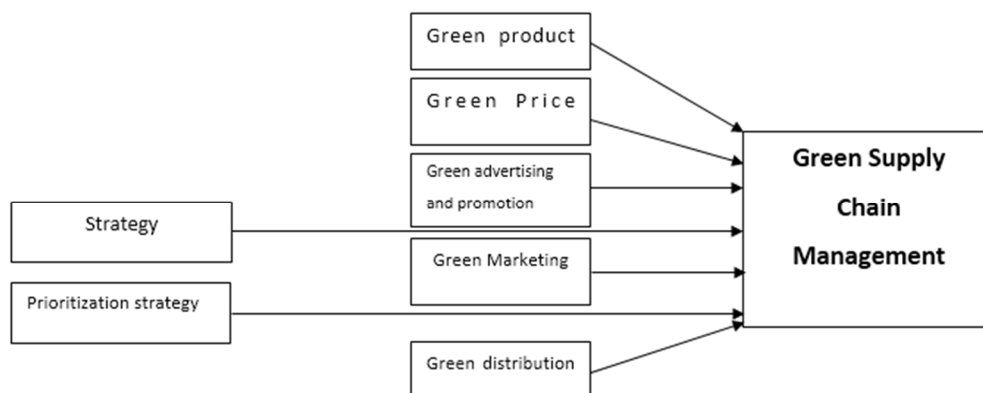

Figure 1. The hybrid model using the model Glenn et al., 2014

3. Discussion and results

3.1 Hypotheses

What elements should exist in competitive strategy?

How can the use of strategic management framework in green supply chain management process improvements that?

How can TOPSIS and fuzzy green supply chain management in order to efficiently Rank teeth developed strategies used?

Table 1. Identify opportunities and threats based on external factors evaluation matrix (EFE) as follows:

	Matrix EFE			
	Opportunities	**B**	**Rank**	**B Rank**
1	The possibility of joint venture (JV) with the company "Disong" to transfer manufacturing technology Maltese Plexiglas, CEC	0/05	4	0/20
2	The possibility of engine parts supply market presence EF4, TU5 and XU7 S81 in the development of hybrid and fuel-efficient vehicles and comply with the Euro 4 standard	0/09	4	0/36
3	Opportunity to enter the market through the production of automotive switches and related electronic parts and trim pieces	0/04	3	0/12
4	Ability to import record "Panasonic" in the form of SKD and CKD (due to tariff reductions on imports of CBU) and obtaining the exclusive representation of the company to enter the market recording	0/04	4	0/16
5	Potential market for ABS brake systems for a variety of products of Iran Khodro Group	0/08	3	0/24
6	There is a potential market for ABS brake systems for products of Iran Khodro Group	0/03	3	0/09
7	To provide Mechatronic parts companies such as "Arrow Pickup" (Motor Nissan Z24) and the opportunity to expand cooperation with "Mega" in the field of EMS products	0/03	3	0/09
8	The possibility of increasing sales of some products on the market AM (such as recording and the band, alarm, reverse sensor, LCD, etc.) due to strong supplier relationships in this area	0/06	2	0/12
9	The chance to participate in international markets through exports EMS	0/02	2	0/04
10	Strong communication and interaction with this group of automakers Saipa Automotive, the opportunity to develop cooperation with customers and increased interaction for Iran Khodro Co.	0/05	4	0/2
	Threats			
1	Sanctions as an obstacle to contract with reputable brands global and strategic partnership for technology transfer and imports of equipment and raw materials required in addition to issues such as exchange rate fluctuations, currency in circulation and bank limits the central bank sanctions	0/07	1	0/07
2	Risk of more than 30% local value of sales of products of Iran Khodro Company (including amplifiers front, central locking, Apparently alert system, etc.) with automakers move towards the use of multi-Plex system	0/06	3	0/18
3	Loss of market share due to the presence of competitors such as remote lock and company "Arad West" and "supply" in the production of these products	0/02	2	0/04
4	The presence of competitors such as cruise and Taysir ABS brake systems as well as supply areas, knowledge and experience Tklan strong rivals such as birch and decorate the trunk in the supply of brake systems CBS	0/05	2	0/1
5	Work experience and strong competitors such as X "of the righteous" and "Aria" in the product supply record	0/06	2	0/12
6	Electronic throttle domestic production (output pressure regulation in electronic form) by other suppliers	0/09	2	0/16
7	The presence of powerful competitors in the market as companies Majykar AM, steel mate, Marshall, Pioneer, Sony and JVC on imported products and limit the risk of market share in this area	0/07	2	0/12
8	Strong communication and good customer cruise companies, financial strength and focus on decision-making and a more complete product portfolio of the company	0/06	2	0/12
9	The lack of reliable external financial resources for production, (such as carmakers or get bank loans proper) ago and a lack of liquidity needed to implement the development projects the government plans to increase tariffs on imports of components and raw materials to part manufacturers	0/08	2	0/16
10	Sanctions and problems of small manufacturers supply complementary products X slowing production process automaker and the production company X will be overshadowed.	0/04	3	0/12

As Table 1 shows, according to the total, final score 78/2 suggests that the company is in a relatively good state of the environment. In other words, indicating that the company employing strategies that can be used as opportunities and threats thereby reduce its use.

3.2 Identify the strengths and weaknesses

Table 2. Strengths and weaknesses based on internal factors evaluation matrix (IFE) as follows:

	Matrix EFE			
	Strengths	**B**	**Rank**	**B Rank**
1	Experience and technical knowledge in the design of electronic components and equipment (such as SMD-to-date machines, digital scopes...)	0/05	4	0/20
2	Good business relations with companies "Bush", "Bentley" and "magnetic Marley" in the field of mechatronic products, the company "Daysvng" in the design and production of electronic parts and the company "Panasonic" in the area of product supply record	0/06	3	0/18
3	Possessing advanced equipment and technical knowledge in the field of mechatronics (eg, steel plates, aluminum-forging technology, automatic testers and MasterCard part equipped with modern technology)	0/05	3	0/15
4	High market share of 50% in the field of automotive electronics suppliers (suppliers of electronic products to customers in the basket)	0/05	3	0/15
5	Appropriate interaction with the group getting the first rank in evaluating the performance of groups Y and Y (EPMS) in human resource management, productivity management, leadership, and strategy and technology management	0/06	4	0/24
6	The company's diverse product portfolio X in the OE market.	0/05	3	0/15
7	Good relations with customers and gain valuable information about customer needs and future plans, he	0/07	3	0/21
8	Standard certificate ISO / TS over 9 years in a row and structure appropriately and also earn the top rating of 350 (citation 3 stars) in accordance with the EFQM business excellence model	0/04	3	0/12
9	Having a skilled, motivated and dynamic with a spirit of cooperation and teamwork	0/05	3	0/15
10	Management of financial resources and control costs in order to stabilize or reduce the cost of	0/07	4	0/28
	Weaknesses			
1	Lack of software systems to communicate and integrate units (ERP)	0/05	2	0/1
2	PPM high in some products (such as recording, Jlvampr, clocks and regulators and ECU, etc.) and the lack of full implementation of customer requirements to the level of Grade A	0/07	3	0/21
3	The absence of some of the equipment and machines for testing in the field of electronics (such as testers' suitable storage products such as heated front of the amp, immobilizer, ECU, etc.)	0/04	3	0/12
4	The absence of a codified system for selecting business partners, leading to poor business cooperation with companies such as "Kangtv" and "Deming" is in the field of electronics.	0/06	2	0/12
5	Lack of technical knowledge and lack of experience in the supply of brake systems	0/02	4	0/08
6	Automation and mechanization weakness in non-line of electronic products	0/04	4	0/16
7	Lack of technical knowledge and experience in the field of products dashboard	0/04	3	0/12
8	Lack of proper organization in sales AM	0/03	2	0/06
9	Weakness in the establishment of a knowledge management system	0/04	2	0/08
10	Shortage of skilled manpower in development projects and the loss of some key personnel	0/07	3	0/21

As can be seen in the table above with respect to the total, final score is 82/3 suggests that domestic factors, is higher than average. In other words indicating that the company has strengths are internal factors.

3.3 Strategy

Table 3. Internal and external matrix (IEM)
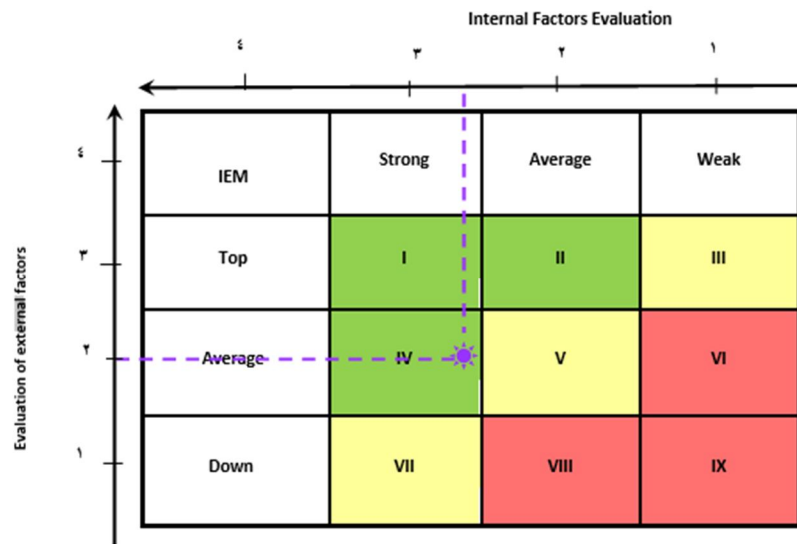
Internal and external matrices in 9 different parts of the puts. The matrix provides a different organization charts; that's why it is called the Matrix portfolio.

((Internal and external matrix)) is based on two main aspects:

1-Total final internal factors evaluation matrix that is shown on the X-axis.

2. Total score of the final evaluation matrix internal and external factors that can be written on the Y-axis.

In ((internal and external matrix)) Total final scores, on axis X from 0/1 to 1/99 0/2 to 2/99 indicates weakness in the company and the score indicates that the company is in average condition and a score of 0.3 to 0.4 indicates that the company is in excellent condition. It can be ((internal and external matrix)) divided into three major areas and for each of them used different strategies:

The first area to areas where houses 1, 2 or 4 are to be implemented that strategy ((growth and development)) is. In these units should focus strategy (market penetration, market development and product development or vertical integration strategy based on the top, bottom and vertical integration, horizontal integration) to run out and these strategies are most appropriate.

The second area for units of the organization which houses 3, 5 or 7 can be easily implemented strategies that target ((maintaining the status quo)) is. The units are very common strategies, market penetration and product development.

The third area for units which houses 6, 8 and 9 are the strategies ((harvest or drop)) to the cause. And IFE, the company's strategic position X in accordance with local and foreign matrix (IEM) house No. 4. The nature of the organization's strategy, prudent growth or development will be prudent and selective.

3.4 Matrix formulation of strategies (SWOT)

Table 4. Aggressive strategies (SO)

		strategies
1	$S_1 O_1$	Daysong JV contract with the company to transfer technical knowledge of design, production and testing of integrated circuits (Malta multiplex CEC)
2	$S_1 O_2$	XU7 engine ECU domestic production in the rice-mail
3	$S_2 O_4$	Set up production lines and testing of radio broadcasting, in collaboration with Panasonic
4	$S_2 O_2$	Contract for the development, production, marketing and sales EMS vehicles equipped with engines TU5, EF4, XU7
5	$S_3 O_{10}$	Increase revenue through the use of mechatronics equipment (such as furnaces Brizing) and contract services
6	$S_2 O_8$	Market development AM and proper communication with Panasonic in the OE and extend this cooperation and agent for the sale of goods AM
7	$S_{2,8} O_9$	The presence of IKCO subsidiaries in the supply chain in order to provide CNG products to customers in the international supply chain
8	$S_{1,2,4,5} O_{10}$	Develop cooperation with car maker and creating new market by relying on technical power electronics and relationships with reputable business partners

9	$S_4 O_{10}$	Capacity building and infrastructure for the production of electronic products / mechatronic / ABS / CBS / dashboard
10	$S_{7,8,10} O_3$	Development, production, marketing and sale of complete sets of IKCO cars dashboard
11	$S_{9,10} O_{8,10}$	Offering products with competitive price in both markets AM and OE
12	$S_{7,8,2} O_{5,6}$	Development, production, marketing and sale of braking systems ABS / CBS for Samand, Peugeot 405 and Pars

Table 5. Diversification Strategies (ST)

		strategies
1	$S_1 O_1$	Domestic (Localization) some half-built parts and raw materials (such as plastic and metal parts JloAmir)
2	$S_1 O_2$	Activation offices abroad Group A in order to improve procurement
3	$S_2 O_4$	Lock production line
4	$S_2 O_2$	Transfer of technology and local production (Localization) brake system ABS / CBS
5	$S_3 O_{10}$	Production of the throttle (Throttle Body) and accelerator)

Table 6. Strategies to change the order (WO)

		strategies
1	$S_1 O_1$	Establishment of integrated software systems in order to improve communication and integration units
2	$S_1 O_2$	PPM reduce the formation of working groups with the aim of reducing waste and improve product quality
3	$S_2 O_4$	The use of power electronics technology to improve services market AM
4	$S_2 O_2$	AM market development and deliver a variety of products according to the company's diverse product portfolio X OE market and be used to develop AM

Table 7. Defensive strategies (WT)

		strategies
1	$S_1 O_1$	Cross-functional teams designed to enhance the structural flexibility in the implementation of development projects
2	$S_1 O_2$	The establishment of a comprehensive system of enterprise knowledge management (EKM)
3	$S_2 O_4$	Establishment of integrated human resource management system

This matrix is one of the important tools that managers can use the information to compare, and it provide four types of strategies:

SO strategies

WO strategies

ST strategies

WT strategies

Compare internal and external factors of the hardest parts of preparing matrix threats, opportunities, weaknesses and strengths and needs good judgment. According to analysis within and outside the organization and privileges obtained from EFE matrix and IFE, was the nature of the organization's strategy, prudent growth or development will be prudent and selective. And accordingly formulate strategies according to corporate matrix X (SWOT) Iran Khodro's main strategies is shown below.

Fuzzy TOPSIS

Fuzzy TOPSIS technique, generalized fuzzy TOPSIS in the environment. Huang's technique and ion TOPSIS s raised in 1981. TOPSIS underlying logic, defining positive and negative ideal solutions. The positive ideal solution, the criteria of type to maximize profits and minimize costs necessary criteria. Negative ideal solution, the maximum criteria of cost and minimizes the criteria of profit. The optimal choice, the closest option to ideal solution is positive and the farthest option ideal solution is negative. In short, the ideal solution is positive, combining the best values available criteria, while an ideal

solution negative, the worst values of available standards. For evaluating financial performance, we first formulate a MCDM problem. The problem FMCDM, including a set of financial indicators and weights m n corresponding options that are evaluated. The problem can be modeled as follows:

$$G = [G_{ij}]_{m*n} = \begin{array}{c} \\ A_1 \\ A_2 \\ \cdot \\ \cdot \\ \cdot \\ A_m \end{array} \begin{bmatrix} C_1 & C_2 & \cdot & \cdot & \cdot & C_n \\ G_{11} & G_{12} & \cdot & \cdot & \cdot & G_{1n} \\ G_{21} & G_{22} & \cdot & \cdot & \cdot & G_{2n} \\ \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \\ G_{m1} & G_{m2} & \cdot & \cdot & \cdot & G_{mn} \end{bmatrix}$$

(1)

And W= [w₁, w2,…,wₙ].

Here, A1, A2... Am are the experts must assess the possible options. Cn criteria that were considered versus performance options. Gij Rank financial performance against a benchmark option Ai Cj and Cj is the weight Wj. In the evaluation process, the weights of criteria provided by financial experts through subjective evaluations show with linguistic terms. The weights language to very low (VL), low (L), Medium (M), high (H) and very high (VH) through questionnaires distributed and collected.

Suppose bike) represents an index value j in the period e shows where i = 1,2, ..., m, j = 1,2, ..., n and e = 1,2, ..., t are.

According to the concept of triangular fuzzy numbers, Gij we define:

$$G_{ij} = (g_{ij}^l, g_{ij}^m, g_{ij}^r)$$

$$g_{ij}^l = min\{b_{ij}(e)|e = 1,2,…,t\}$$
$$g_{ij}^m = \frac{1}{t}\sum_{e=1}^{t} b_{ij}(e)$$
$$g_{ij}^r = max\{b_{ij}(e)|e = 1,2,…,t\}$$

(2)

So [Gi1, Gi2, ..., Gin] Report option Ai performance criteria indicated in n. Operators using MAX and MIN, positive ideal solutions (A +) and negative ideal (A-) to set the option can be identified.

$$A^- = [G_1^-, G2^-… Gn^-]$$ (3)
$$A^+ = [G_1^+, G2^+… Gn^+]$$ (4)

In relations triangular fuzzy numbers as high Gn- and Gn + the equation (2) are, respectively, the minimum and maximum values glij, gmij and grij were formed for the n-th option.

It is clear that for i = 1, 2... m and j = 1, 2... n equation (5) holds:

$$G_j^+ \geq G_{ij} \geq G_j^-$$ (5)

Dj- and dj, respectively, are indicative of Gji- and Gj + Gij are using formulas (6) and (7) are calculated:

$$d_{ij}^- = d(G_{ij}, G_j^-) = \sqrt{\frac{1}{3}[(g_{ij}^l - g_j^{l-})^2 + (g_{ij}^m - g_j^{m-})^2 + (g_{ij}^r - g_j^{r-})^2}$$

(6)

$(i = 1,2,…,m) , (j = 1,2,…,n)$

$$d_{ij}^+ = d(G_{ij}, G_j^{l+}) = \sqrt{\frac{1}{3}[(g_{ij}^l - g_j^{l+})^2 + (g_{ij}^m - g_j^{m+})^2 + (g_{ij}^r - g_j^{r+})^2}$$

(7)

$(i = 1,2,…,m) , (j = 1,2,…,n)$

To determine weights of the different decision-making criteria, fuzzy numbers are used. In case a triangular fuzzy number that weights Ek language expressed by experts in the criterion Cj as fuzzy states: (j = 1, 2... n and k = 1, 2... p)

Wj as the average weight of criteria and its Cj consider using equation (8) is calculated:

$$W_j = (w_j^l, w_j^m, w_j^r) = (1/p) \otimes (W_{j1} \oplus W_{j2} \oplus W_{j3} \oplus…\oplus W_{jp})$$

(8)

$(j = 1,2,…,n)$

Symptoms $\otimes$, $\oplus$ and $\otimes$, $\oplus$ of multiplication and addition are fuzzy.

Di- and Di +, respectively, are weighted Ai's choice of a positive ideal solution and negative ideal solution, and by using equations (9) and (10) obtained.

$$ND^- = MIN_{1 \leq i \leq m}\{D_i^-\}$$ (9)
$$ND^+ = MAX_{1 \leq i \leq m}\{D_i^-\}$$ (10)
$$PD^- = MIN_{1 \leq i \leq m}\{D_i^+\}$$ (11)
$$PD^+ = MAX_{1 \leq i \leq m}\{D_i^+\}$$ (12)

For distance vector$[D_i^-, D_i^+]$, Negative ideal solution$[ND^-, PD^+]$ and for positive ideal solution$[ND^+, PD^-]$ Ai- and Ai, respectively, indicating distances to and are using the relations (13) and (14) obtained.

$$A_i^- = d(D_i^-, ND^-) + d(D_i^+, PD^+)$$ (13)
$$A_i^+ = d(D_i^-, ND^+) + d(D_i^+, PD^-)$$ (14)

$i = 1,2,…,m.$

Finally, closeness coefficient Ai options with A * appears, using equation (15) is calculated.

$$A_i^* = \frac{A_i^-}{A_i^- + A_i^+}$$

(15)

$i = 1,2,…,m.$

Clearly, that is. If the positive ideal solution and if the option Ai, Ai options ideal solution would be negative. The different options can be ranked according to how close to ideal solution Dad.ba positive and avoid the negative ideal solution TOPSIS Based on Fuzzy Auto prioritized strategy is as follows:

Table 8. Matrix to prioritize strategies

Order	Name Strategy	Ci
1	Development, production, marketing and selling the full range of dashboards Iran Khodro	0/9153
2	Set up production lines and testing of radio broadcasting, in collaboration with Panasonic	0/9001
3	Development, production, marketing and sale of motor control systems (ECU) and immobilizer	0/8999
4	A joint venture (JV) with the company "Daisong" in order to transfer technical knowledge, design and manufacture of integrated circuits (Malta Plexiglas, CEC)	0/8764
5	Development, production, marketing and sale of front car amplifiers	0/8123
6	Technology transfer, capacity building and infrastructure necessary to develop, manufacture and supply of public and anti-lock braking systems (ABS / CBS)	0/7345
7	Locks the vehicle production line	0/6578
8	Development, production, marketing and sale of EMS systems for engines TU5, EF4, XU7 and domestic production of the throttle and the accelerator pedal (Normal and Electric)	0/5781
9	ACM diversified product portfolio with the development and improvement of services in this area	0/5443
10	Establishment of integrated information systems with an emphasis on strategic planning processes, supply, production and design	0/5105
11	Creating a system codified in order to select partners in the field of security and cooperation	0/4222
12	Presence in the international supply chain and provide products CNG (such as PR, TV, FR) to customers	0/2002

4. Conclusion

The mission, strengths, weaknesses, opportunities and threats, Iran Khodro and studied approach to change in this regard, the proposed strategy is based on the model set SWOT to strengthen the company's strengths, weaknesses, threats and control was decreased and also take advantage of opportunities provided. Strategy so: in fact, in this section by using internal strengths and opportunities for the organization's strategy is determined to be effective. The strengths of weaknesses, threats and opportunities of a higher score. The nature of the organization's strategy, prudent growth or development will be prudent and selective. It is possible strategies: Iran Khodro for the system to develop strategic and prospective managers and development, production, marketing and sale of harmony with environment mapping organizational culture and Inclusion and environmental factors such as organization and strategy of pushing Iran towards a strategy-focused organization eco-friendly car and set up production lines and testing with regard to the environment and working with environmentally friendly companies.

Strategy WO: in fact, in this section to take advantage of opportunities in the environment strives to eliminate weaknesses. It is possible strategies: short-term classes or pamphlets created by the circle with the quality of education as well as further enhance existing systems in the organization according to modern technologies. Strategy st: In fact, in this section, using the strengths, threats eliminated. The strengths of weaknesses, threats and opportunities of higher scores of the ways it could: build applications for the establishment of an integrated software system to improve communication and integration unit. Increased reporting under the supervision of organizations. Preparing to accept new strategy and its implementation. Strategy wt: actually, here to minimize internal weaknesses, threats in the environment will decrease. In the strategy could focus on strengthening the incentive system and a cautious growth strategy and use outsourcing. In fact, the use of strategic planning as a dynamic process with vision to the facts and circumstances available to provide strategic and tactical effectively to achieve better tomorrow made possible. In this type of planning, participation of all stakeholders, and interested stakeholders on the basis of reflection, leads to the use of the mechanism in the form of strategic planning, define the desired future and present situation, to determine their needs and to meet they somehow ((detachment fold)) apply.

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