



## Strategic Planning by Means of Blue Ocean Strategy in Insurance Industry, Case Study: Parsian Insurance Company in Semnan Province, Iran

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ARTICLE INFO	ABSTRACT
<p>Article History: Received 17 March 2022 Received in revised form 15 May 2022 Accepted 4 June 2022 Available online 10 June 2022</p>	<p>In strategic management, Blue Ocean refers to an environment where competition is not well defined. This can be achieved through innovation, resulting in a high-quality product that reduces production costs and adds value for the customer. The main objective of this study is to conduct a survey on how to improve the ranking of Parsian Insurance Company in Semnan Province compared to other companies using Grey Theory. The study distributed questionnaires to experts in the insurance industry to rate the importance of eight main factors, each with its own subcategories: comfort and welfare, internet services, quality of relationship, quality of services, brand, display appearance, price, and creativity. The authors aimed to assist Parsian Company in achieving first place by increasing the scores of certain factors and decreasing the scores of others based on the experts' ratings. Parsian Insurance Company can enhance its competitive advantage by improving the quality of its relationships, services, and pricing. It is important to note that creativity should not be sacrificed in this effort. Additionally, the company should consider introducing supplementary services to further increase its market share.</p>
<p>Keywords: Strategic management, Blue Ocean Strategy, Insurance Industry.</p>	

### 1. INTRODUCTION

Strategic planning is the process of organizing an organization's resources and efforts to achieve long-term goals while considering internal and external limitations and facilities. Its comprehensiveness directs other operational plans of the organization, facilitating integral anticipations according to the organization's facilities [1]. In strategic management, the term 'Red Ocean' refers to an industry with pre-defined boundaries and regulations. The ultimate goal in this environment is to surpass competitors and gain the largest market share. However, as the number of competitors increases, the profit share decreases, leading to intense competition among all companies in the industry. On the other hand, Blue Ocean is a new concept that offers infinite market space. It emphasizes the creation of demand and the potential for progress through value innovation. In contrast, Red Ocean focuses on reducing delivery time and cost while improving product quality to compete in the market. However, the new method emphasizes that quality improvement is necessary but not sufficient [2], [3]. To achieve a blue ocean, the Four Actions Framework

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and Strategic Canvas are useful tools in Blue Ocean Strategy. The Strategic Canvas presents the key elements in an industry and the position or rank of various companies in a schematic diagram. The Four Actions Framework emphasizes four actions: 'raise, create, eliminate, and reduce' [4]. This study implements a combination of the Four Actions Framework, Strategic Canvas, and Grey Theory for Parsian Insurance Company in Semnan Province. Previous studies did not use these three elements together.

## **2. LITRETURE REVIEW**

The Blue Ocean approach has been applied in various research fields, including the fruit and vegetable market, computer games, hotel industry, transportation, banking, and insurance. For example, Wubben proposed this method to address the saturation of 27 vegetable markets in Europe [5, 6].

Additionally, Hollensen conducted a survey on the performance of three well-known companies in the computer games industry: Play Station3, Nintendo Wii, and Microsoft Xbox 360. These three companies competed in the console game market. The Wii game console produced by Nintendo Corporation sold exceptionally well in Japan, Canada, South Africa, and Europe between 2005 and 2012. In response to declining sales, Nintendo changed its strategy by producing handheld consoles that did not require a television. However, in recent years, Nintendo's market position has been threatened by other competitors. The idea that blue oceans do not remain blue forever is presented, and it is noted that the concept has been adopted in other fields.

This passage discusses the concept of blue oceans and its application in the hospitality industry. Specifically, the Four Actions Framework is used in the hospitality industry in Taiwan to create a Blue Ocean strategy by eliminating obstacles and reducing certain facilities and standards. The hotel and hostel environment has undergone significant changes due to customer demand and changes in purchasing behavior [10]. Additionally, recent economic conditions and global environmental changes have made room space management more complex. Therefore, providing high-quality products and services is a great challenge for hotel owners [11].

Blue Ocean strategy can also be applied in the agricultural industry. While most businesses tend to focus on digital marketing, there is still a risk of crop decay and damage during transportation. Therefore, a reliable distribution system is crucial for such businesses [12].

In Iran, studies have also been conducted on the Blue Ocean strategy. Abdi conducted a study on the impact of Blue Ocean on the performance of banks in Iran, using Mellat Bank as a case study. The author's work was based on data collection and statistical modeling. The questionnaires were designed with five items: making competition meaningless, creating a competition-free environment, breaking the substitution relationship between cost and value, integrating all systems within the organization, and creating and acquiring new requirements for Blue Ocean. According to the results, there is a direct relationship between market performance and the Blue Ocean strategy [13].

The study examines the potential for creating a competition-free environment within the insurance industry. The study then compares the performance of insurance companies.

According to research, insurance companies are currently operating in a saturated market and should strive to break through barriers to establish a new market space. Aghazadeh's objective is to identify and prioritize the factors that provide customers with a competitive advantage. This is a descriptive survey that utilizes a questionnaire method and strategic canvas. Based on the survey results, the most significant factors in the insurance industry are: 1) Comfort and Welfare, 2) Internet Services, 3) Quality of Relationship, 4) Quality of Services, 5) Brand, 6) Display Appearance, 7) Price, and 8) Creativity. The survey's Cronbach's alpha coefficient is 0.7, indicating the reliability of the questionnaires.

Additionally, this survey conducted statistical analyses including analysis of variance, HSD, and one-sample t-test. The statistical population consisted of all insurance branches in Tehran, the capital of Iran, which were selected through simple random sampling. A total of 370 questionnaires were distributed, and 232 of them were thoroughly filled out and returned. The survey utilized a Likert scale with seven options, and the average score was 4.

The results indicate that all insurance industries perform similarly in all aspects except for display appearance. This suggests that creativity is not utilized in these companies and there are significant differences between global and domestic indices. Finally, the Four Actions Framework was employed, revealing that activities such as internet

services, discounts, clean and neat dressing, and the status of creativity should be improved. The author suggests the creation of multi-rate insurance policies for customer convenience. Another beneficial solution could be the implementation of mobile services and addressing the issue of insurance policy [2]. This survey serves as the basis for the author's research.

### **3. HYPOTHESES OF THE RESEARCH**

The only factors influencing the insurance industry are the 8 factors mentioned above in Aghazadeh's study. It was published in Iranian Journal of Insurance Research in 2015. His work is the basis of this research.

### **4. METHODOLOGY**

This study is applied research based on a survey with analytical mathematics. The statistical population includes all staff members of insurance branches in Semnan province, Iran. The sample consists of clerks from Parsian Insurance Company, Novin Insurance Company, and Iranian Journal of Insurance Research who had sufficient information and did not refuse to participate in the interview. The clerks were interviewed to assign scores to the 8 important factors in the insurance industry, as mentioned above. The scores range from 0 to 1, with the most important factor receiving a higher number. They then assigned scores to each insurance company in Semnan province based on their strength and capability in these factors. Based on these scores, insurance companies were classified as either mediocre or high grade.

These three segments, including Parsian Insurance Industry, are considered as distinct groups. Using Grey Theory formulas and a strategic canvas, insurance companies are ranked. The goal is to make Parsian Insurance Company the top-ranked company by improving its scores in certain factors. The strategic canvas and four action framework are also presented to create a blue ocean.

### **5. RESEARCH VARIABLES**

#### **5.1. Grey Theory**

When making a decision, it can be challenging to determine the most desirable option due to the involvement of multiple factors. If only one factor is considered, prioritizing is straightforward. However, when both quantitative and qualitative factors are involved, the decision-making process becomes more complex. When faced with potentially conflicting priorities, determining the most important factors can be challenging. To tackle this problem, multi-criteria decision-making solutions can aid in selecting the best option from a set of choices based on multiple indicators [14, 15].

Grey Systems are named based on their colors. A system with explicit information is referred to as white, while a system with ambiguous or unknown information is referred to as dark. A system in which there are both known and unknown pieces of information is considered a grey system [16].

Grey Theory is an extension of Fuzzy Theory that deals with situations where there is insufficient information. The main difference between Fuzzy Theory and Grey Theory is that in grey systems, having limited data is sufficient.

In Fuzzy Theory, knowledge about the membership function [16] is mandatory, even though it does not require a lot of information [17].

##### *5.1.1. The Definition of Grey Number*

A Grey Number is a number that is not explicitly defined, but its range is known. In other words, it falls within a range of numbers. For example, if 'X' is the universal set, then the complex 'G' from the universal set X will be represented with two symbols.

$$\left[ \begin{array}{l} \bar{\mu}_G(x): x \longrightarrow [0, 1] \\ \underline{\mu}_G(x): x \longrightarrow [0, 1] \end{array} \right.$$

In this mathematical equation  $\mu_G(x) \geq \bar{\mu}_G(x)$  these two are upper and lower limits of membership function of “G”. In an exceptional condition in which these two limits are equal, the problem will be converted to a Fuzzy problem.

### 5.1.2. Main Grey Operators

According to various papers, Moore spread out numeric range operators [18]. Operators between the two grey numbers  $\otimes G_1 = [\underline{G}_1, \bar{G}_1]$  and  $\otimes G_2 = [\underline{G}_2, \bar{G}_2]$  are shown below [19]:

$$\otimes G_1 + \otimes G_2 = [\underline{G}_1 + \underline{G}_2, \bar{G}_1 + \bar{G}_2] \tag{1}$$

$$\otimes G_1 - \otimes G_2 = [\underline{G}_1 - \bar{G}_2, \bar{G}_1 - \underline{G}_2] \tag{2}$$

$$\otimes G_1 \times \otimes G_2 = [\min(\underline{G}_1 \underline{G}_2, \underline{G}_1 \bar{G}_2, \bar{G}_1 \underline{G}_2, \bar{G}_1 \bar{G}_2), \max(\underline{G}_1 \underline{G}_2, \underline{G}_1 \bar{G}_2, \bar{G}_1 \underline{G}_2, \bar{G}_1 \bar{G}_2)] \tag{3}$$

$$\otimes G_1 \div \otimes G_2 = [\underline{G}_1, \bar{G}_1] \times [\frac{1}{\bar{G}_2}, \frac{1}{\underline{G}_2}] \tag{4}$$

If “k” is a positive real number, it can be multiplied by a complex like “G” in this way:

$$k. \otimes G = [k\underline{G}_1, k\bar{G}_2] \tag{5}$$

The length of the range is calculated:

$$L(G) = [\bar{G} - \underline{G}] \tag{6}$$

The degree of grey possibility is calculated by below equations. In other words, the possibility that  $G_1 \leq G_2$ :

$$P(G_1 \leq G_2) = \frac{\max[0, L^* - \max[0, \bar{G}_1 - \bar{G}_2]]}{L^*} \tag{7}$$

$$L^* = L(G_1) + L(G_2) \tag{8}$$

Then, there could be 4 possibilities:

$$\text{If } \underline{G}_1 = \underline{G}_2 \ \& \ \bar{G}_1 = \bar{G}_2 \implies G_1 = G_2 \implies P(G_1 \leq G_2) = 0.5$$

$$\text{If } \bar{G}_1 < \underline{G}_2 \implies G_1 < G_2 \implies P(G_1 \leq G_2) = 1$$

$$\text{If } \underline{G}_1 > \bar{G}_2 \implies G_1 > G_2 \implies P(G_1 \leq G_2) = 0$$

If the two grey numbers have interference in the numerical range:

$$P(G_1 \leq G_2) > 0.5 \implies G_1 < G_2$$

$$P(G_1 \leq G_2) < 0.5 \implies G_1 > G_2$$

If “k” shows the number of elites answering the questionnaires and  $\otimes W_j^k$  stands for the importance weight of each important factor in the industry, the average score of these weights will be calculated by formula number 9.

$$\otimes W_j = \frac{1}{k} [\otimes W_j^1 + \otimes W_j^2 + \dots + \otimes W_j^k] \quad (j=1, \dots, n) \tag{9}$$

$$\otimes W_j^k = [\underline{a}_j^k, \bar{a}_j^k]$$

In order to assign each grey number, the equation number 10 will be used.

$$\begin{aligned} \otimes G_{ij} &= \frac{1}{k} [\otimes G_{ij}^1 + \otimes G_{ij}^2 + \dots + \otimes G_{ij}^k] \quad (i=1, \dots, n, j=1, \dots, n) \\ \otimes G_{ij}^k &= [\underline{a}_{ij}^k, \bar{a}_{ij}^k] \end{aligned} \tag{10}$$

If the number of important factors in an industry are “n” and it is tried to make a comparison among “m” companies, based on the equation number 11, the “D” matrix will be formed initially.

$$D = \begin{bmatrix} \otimes G_{11} & \dots & \otimes G_{1n} \\ \vdots & \ddots & \vdots \\ \otimes G_{m1} & \dots & \otimes G_{mn} \end{bmatrix} \tag{11}$$

The above matrix should be normalized and  $\otimes G_{ij}^*$  should be formed in order to form the “D\*” matrix and the equation number 12.

$$\begin{aligned} D^* &= \begin{bmatrix} \otimes G_{11}^* & \dots & \otimes G_{1n}^* \\ \vdots & \ddots & \vdots \\ \otimes G_{m1}^* & \dots & \otimes G_{mn}^* \end{bmatrix} \\ \otimes G_{ij}^* &= \left[ \frac{\underline{a}_{ij}}{G_j^{max}}, \frac{\bar{a}_{ij}}{G_j^{max}} \right] \quad G_j^{max} = \max_{1 \leq i \leq m} \{ \bar{a}_{ij} \} \end{aligned} \tag{12}$$

If the factor is a subtractive one like cost and time,  $\otimes G^*$  should be calculated by the below equation.

$$\otimes G_{ij}^* = \left[ \frac{G_j^{min}}{\bar{a}_{ij}}, \frac{G_j^{min}}{\underline{a}_{ij}} \right] \quad G_j^{min} = \min_{1 \leq i \leq m} \{ \underline{a}_{ij} \} \tag{13}$$

In the end, the normalized decision-making matrix should be calculated by the equation number 13.

$$D^* = \begin{bmatrix} \otimes N_{11} & \dots & \otimes N_{1n} \\ \vdots & \ddots & \vdots \\ \otimes N_{m1} & \dots & \otimes N_{mn} \end{bmatrix} \quad \otimes N_{ij} = \otimes G_{ij}^* \times \otimes w_j \tag{14}$$

Subsequently, based on the equation number 14, the best choice will be pinpointed in the matrix.

$$\begin{aligned} M^{max} &= \{ \otimes G_1^{max}, \otimes G_2^{max}, \dots, \otimes G_n^{max} \} \\ M^{max} &= \{ [\max_{1 \leq i \leq m} \underline{a}_{i1}, \max_{1 \leq i \leq m} \bar{a}_{i1}], [\max_{1 \leq i \leq m} \underline{a}_{i2}, \max_{1 \leq i \leq m} \bar{a}_{i2}], \dots, [\max_{1 \leq i \leq m} \underline{a}_{in}, \max_{1 \leq i \leq m} \bar{a}_{in}] \} \end{aligned} \tag{15}$$

The next step is to calculate the grey possibility degree from the equation number 15.

$$P\{M_i \leq M^{max}\} = \frac{1}{n} \sum_{j=1}^n P\{ \otimes N_{ij} \leq \otimes G_j^{max} \} \tag{16}$$

Finally, after obtaining all the numbers from equation number 15, the ranking of all companies will commence. The better choice is the one with a lower grey possibility degree.

## 6. FINDINGS OF THE RESEARCH

The EFE Matrix is a useful tool for companies to identify external threats and opportunities. It is important to develop strategies based on this matrix. Each threat or opportunity is assigned a coefficient between 0 and 1 based

on its significance. A score between 1 and 4 is then assigned to the company based on these coefficients. A score of 3 or 4 is assigned for opportunities, while a score of 1 or 2 is assigned for threats. A company's score of 1 indicates a very poor status towards threats, while a score of 4 shows a proper status towards opportunities. To obtain the total score of a company, multiply each weight by the company's score in each line and sum up the last numbers in each line, as shown in Table 1. A total score above 2.5 indicates that the company is in a favorable status.

**Table 1.** EFE Matrix for Parsian Insurance Company in Semnan Province (source: Authors).

Row	Opportunities	Importance Factor	Rating	weighted score
1	The possibility of university alumni employment who have studied in fields related to insurance	0/13	2	0/26
2	The possibility of using municipal or provincial capacities	0/11	2	0/22
3	Accessibility to new insurance markets	0/11	2	0/22
4	The possibility of cooperation with foreign insurance companies according to lifting sanctions	0/1	1	0/1
5	The possibility of insuring more factories as it is promising after lifting sanctions	0/09	3	0/27
6	The possibility of beneficial risks diagnosis	0/06	2	0/12
7	Financial Support from Parsian Bank	0/06	4	0/24
8	Accredited Brand	0/06	3	0/18
9	The accessibility of the place	0/05	3	0/15
Row	Threats	Importance Factor	Rating	weighted score
1	The presence of intense market and the possibility of missing loyal customers	0/05	1	0/05
2	Financial problems of organizations and people	0/04	2	0/08
3	The possibility of employing non specialist individuals	0/04	2	0/08
4	Little history in comparison to other renowned companies	0/04	2	0/08
5	Responsibility insurances are not welcomed according to the recession in construction section	0/04	1	0/04
6	The presence of vandalism in markets and trivialize rivals' proper deeds	0/02	1	0/02
	Sum	1		2/11

The final score indicates that there are more threats than opportunities for Parsian Insurance Company. To diagnose internal strengths and weaknesses, another matrix, called the IFE Matrix, should be created. This matrix is similar to the EFE Matrix in terms of assigning marks. Table number 2 displays the IFE Matrix.

**Table 2.** IFE Matrix for Parsian Insurance Company in Semnan Province (source: Authors).

Row	Strengths	Importance Factor	Rating	weighted score
1	Skillful experts with university degrees	0/16	3	0/48
2	Financial status	0/15	4	0/6
3	Continuous training for employees in sales section	0/14	2	0/28
4	Committed human resources	0/12	3	0/36
5	Up-to-date technologies in insurance system	0/11	3	0/33
6	Proper payroll system	0/1	3	0/3
7	Systematic framework	0/09	3	0/27
Row	Weaknesses	Importance Factor	Rating	weighted score
1	Not all employees are motivated	0/08	3	0/24
2	Some branches work slowly	0/05	2	0/1
	Sum	1		2/96

The final score indicates that Parsian Company has more advantages and strengths than weaknesses. Blue Ocean Strategy and Grey Theory can be used to determine the actions needed to take the lead in the market.

There are 8 main factors that strongly influence the insurance industry. Based on these factors, questionnaires were prepared and respondents from various insurance companies had to answer these questions and assign scores to the factors based on their importance. Participants were also asked to assign scores to various insurance companies based on their performance in eight different factors. The questions were asked by informed experts from Parsian Insurance Company, Novin Insurance Company and another expert from Insurance Institution. The research included five verbal variables: "very good", "good", "fair", "poor" and "very poor" with corresponding scores to represent each variable. (0-0.2), (0.2-0.4), (0.4-0.6), (0.6-0.8), and (0.8-1) represent the five extremes of scores ranging from "very bad" to "very good". Based on the scores obtained from different insurance companies, they can be divided into two segments: mediocre and high-quality insurance companies.

**Table 3.** Important factors and their subsets in insurance industry [2].

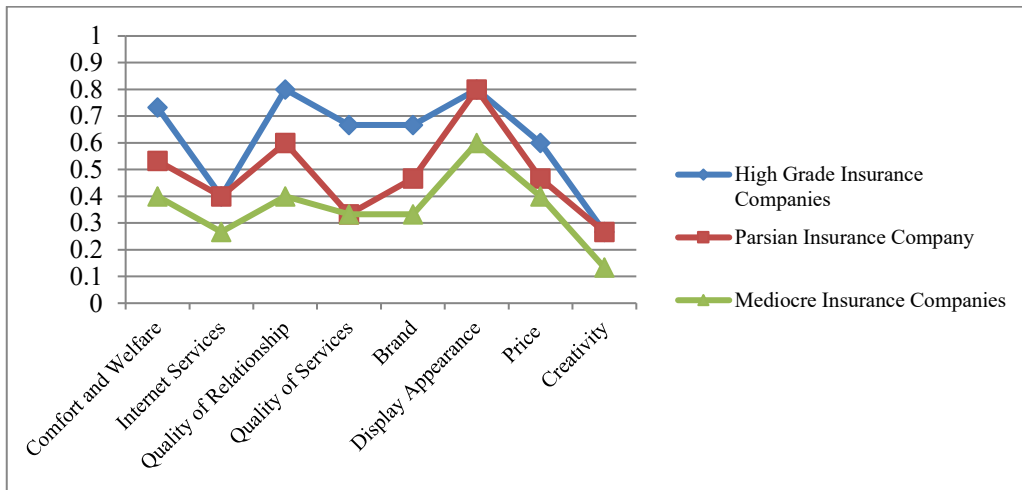
Group	Factors	Subcategories	Reference
1	Comfort and Welfare	<ol style="list-style-type: none"> <li>1. Number of branches</li> <li>2. Accessibility of branches</li> <li>3. Time of issuing policies</li> <li>4. Work hours of branches</li> <li>5. The flexibility of offering insurance services based on customers' demands</li> </ol>	Pitta, (2009) [20]; Cirjevskis, et al., (2011) [21]; Dwivedi and Sharma, (2011) [22]; Kim, et.al, (2008) [23], Arbore and Busacca, (2009) [24].
2	Internet Services	<ol style="list-style-type: none"> <li>1. Offering insurance services electronically</li> <li>2. Offering services on the Internet</li> <li>3. Offering services via mobile</li> <li>4. The presence of a context to share experiences on the Internet</li> <li>5. The presence of a context in order to help customers to get information and free consultation on the Internet</li> </ol>	Aghazadeh, et al., (2015)[2].
3	Quality of Relationship	<ol style="list-style-type: none"> <li>1. Behavior of representatives</li> <li>2. Behavior of employees</li> <li>3. Degree of accountability</li> <li>4. Dealing with complaints</li> </ol>	Cirjevskis, et al., (2011), Arbore and Busacca, (2009), Yousefaraei, (2008) [25].
4	Quality of Services	<ol style="list-style-type: none"> <li>1. Fastness of paying compensation</li> <li>2. Precision</li> <li>3. Offering free consultation</li> <li>4. Degree of contact and relationship with policyholders after sale</li> </ol>	Kim, et.al, (2008), Dwivedi and Sharma, (2011), Arbore and Busacca, (2009), Chang, (2010) [26], Yousefaraei, (2008).
5	Brand	<ol style="list-style-type: none"> <li>1. Reliability of insurers</li> <li>2. Reputation of a company</li> <li>3. Scale of advertisement</li> </ol>	Cirjevskis, et al., (2011), Dwivedi and Sharma, (2011), Arbore and Busacca, (2009), Chang, (2010), Yousefaraei, (2008).
6	Display Appearance	<ol style="list-style-type: none"> <li>1. Decoration and internal equipment</li> <li>2. Outer appearance</li> <li>3. Employees' appearance</li> </ol>	Arbore and Busacca, (2009).
7	Price	<ol style="list-style-type: none"> <li>1. Cost of policies</li> <li>2. Level of discounts</li> <li>3. Assigning cost of policies based on customers' features</li> </ol>	Ogorman, (2008) [27], Arbore and Busacca, (2009), Pitta, (2009): Cirjevskis, et al., (2011); Dwivedi and Sharma, (2011); Kim, et.al, 2008. Chang, (2010). Kim and Mauborgne, (2008); Kotler, (2012) [28].
8	Creativity	<ol style="list-style-type: none"> <li>1. Creativity in offering insurance services</li> <li>2. Using customers as consultants or cooperators</li> </ol>	Cirjevskis, et al., (2011); Dwivedi and Sharma, (2011).

This research focuses on three segments, one of which is Parsian Insurance Company. Table 4 displays the scores of the companies, which will be used as a matrix in future calculations. To simplify calculations in Excel, the term 'price' refers to the 'appropriateness of price' to avoid negative grey calculations.

**Table 4.** Acquired scores for different insurance companies from 1 in Semnan province (source: Authors).

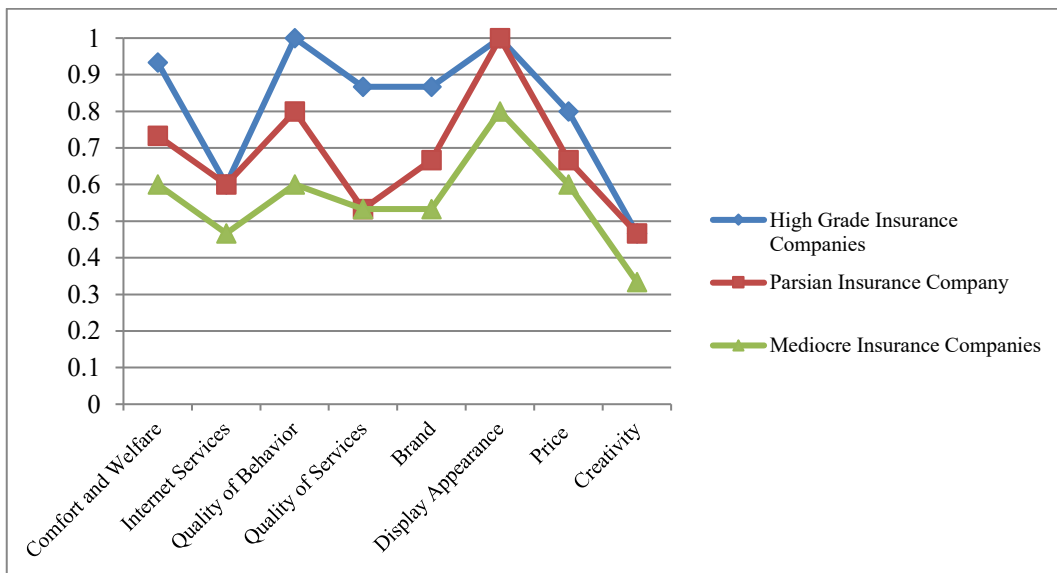
Factors	Comfort and welfare	Internet services	Quality of relationship	Quality of services	Brand	Display appearance	Price	Creativity
Companies								
High grade companies	(0/7333-0/9333)	(0/4-0/6)	(0/8-1)	(0/6666-0/8666)	(0/6666-0/8666)	(0/8-1)	(0/6-0/8)	(0/2666-0/4666)
Parsian company	(0/5333-0/7333)	(0/4-0/6)	(0/6-0/8)	(0/3333-0/5333)	(0/4666-0/8666)	(0/8-1)	(0/4666-0/8666)	(0/2666-0/4666)
Mediocre companies	(0/4-0/6)	(0/2666-0/4666)	(0/4-0/6)	(0/3333-0/5333)	(0/3333-0/5333)	(0/6-0/8)	(0/4-0/6)	(0/1333-0/3333)

Figure 1 shows the lower limits of the scores of companies on the strategic canvas.



**Fig. 1.** The strategic canvas of lower limit scores for insurance companies (source: Authors).

Figure 2 shows the upper limits of the scores of these companies according to table 4 on the strategic canvas.



**Fig. 2.** The strategic canvas of upper limit scores for insurance companies (source: Authors).

Now, it is essential to normalize the scores and form the D\* matrix. This matrix is shown in table 5.

**Table 5.** The scores of D\* matrix (source: Authors).

Factors	Comfort and welfare	Internet services	Quality of relationship	Quality of services	Brand	Display appearance	Price	Creativity
High grade companies	(0/7858-1)	(0/6666-1)	(0/8-1)	(0/7692-1)	(0/7692-1)	(0/8-1)	(0/75-1)	(0/5714-1)
Parsian company	(0/5714-7857)	(0/6666-1)	(0/6-0/8)	(0/3846-0/6154)	(0/5385-0/7692)	(0/8-1)	(0/5833-0/8333)	(0/5714-1)
Mediocre companies	(0/4286-0/6429)	(0/4444-0/7777)	(0/4-0/6)	(0/3846-0/6154)	(0/3846-0/6154)	(0/6-0/8)	(0/5-0/75)	(0/2857-0/7143)

Table 6 shows the weight of each important factor obtained by formula number 9.

**Table 6.** The importance weight of each factor (source: Authors).

Factors	Comfort and welfare	Internet services	Quality of relationship	Quality of services	Brand	Display appearance	Price	Creativity
Weight of importance	0/7333-0/9333	0/7333-0/9333	0/8-1	0/8-1	0/6-0/8	0/6-0/8	0/7333-0/8666	0/4-0/6

By multiplying each entry from tables 5 and 6 by each other, table 7 will be obtained which shows the normalized-weighted grey matrix.

**Table 7.** Normalized-weighted grey matrix (source: Authors).

Factors	Comfort and welfare	Internet services	Quality of relationship	Quality of services	Brand	Display appearance	Price	Creativity
High grade companies	(0/5762-0/9333)	(0/4888-0/9333)	(0/64-1)	(0/6154-1)	(0/4615-0/8)	(0/48-0/8)	(0/55-0/8666)	(0/2286-0/6)
Parsian company	(0/4190-0/7333)	(0/4888-0/9333)	(0/48-0/8)	(0/3077-0/6154)	(0/3231-0/6157)	(0/48-0/8)	(0/4227-0/7221)	(0/2286-0/6)
Mediocre companies	(0/3143-0/6)	(0/3259-0/7258)	(0/32-0/6)	(0/3077-0/6154)	(0/2308-0/4923)	(0/36-0/64)	(0/3667-0/65)	(0/1143-0/4286)

The ideal choice is distinguished by  $M^{max}$  calculations.

$$M^{max} = \{[0.5762-0.9333], [0.4888-0.9333], [0.64-1], [0.6154-1], [0.4615-0.8], [0.48-0.8], [0.55-0.8666], [0.2286-0.6]\}$$

Then, by grey possibility degree, companies are ranked in table 8.

**Table 8.** Scores in grey possibility degree (source: Authors).

Insurance Companies	$P\{M_i \leq M^{max}\}$
High Grade	0/5
Parsian	0/6881
Mediocre	0/8632

According to the results, Parsian Company and mediocre companies are ranked 1st to 3rd based on their degree of excellence. To improve its ranking, Parsian Company should focus on increasing scores for factors with lower costs and higher promotion potential. Specifically, the company should prioritize enhancing the quality of relationships by boosting the score to 'very good' (0.8-1). Based on the calculations, even if this factor is improved, Parsian Company cannot currently achieve first place. Therefore, it is important to focus on promoting other factors, such as internet services, until they reach a 'very good' level. Despite these efforts, Parsian Company remains in second place. Finally, through trial and error, we were able to improve scores in cost, comfort, and welfare until they

reached a 'very good' level. Parsian Company has the potential to create a unique market space. Table 9 displays the updated scores. Internet services were excluded as a factor for score promotion due to its equal score with high degree companies and its non-vital role in promotion.

**Table 9.** Scores of grey possibility degree after the promotion of four factors (source: Authors).

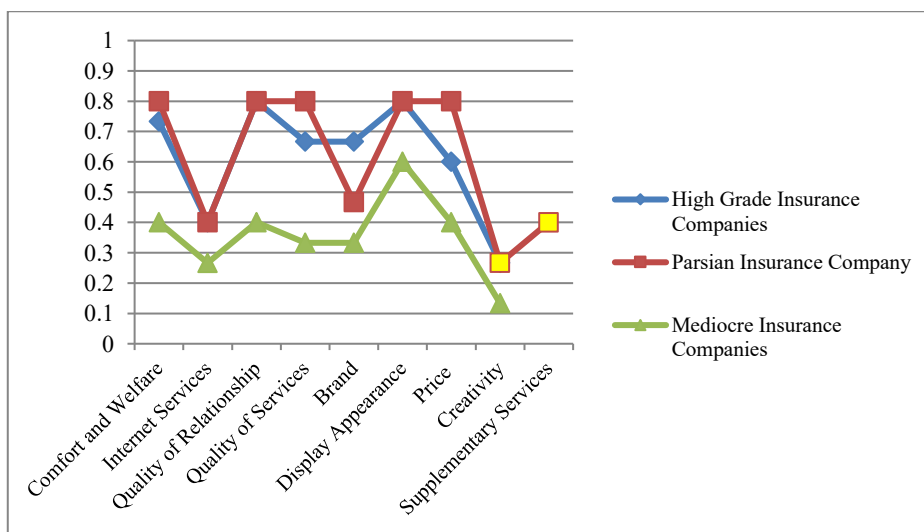
Insurance Companies	$P\{M_i \leq M^{max}\}$
High Grade	0/5694
Parsian	0/5320
Mediocre	0/8888

Based on the ranking system, Parsian Company will remain in first place among other companies, despite the low weight given to creativity. The final grey scores, as shown in Table 10, place Parsian at the top with a lower degree of grey, followed by high degree companies in second place and mediocre companies in third.

To gain a stronger market share, it is recommended that Parsian Company leverage its indigenous capabilities. Parsian Company offers discounts on various policy branches to companies in Semnan province, even if they apply for just one policy. In the car insurance section, they provide supplementary services such as transportation of a damaged car to an automobile repair shop. This type of insurance is not limited to transportation and can cover other fields. For example, if a company applies for group health insurance.

**Table 10.** Acquired grey scores after the final changes (source: Authors).

Factors Companies	Comfort and welfare	Internet services	Quality of relationship	Quality of services	Brand	Display appearance	Price	Creativity
High grade companies	(0/7333-0/9333)	(0/4-0/6)	(0/8-1)	(0/6666-0/8666)	(0/6666-0/8666)	(0/8-1)	(0/6-0/8)	(0/2666-0/4666)
Parsian company	(0/8-1)	(0/4-0/6)	(0/8-1)	(0/8-1)	(0/4666-0/8666)	(0/8-1)	(0/8-1)	(0/2666-0/4666)
Mediocre companies	(0/4-0/6)	(0/2666-0/4666)	(0/4-0/6)	(0/3333-0/5333)	(0/3333-0/5333)	(0/6-0/8)	(0/4-0/6)	(0/1333-0/3333)



**Fig. 3.** The strategic canvas of lower limit scores after the changes (source: Authors).

Figure 4 demonstrates the upper limit scores after the changes.

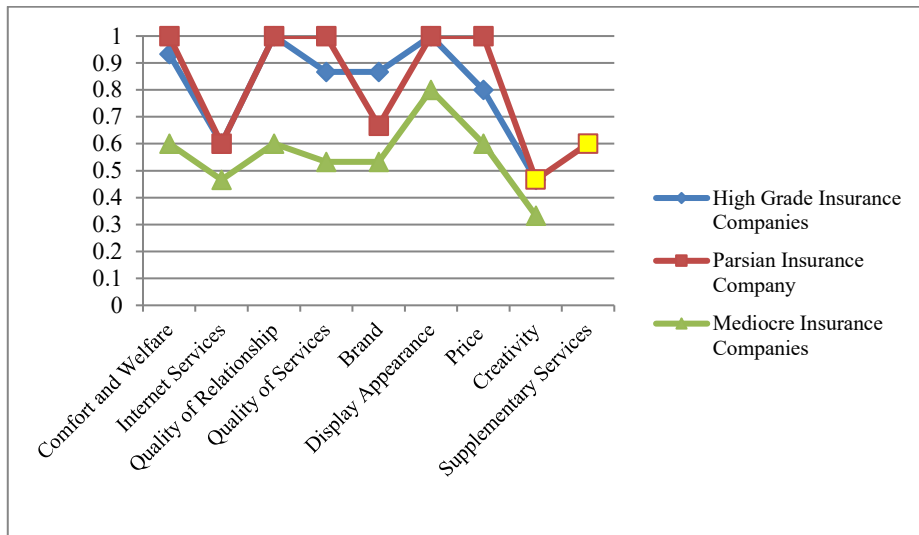


Fig. 4. The strategic canvas of upper limit scores after the changes (source: Authors).

Foreign travel insurance can be automatically charged to employees at a discounted rate. These services are referred to as 'supplementary services' in Figures 3 and 4. Figure 3 displays the lower limits of the new strategic canvas. As supplementary services were not previously given weight, they can receive an average score as shown below. They are represented by dots in the figures.

Finally, the four actions framework is drawn for Parsian Company in order to create a blue ocean.

Table 11. Four actions framework for Parsian Company (source: Authors).

Raise	Reduce
Quality of Relationship Quality of Services (The appropriateness of) Price Comfort and Welfare	<b>Creativity</b>
<b>Create</b>	Eliminate
Supplementary Services	-

## 7. DISCUSSION AND CONCLUSIONS

This study presents a ranking of insurance companies in Semnan province, Iran, based on the evaluations of elites. Verbal variables were scored on a scale of 0 to 1, with 'very bad' (0-0.2), 'bad' (0.2-0.4), 'mediocre' (0.4-0.6), 'good' (0.6-0.8), and 'very good' (0.8-1). The article by Mr. Aghazadeh was used to identify the important factors in the Iranian insurance industry. After evaluating each company and assigning scores, they were divided into three segments: high-grade, mediocre, and Parsian Insurance Company. A strategic canvas was created for each segment, with upper and lower limits. The insurance segments were then ranked using the strategic canvas and the grey theory, a method for ranking options based on criteria. The top-ranked companies were those with high grades, followed by Parsian in second place, and the lower-ranked companies in third place. The objective was to enhance certain factors' scores for Parsian Insurance Company to achieve the highest ranking based on grey scores. After evaluating the weight of each factor and the cost required to improve them through trial and error, we identified four key areas for improvement: the quality of the relationship, quality of services, price, and welfare/comfort. Our efforts to improve these factors resulted in Parsian being ranked first, achieving the highest possible score. According to the Four Actions Framework, increasing these factors will create a Blue Ocean. Specifically, even with slight decreases in creativity, Parsian could still come in first place. The Four Actions Framework is designed to create additional services.

According to tables 1 and 2 showing external and internal factors evaluation matrix, besides table 11 some tips can be proposed:

1. In light of the improved financial status and lifted sanctions, it is recommended that customers be offered greater flexibility in the welfare and comfort section. It is worth noting that more discounts can be offered in the pricing section.
2. Maintaining a good relationship with customers and responding to their complaints promptly is essential to avoid losing loyal customers due to market competition.
3. Continuous training of human resources, particularly in compensations, is vital to avoid weaknesses and lags in different branches and to ensure customer satisfaction.
4. Supplementary services should be thoroughly studied and followed to increase the company's market share.

This study utilized grey theory in conjunction with strategic canvas to rank various insurance companies in Semnan Province. The blue ocean strategy was created using the strategic canvas, four actions framework, EFE and IFE matrix. It is suggested that future research should consider using AHP and TOPSIS methods and compare their results with those obtained using grey theory.

## **CONFLICTS OF INTEREST**

The authors declare no conflict of interest.

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