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### Developing Best Strategy Using Blue Ocean Strategy: the Case of Salim Engineering Company

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#### CHRONICLE Abstract

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The parts manufacturing companies should select a proper strategy according to their current and future environmental conditions and capabilities to survive and thrive in competitive market. To help the companies to select the best strategy the current paper proposes a model. The model is developed using a number of strategic tools, including TOPSIS, SWOT analysis and Six Paths Framework to Formulate Blue Ocean Strategy. Finally, based on the study results, the paper proposes the best strategy for Salim Company. Although this paper covers the case of one company, the model presented here can help other companies to select the best available strategy

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#### Introduction

Many businesses fail because of the lack of strategic and creative thinking. Rapid environmental and technological changes in the modern world have necessitated knowledge development. Uncertainty arising from environmental changes urges undeniable necessity for strategic planning. Strategic planning analyzes the key environmental risk factors and provides appropriate options for achieving the objectives. The most important factors to consider in strategic planning include size of organization, type of management, complexities of environmental conditions,

complexities of production process, variety of problems and goal planning system. The application of the strategic programming has many benefits for an organization including that it informs about a problem before it occurs, facilitates the process of identifying the opportunities, provides a competitive advantage, and helps to achieve the predetermined goals.

Industrial sector is one of the key economic sectors. As Iran is seeking to limit its dependence on oil and trying to increase non-oil exports, industrial sector is of particular importance because the activity of other sectors depends on it.

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Only parts manufacturing industry has generated more than 6% of total employment in the industrial sector in recent years. Unlike other studied macro indicators, employment in the parts manufacturing industry had an upward trend from 2001 to 2011. Thus, it plays an important role in the country's economy creating job opportunities in this sector and decreasing the unemployment rate among young educated individuals. The exports of parts by the manufacturing industry have been lower than the imports to the country. In recent years, that is from 2011 to 2014 (except 2013), the parts manufacturing industry not only failed to sustain the uptrend of the previous years, but also could not apply the created opportunities because of the threefold increase in the exchange rate. The export value of the parts manufacturing industry of the country (except some years in which it reached to a definite point of \$140 million) decreased from \$100 to \$80 million in 2014. In addition the place of parts manufacturing industry in total industrial exports of the country faced a downtrend in past years reaching 2.0 percent from 68% in 2010. Investigation of the parts manufacturing industry indicates that its decline accelerates. In recent four years 100 units in the industry has been closed. As a result the unemployment of the country will grow considering the high share of this industry in the employment. It is necessary to increase the share of the Islamic Republic of Iran in the international markets, which is very small in comparison with other countries. Parts manufacturing companies need to change their current strategies and select the ones that will fit present situation and will improve their state. Therefore, the main objective of this research is to develop an appropriate strategy for the parts manufacturing companies based on the case of Salim Engineering Company using the Blue Ocean approach.

To achieve the goal of the study we first identify the factors affecting the parts manufacturing industry and then analyze the internal and external factors affecting Salim Engineering Company.

## Literature Review and Research Background

Many researchers believe that strategic thinking and strategic planning are distinct processes that we need for the strategic management (Heracleous, 1998). Porter's perspective is different and it is based on analytical approach. He notes that "Strategic thinking involves two key questions: first, what is the structure of your industry and how will it change over time, and second, how is your relative position in this industry?"

Mintzberg (1994) makes a clear distinction between strategic thinking and concepts such as strategic planning. He states that strategic planning is not strategic thinking and he argues that each of them belongs to the various stages of strategy development process. According to him, strategic planning focuses on analysis and deals with determining and formulating the existing strategies. While strategic thinking focuses on a combination and provides a cohesive perspective of the institution through intuition and creativity. He claims that strategic planning is process that should occur after strategic thinking.

"Value Innovation" is a new way of thinking in the area of strategy development and implementation that will lead to the creation of Blue Ocean. Value innovation occurs only when the companies align innovation with price and cost efficiency. Value creating innovation is the foundation of Blue Ocean Strategy. Value creating innovation equally emphasizes value and innovation and is the new way of thinking about the development and implementation of strategies that will result in the creation of



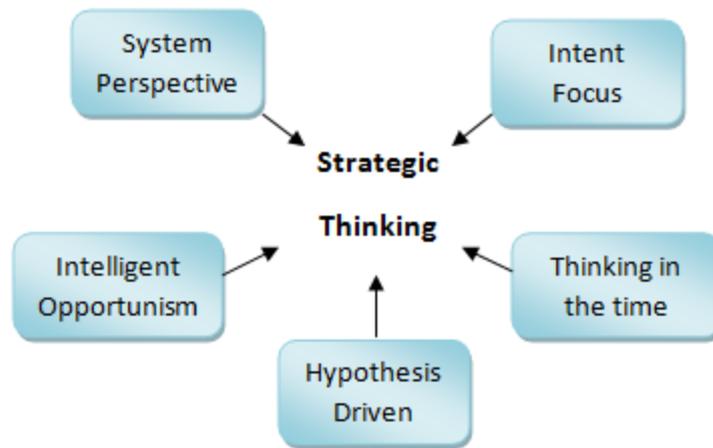


Fig 1: Components of strategic thinking (Liedtka, 1998)

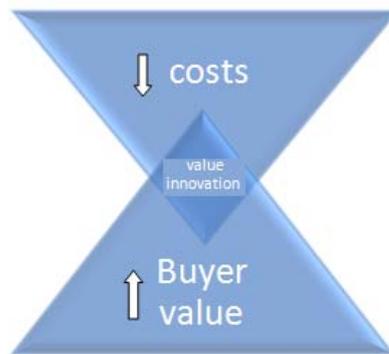


Fig. 2. Value innovation: the cornerstone of Blue Ocean Strategy (Kim and Mauborgne, 2005)

the Blue Ocean. " In today's strategic literature it is usually believed that organizations can either create more value for their customers with higher cost or create fair value with less cost. Unlike this belief, Blue Ocean Strategy is about creating more value at lower cost (Kim and Mauborgne, 2005).

Innovation in value is created when the corporate actions have a favorable effect on the cost structure and the available value for the buyers.

Table 1. Comparing the value of innovation and competitive strategies (Kim and Mauborgne 2005)

Strategy	Cost		Value
Differentiation	High		High
Low cost	Low		Acceptable
Value Innovation	Low		High

Blue Ocean idea was first offered by Professor Hill (1988) at Michigan State University. He claimed that Porter's idea was incomplete, because differentiation may mean cost leadership and the company, which provides its product at a lower price, had in fact an aspect of the differentiation strategy. He points out that in order to achieve a sustainable competitive advantage; the companies must apply a combination of cost leadership and differentiation strategies (Hill, 1988).

Professor Ridderstrale and Nordstrom have also raised this issue. They state that: competitiveness as a strategy does not succeed and companies need to develop strategies that create excitement (Nordstrom and Ridderstrale, 1999). Therefore, strategic management has

focused on the areas of innovation and creativity in recent years. Blue Ocean Strategy is one of the most important developments which led to a revolution in strategic area. The Blue Ocean approach is based on the assumption that the scope and structure of the industry is not fully defined and determined and can be rebuilt or renovated by industry actors. New age entrepreneurs can create a predictive vision through breaking the existing patterns and structure. Value innovation is the infrastructure of Blue Ocean Strategy. For this reason it is called as value innovation where the companies neglect competition rather than focusing on competitive struggle, and they do this through creating value for the buyers and open new and in competitive space in the market (Kim and Mauborgne, 2005).

The global market is composed of two oceans: Red Oceans and Blue Oceans. Red Oceans include all the available industries. They are known in the market. Blue Oceans are the industries that do not exist yet, and are unknown in the market. In Red Oceans, industry boundaries are defined and accepted, and the competition rules are clear. In Red Oceans, companies attempt to achieve better performance than their competitors, and thus gain a larger share of the market. Since Red Oceans have many people (industries in which there are many competitors), the chance of profitability and growth is lower in them. In Red Oceans, the deadly competitions among the firms, has made the ocean water red and bloody. On the contrary, no gain has been obtained from Blue Oceans and there is no competitor, therefore, the Blue Oceans have a great potential for growth and profitability and there is a large potential demand for the products and services of these oceans. Blue Ocean can specify the rules and boundaries of the industry. Although some Blue Oceans are created beyond existing industry boundaries, most of them have been

**Table 2.** Comparison between Red and Blue Ocean Strategies (Kim and Mauborgne, 2005)

<b>Red Ocean Strategy Focuses on Current Customers</b>	<b>Blue Ocean Strategy Focuses on Non Customers</b>
Compete in existing markets	Create uncontested market place
Beat the competition	Make the competition irrelevant
Exploit existing demand	Create and capture new demand
Make the value-cost trade off	Break the value-cost trade off
Align the whole system of a company` s activities with its strategic of differentiation OR low cost	Align the whole system of company` s activities in pursuit of differentiation AND low cost

created in the red oceans through expanding the existing industry boundaries. In Blue Oceans, competition is meaningless because laws have not yet been formulated (Kim and Mauborgne, 2005).

The Blue Ocean Strategy was defined by Kim and Mauborgne as “the non-competitive markets in which competition is unimportant” (Kim and Mauborgne, 2004). The consequences of the Blue Ocean strategy are the generation of strong growth and high profits for the company through new market conditions where there are no new competitors and valid competition rules. Therefore, it facilitates excess information supply, provides an opportunity to predict and estimate consumers’ habits in a changing environment (Shih et al., 2010; Alzua-Sorzabal et al., 2013) and provides cost efficient tools to transfer information to decision-makers (Teo and Choo, 2001). As the establishment of a parts manufacturing



unit requires relatively low capital, a large number of investors and producers enter this field every year, and this increases the competition in this sector. Thus, the managers of parts manufacturing companies should select an appropriate strategy to remain in competitive.

Chang (2013) in his article investigated the market of LED bulbs in Taiwan. The industry of light emitting diodes (LED), is a key focus of the green industrial policy in Taiwan. After the rapid development in recent years, the LED lighting industry has created the necessity of a lot of equipment in daily life and increased competition. The study applies five competitive forces model of Porter and analysis of SWOT to find the key success factors for LED lighting manufacturers and provides recommendations for the development of Taiwan's LED Lighting industry based on the case study of Company A. The study finds that company A can create a BO market and achieve profitability using innovation and differentiation strategy through providing fast services, flexible design, improved integration, and customized products.

In another study, small and medium sized PC manufacturers, facing fierce competition by large PC manufacturers, are considered. These companies employ appropriate strategies of Blue Ocean approach, such as settings and reviewing the production, marketing; entering low end market, reducing width, depth and length of the production line, removing the investment in research and development, generalizing low allocation computers, replacing Windows with Linux which is cheaper. (Li, 2012). Investigating the results of the research, Afshar (2010) indicates that Blue Ocean strategy will be profitable through new value creation and cost reduction.

Rawabdeh (2012) conducted a case study of the implementation of Blue Ocean Strategy in a private company in a highly

competitive market in Jordan. The author stated that Blue Ocean Strategy is a pattern consistent with strategic thinking in the field of creating new industries and markets in which demand is created rather than being fought for, and the competition is irrelevant. He used different tools and techniques such as value curves, the six-path approach, four-action framework, desirability matrix, integrated analysis, cluster analysis etc. to suggest strategies for the company. The most important strategy was identification of several new products that would develop new markets for the company.

The Blue Ocean Strategy provides a systematic approach to escape Red Ocean and bloody competition. Instead of competing in the existing industries, the Blue Ocean strategy equips the companies with analytical frameworks and tools to create their own Blue Ocean through human resources and the competitive marketplace. Therefore, the creation of Blue Oceans is a challenge. There is also another challenge with the same importance and it is the manner of implementing these ideas in practice and in every organization. A large study suggests that the introduction of new products can increase the long-term financial performance of a company and its market value. Therefore, the importance of developing a new product is emphasized in BO strategy (Singh, 2014).

The managers often struggle to determine why their competitors perform better. Kim and Mauborgne (2005) applied the strategy canvas to check whether their company underperforms because of an improper implementation of a false value proposition or Incorrect methods of value creation. When issues related to the value creation and the activities related to its implementation are properly diagnosed, the strategic value curve analysis helps to develop recommendations for improving



company profitability (Sheehan & Bruni-Bossio, 2015).

Lindica et al. (2012) offer a new approach that provides a successful business strategy framework - Blue Ocean Strategy - to discover perfect conditions for economic growth. This article is based on the empirical study of two successful businesses Slovenian and Amazon.com. The findings indicate that economic policy should focus on industrial cooperation instead of size of the companies, industries, and business activities.

One of the main problems of the parts manufacturing industry of the country, is the large number of manufacturers in the country, mostly small and with limited technological capabilities that need support to grow. Therefore, considering global experience of parts manufacturing industry, especially the integration of large global corporations, there is no choice but to integrate the civil parts manufacturing companies.

### Research Methodology

This study is descriptive in terms of data collection. To collect the data library method (books, articles, journals) and field study (questionnaire) have been used. Considering the purpose of the research, it is an applied research.

The research was conducted in two stages. First, to extract the factors affecting the parts manufacturers in Iran, interviews with the authorities, experts, and university professors were held. The results of these interviews were further extracted to form a questionnaire containing 27 questions. The questionnaires then were distributed among the sample population. The population of this study consists of managers of parts manufacturing companies located in Tehran and Semnan. The statistical population was selected through judgmental sampling because of the small size of population. Following, to provide the right strategy for Salim parts

manufacturing company, the internal and external factors of the company were identified.

The following tools along with TOPSIS technique of Blue Ocean Strategy have been used in the study:

- Strategy canvas - to define the strategic situation of Salim Company
- Tetrahedral network - to create the appropriate changes in the factors affecting the parts manufacturing industry
- Six-path - to create a pattern of unrivalled markets of every industry in 6 ways: functional and emotional attributes of the buyers, complementary products, exploration of strategic groups, alternative industries, exploration between the customer and non-customers chains, exploration of time.



**Fig. 3.** Conceptual Model for the Offered Strategy with the Approach of Blue Ocean Strategy  
The study included the following processes

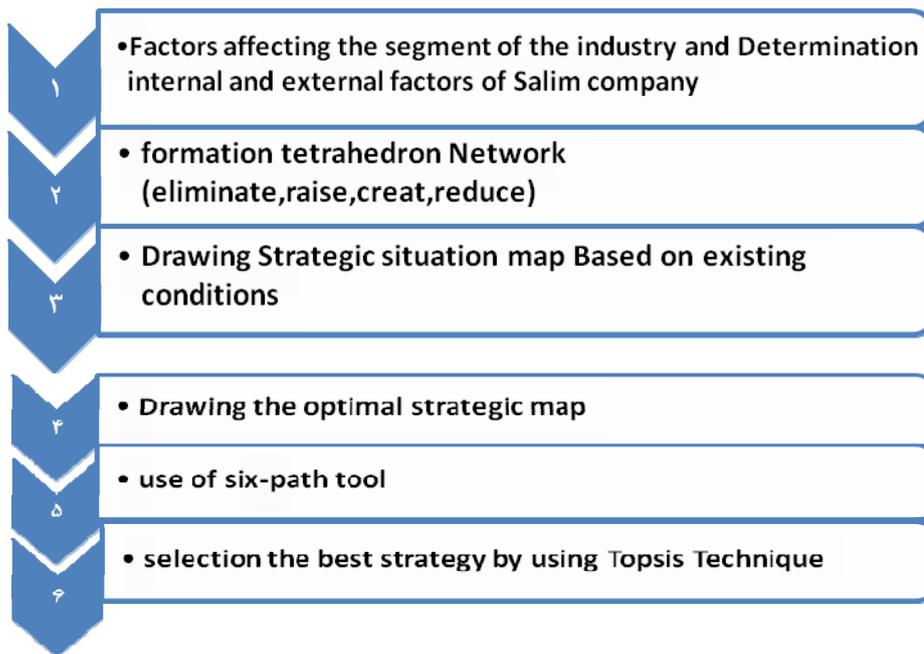


Fig 4. Stages of the work

**Findings**

Initially ten factors affecting the parts manufacturing industry were identified to develop a strategy canvas.

Suppliers	Road availability	Liquidity	Number of returns	Customer variety
<ul style="list-style-type: none"> <li>•Domestic</li> <li>•Foreign</li> <li>•Self-reliance</li> </ul>	<ul style="list-style-type: none"> <li>•Customers</li> <li>•Suppliers</li> </ul>	<ul style="list-style-type: none"> <li>•Bank loans</li> <li>•Receiving manner of the demands</li> </ul>	<ul style="list-style-type: none"> <li>•Number</li> <li>•Reasons</li> </ul>	<ul style="list-style-type: none"> <li>•Customer types</li> <li>•Manner of attracting</li> </ul>
The activities of the units	Technology power	Staff	Customer satisfaction	product variety
<ul style="list-style-type: none"> <li>•The strategic unit</li> <li>•Educational unit</li> <li>•Marketing unit</li> <li>•Research and development unit</li> </ul>	<ul style="list-style-type: none"> <li>•Machinery</li> <li>•Technical Laboratory</li> <li>•Internet</li> </ul>	<ul style="list-style-type: none"> <li>•Interacting with the management</li> <li>•Commitment</li> <li>•Expertise</li> <li>•Salary</li> </ul>	<ul style="list-style-type: none"> <li>•After sales services</li> <li>•Delivery time</li> <li>•Contract</li> <li>•Customer loyalty</li> <li>•Handling complaints</li> </ul>	<ul style="list-style-type: none"> <li>•Number</li> </ul>

Fig 5. The factors affecting the parts manufacturing industry

Then, the internal (strengths and weaknesses) and external (opportunities and threats) of Salim Company were analyzed.

- Lack of written procedures and rules of conducting projects
- The lack of steady customers
- Inopportune time for product delivery to the customer

### Internal factors

#### Strength

- Special skills in designing automatic welding equipment
- Innovation
- Use of modern technologies in the field of engineering
- Specialized personnel
- The willingness of managers to plan strategically
- History and reputation of the company particularly in the industry
- ISO certification
- Production of raw materials
- Good quality of product
- Reasonable price of the product
- Unanimity in decision-making
- Up to date machinery and measurement tools

#### Weakness

- Weak research and development unit
- Inappropriate use of production capacity
- Lack of loyalty and commitment of workers
- Lack of marketing and promotional programs
- Weak financial management system
- Weak cash liquidity
- Non-optimal incentive system to enhance employee performance
- Failure to employ management approaches, strategic principles and long term planning
- Lack of educational programs for the management and staff team

### External factors

#### Threat

- Increasing currency price
- The large number of competitors in the country
- High interest rates and inflation in the Community
- Increasing labor wages
- Lack of allocating subsidies to producers
- The large number of producers in a particular part (large number of competitors)
- Unfair contracts
- Increased rate of some fuel elements
- The large number of the crimes by Taxation Affairs Organization
- Lack of a strong relationship between the parts manufacturing companies for the synergistic capabilities
- Geographical distribution of parts manufacturing companies

#### Opportunity

- Sanctions
- Distribution centers of the projects outside the tender formalities
- The need of most industries to designing and producing equipment
- Governmental support of domestically manufactured goods
- The extent of activities
- Young cheap labor and high unemployment rate



**Table 3.** Factors affecting the success of the parts manufacturing industry in Iran

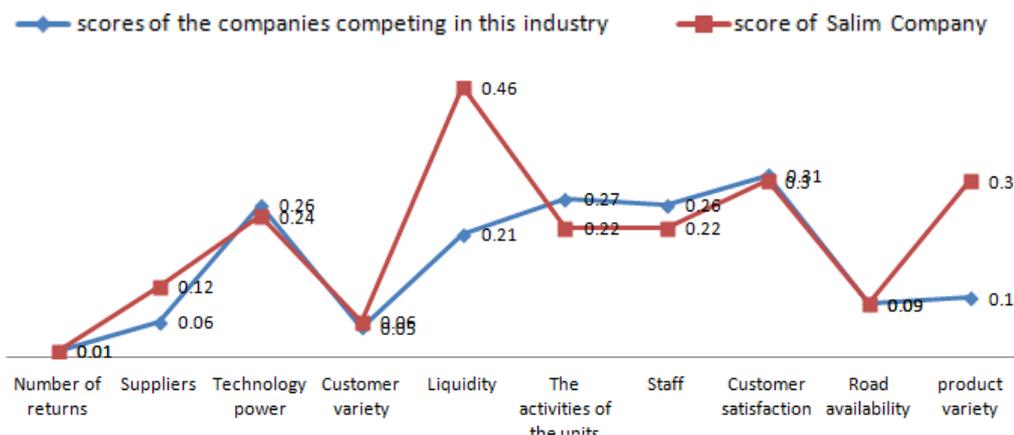
Coefficient score	Coefficient	The mean score of the companies	Coefficient score	Performance score	Effective factors
0.03	3	0.09	3	0.09	Road availability
0.11	2.9	0.31	2.8	0.30	Customer satisfaction
0.09	2.9	0.26	2.5	0.22	Staff
0.1	2.7	0.27	2.2	0.22	The activities of the units
0.14	1.5	0.21	3.3	0.46	Liquidity
0.1	0.5	0.05	0.6	0.06	Customer variety
0.09	2.9	0.26	2.7	0.24	Technology power
0.11	0.6	0.06	1	0.11	Suppliers
0.07	0.25	0.01	0.2	0.01	Number of returns
0.05	2	0.1	6	0.3	Product variety

Further, coefficients of each effective factor were normalized by the experts according to the importance of efficiency. Each factor includes at least two measurable items, which are scored based on Likert scale. The score of Salim Company and the other competitors are indicated in Table 3.

The strategic situation map is a decision-making and analytical tool, which is used as a basic framework for the creation of Blue Oceans. This tool helps determine the status of the company's

strategy as compared to its competitors. Strategy canvas helps decision-makers to analyze current market condition. This tool is one of the most important tools of the Blue Ocean Strategy (Kim and Mauborgne, 2005). Therefore, the current situation of the company in comparison to its competitors is analyzed taking into account the factors affecting lower costs, through applying the changes in the effective factors including deletion, creation, decrease and increase of the effective factors..

Through analyzing the score of each factor for Salim Company and comparing it with the scores of the companies competing in this industry, the above strategic map was obtained. As it can be observed, returns percentage, the customer variety, technological power, road accessibility and customer satisfaction are entirely overlapping, while suppliers and the units' activities with a slight difference are placed in strategy canvas. Product variety and liquidity are the factors that have a better rank than the others with a difference of (0.2) and (0.25). This means that in more than 80% of the factors, the competitors' curve is overlapping Salim Company's curve and this emphasizes the intense competition in the Red Ocean of parts manufacturing industry.



**Fig. 6.** Strategic situation of Salim Company

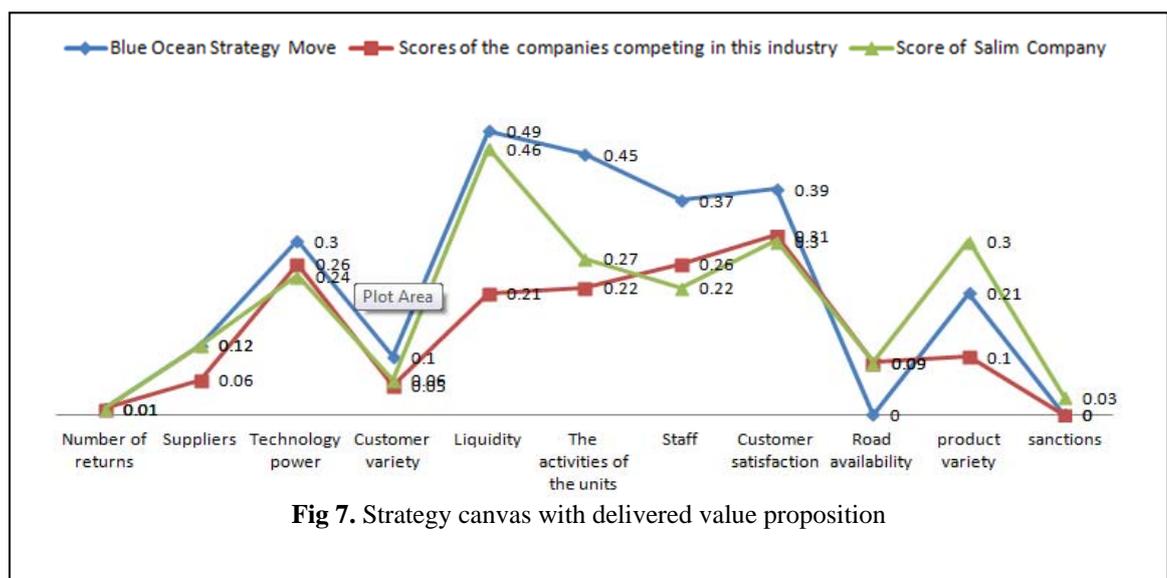


**Table 4.** The results of tetrahedral network

Creation	Reduction
Creating an online sales site and a portal for introducing the Company Integration and synergy of parts manufacturing companies Creation of new non-competitive markets through the relationship with knowledge based companies and technology centers such as spin off and start up Establishing sanctions Creating a strategic unit	Reducing currency dependence Reducing product variety and focusing on the production of specific products Reducing dependency on certain customers Reducing product delivery time to customers
Deletion	Increase
Deletion of the services in which there is no space to act and are not profitable according to the current situations of the business Deletion of the inefficient managers and replacing them with new complexes and deletion of managers which are resistant to changes	Increasing the number of developed educational programs for the managers and the personnel Increasing the activities of research and development units in order to determine producible products for the knowledge-based companies Increasing the motivation of the employees through creating interactions between the employees and the manager Increasing liquidity through the sale of intellectual property rights of the required projects of the companies according to high designing ability Increasing the activities of marketing unit such as participation in specialized exhibitions, the use of road billboards and television advertisements

There is another key tool for creating Blue Oceans that complements the four-step decision-making model. This tool is a list of things, which should be removed,

reduced, increased, and created from the set of engineering activities of Salim Company, the results of which are provided in Table 4



**Table 5. Results of six-path framework**

The open tracks of designing boundaries	The results obtained from analysis
Functional and emotional features of the customers	In the field of military industry, we usually follow functional features and there is no room for emotional features, however, the company can both maintain the quality of its products in any industry and focus on packaging. In addition, sending catalogs relevant the history of designing and manufacturing past products can be a factor in attracting customers.
Complimentary products	Due to the well designing power of the company in offering custom designs of the complementary products, this company could sell the right to intellectual property of the produced designs and provide advice on designing in the area of manufacturing new parts in other areas of the market including the military and agriculture industry.
Exploration of strategic groups	Strategic groups include companies existing in an industry that follow a similar and consistent strategy. Through analyzing the strategic groups we come to the conclusion that the parts manufacturing companies have a small share in foreign markets. They only focus on the domestic markets, particularly car producers and usually have poor marketing to deliver the product to the global market. Therefore, any marketing activities in the field of reinforcing foreign marketing for Salim Company and providing quality products overseas can create an unrivaled market for this company. The focus of this parts manufacturing company is only on the military industry and the increasing dependence of this industry to automakers indicates the fierce competition in this market. The focus of Salim Company to produce a quality product to enter the global markets and export can differentiate Salim Company from its competitors.
Focusing on alternative industries	Considering the importance of energy and power in today's automotive industry and the tendency to manufacture environmentally friendly cars, such as electric and hybrids vehicles, the entrance of parts manufacturing industries to this market can make a new market for Salim Company.
Exploration among customers and non-customers chain	By exploring the customer chains of the parts manufacturing companies, the decrease of the customers of automaker and focusing on other customers can create a new market. In the case of Salim Company according to the strengths in designing and innovative spirit of the company and better liquidity than other competitors, the possibility of making relationships with the knowledge-based companies and implementing and designing new ideas could be an important factor for creating a new customer for the company.  This company can also participate in designing and manufacturing agricultural parts.
Exploration over time	All industries follow foreign trends and events, which have great effects on their business over time. Sanctions are one of the factors that have a significant impact on parts manufacturing industry. However, this negative factor can be used to produce the banned domestic product.

The first principle of Blue Ocean strategy is to reconstruct market boundaries in order to be separated from the competitive market and renew the boundaries of the competition market.

Based on the discussions and analyzes conducted by experts and by using four-dimensional network and six-track tools, the desired strategy map is developed as indicated in Figure 6.



**Table 6.** Determining the best strategy using TOPSIS technique

Strategies of Salim engineering company with the Blue Ocean strategy approach	
1	Production of parts for new electric-Hybrid automobiles and exporting the mentioned products to the countries manufacturing electric automobiles
2	Making a relationship with the knowledge based companies to produce the product of their ideas and conducting product design consultations
3	Using electronic business models in marketing and sales units
4	Providing liquidity from non-bank resources using strategies such as selling the shares of the company, entering into the stock market, attracting investment and domestic and foreign investor and selling surplus facilities and equipment
5	Orientation towards selling the design of the parts to the necessary companies and producing the banned part
6	Integration and synergy of parts manufacturing companies and organization of retail stores of spare parts in the market and attempting to form and develop specific parts manufacturing towns

Considering all above analysis, the following strategies are proposed for Salim Company.

1. Production of new machinery parts. Salim Company can produce and export the necessary parts of new electric-hybrid vehicles through promoting and reinforcing the required infrastructure. The presence of the equipped machinery, the ability of the company to apply software technology, the spirit of innovation and optimal use of all the production capacity justify the necessity of this strategy.
2. Relationship with the knowledge-based companies.
3. Use of e-business models: e.g. designing a site for online sales, electronic communications with suppliers, online advertising.
4. More liquidity through selling shares in the stock market, attracting investors etc.
5. Use of sanctions as an opportunity to produce banned products.
6. Integration and synergy of parts manufacturing companies. The use of the wrong policies by Economic Council and the use of cost plus price basis made a huge profit for the parts manufacturers for years. As a result, each parts manufacturer divided itself into a number of smaller parts manufacturers. In a few years, the number of parts manufacturers increased to more than

thousands from 30 with low technological capabilities. Individual activities cannot ensure economic development in various industries, including the parts manufacturing industry. The main motivation in the parts manufacturing network is to achieve synergy and this requires the exchange of human resources, knowledge, and technology. In addition, the organization of retail stores of spare parts and the establishment and development of specialized parts manufacturing towns with other countries can flourish the parts manufacturing industry of the country.

Multi-criteria decision is an approach, which deals with ranking and selecting a number of options or alternatives from among a number of different solutions and options. This approach in order to compare provides an effective framework for assessment using multiple criteria. Among these methods, TOPSIS method provides a very good technique for modeling issues with qualitative criteria as well as quantitative criteria, which will have a wide range of selection, assessment, planning, development, decision-making (Maleklyet al., 2010).



	c <sub>1</sub>	c <sub>2</sub>	c <sub>3</sub>	c <sub>4</sub>	c <sub>5</sub>	c <sub>6</sub>	c <sub>7</sub>	c <sub>8</sub>
R <sub>1</sub>	0.492	0.494	0.49	0.481	0.441	0.424	0.572	0.409
R <sub>2</sub>	0.492	0.494	0.49	0.428	0.33	0.424	0.477	0.545
R <sub>3</sub>	0.393	0.494	0.49	0.374	0.33	0.303	0.381	0.477
R <sub>4</sub>	0.295	0.485	0.163	0.481	0.441	0.424	0.477	0.341
R <sub>5</sub>	0.344	0.37	0.381	0.267	0.441	0.363	0.19	0.272
R <sub>6</sub>	0.393	0.309	0.326	0.374	0.441	0.485	0.19	0.34

R: strategy

C: Effective factors

After calculating ideal with the following formulas, the distance from positive and negative ideals were determined. In this step, the relative proximity of each option is calculated with

the ideal solution. Euclidean distance of each option from the ideal positive and negative will be calculated with the following formula.

$$f^+ = \{0.059 - 0.049 - 0.053 - 0.072 - 0.048 - 0.058 - 0.045 - 0.002\}$$

$$f^- = \{0.035 - 0.018 - 0.017 - 0.040 - 0.036 - 0.036 - 0.015 - 0.005\}$$

$$d_{i+} = \left\{ \sum_{j=1}^n (v_{ij} - v_j^+)^2 \right\}^{0.5}; i = 1, 2, \dots, m$$

$$d_{i-} = \left\{ \sum_{j=1}^n (v_{ij} - v_j^-)^2 \right\}^{0.5}; i = 1, 2, \dots, m$$

$$d_1^+ = \sqrt{0+0+0+0+0+(0.050-0.058)^2+(0.004-0.002)^2} = \sqrt{0.000064+0.000004} = 0.0082$$

$$d_2^+ = \sqrt{0+0+0+(0.064-0.072)^2+(0.036-0.048)^2+(0.050-0.058)^2+(0.038-0.045)^2+(0.005-0.002)^2} = 0.0180$$

$$d_3^+ = \sqrt{(0.047-0.059)^2+0+0+(0.056-0.072)^2+(0.036-0.048)^2+(0.036-0.058)^2+(0.030-0.045)^2+(0.004-0.002)^2} = 0.035$$

$$d_4^+ = \sqrt{(0.035-0.059)^2+(0.018-0.049)^2+(0.017-0.053)^2+0+0+(0.050-0.058)^2+(0.038-0.045)^2+(0.003-0.002)^2} = 0.051$$

$$d_5^+ = \sqrt{(0.041-0.059)^2+(0.037-0.049)^2+(0.041-0.053)^2+(0.040-0.072)^2+0+(0.043-0.058)^2+(0.015-0.045)^2+0} = 0.050$$

$$d_6^+ = \sqrt{(0.047-0.059)^2+(0.030-0.049)^2+(0.035-0.053)^2+(0.056-0.072)^2+0+0+(0.015-0.045)^2+(0.003-0.002)^2} = 0.042$$

$$d_1^- = \sqrt{(0.059-0.035)^2+(0.049-0.018)^2+(0.053-0.017)^2+(0.072-0.040)^2+(0.048-0.036)^2+(0.058-0.036)^2+(0.045-0.015)^2+(0.002-0.005)^2} = 0.068$$

$$d_2^- = \sqrt{0.0005+0.0009+0.0012+(0.064-0.040)^2+0+0.0001+(0.038-0.015)^2+0} = 0.060$$

$$d_3^- = \sqrt{(0.047-0.035)^2+(0.049-0.018)^2+(0.053-0.017)^2+(0.056-0.040)^2+0+0+(0.030-0.015)^2+(0.004-0.005)^2} = 0.051$$

$$d_4^- = \sqrt{0+0+0+(0.072-0.040)^2+(0.048-0.036)^2+(0.050-0.036)^2+(0.038-0.015)^2+(0.003-0.005)^2} = 0.041$$

$$d_5^- = \sqrt{(0.041-0.035)^2+(0.037-0.018)^2+(0.041-0.017)^2+0+(0.048-0.036)^2+(0.043-0.036)^2+0+(0.002-0.005)^2} = 0.033$$

$$d_6^- = \sqrt{(0.047-0.035)^2+(0.030-0.018)^2+(0.035-0.017)^2+(0.056-0.040)^2+(0.048-0.036)^2+(0.058-0.036)^2+0+(0.003-0.005)^2} = 0.035$$



The final step is to calculate the ideal solution. In this step, the relative proximity of each option to the ideal solution is calculated. To do this, we use the following formula:

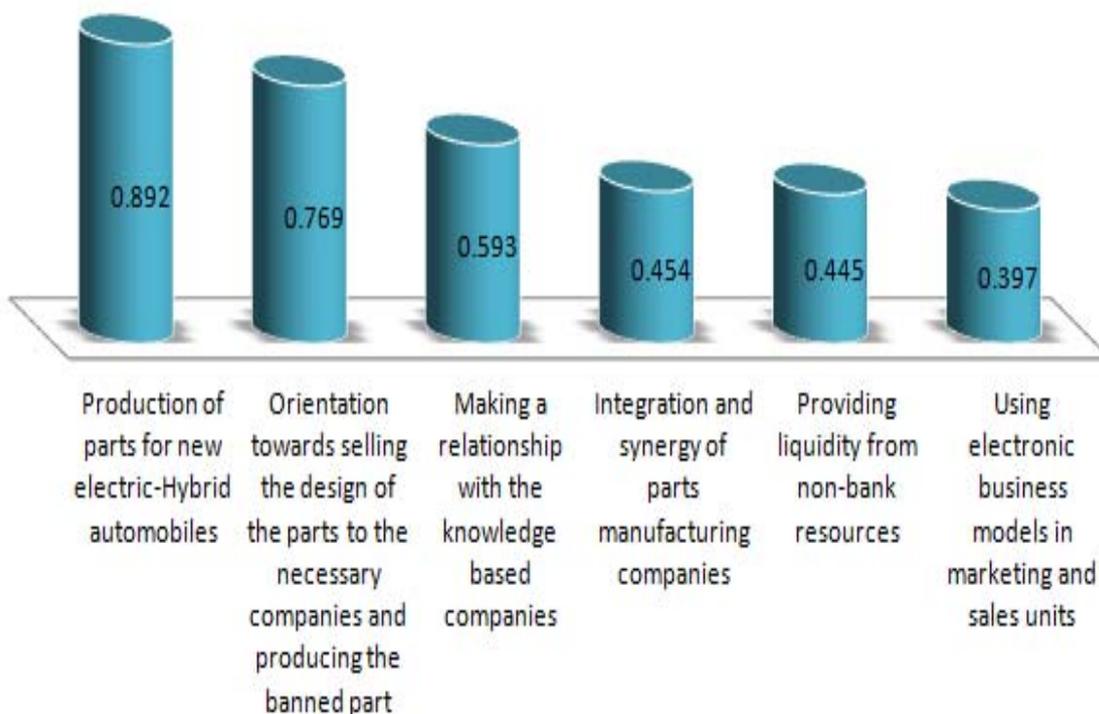
$$cl_{i^*} = \frac{d_{i^-}}{(d_{i^+} + d_{i^-})}; 0 \leq cl_{i^*} \leq 1; i = 1, 2, \dots, m$$

$$cl_1 = \frac{0.068}{0.068 + 0.0082} = 0.892 \quad cl_6 = \frac{0.035}{0.035 + 0.042} = 0.454$$

$$cl_2 = \frac{0.060}{0.060 + 0.0180} = 0.769 \quad cl_3 = \frac{0.051}{0.051 + 0.035} = 0.593$$

$$cl_4 = \frac{0.041}{0.041 + 0.051} = 0.445 \quad cl_5 = \frac{0.033}{0.033 + 0.050} = 0.397$$

Finally, the above outlined strategies are prioritized as follows:



**Figure 8.** The chart of prioritization of strategies using TOPSIS decision-making method

## Conclusion

The purpose of this research is to develop appropriate strategies to advance economic development of Salim engineering company. In order to achieve this goal the researcher tried to identify and evaluate the affecting factors on the parts manufacturing industry in Iran as well as evaluating the strengths and weaknesses and the opportunities and threats for the Salim Company. In this respect, different tools were used. Finally, a number of strategies were proposed for the company. The goal of the Blue Ocean strategy is to generate strong growth and high profits for a company through creating new market with no competitors. Therefore, the results of this study is consistent with the results of the study conducted by Shih, et al (2010), Alzua-Sorzabal et al (2013) and Teo & Choo (2001).

As it is difficult for managers to select the best strategy, blue ocean analysis tool outlined in the article is a straightforward method that managers can use to evaluate and improve their customer value propositions and delivery processes.

This study was conducted based one company and it is recommended to extend the research on more companies to ensure more accurate results.

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