

**Research Article**

## **EVALUATION OF IDEAL MODEL FOR INVESTMENT STRATEGY IN FUEL INDUSTRY TO TANKERS IN KHARG ISLAND**

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### **ABSTRACT**

Nowadays, fuel operations to ships have been accounted as important services in ports throughout the world. Increasing earnings in ports, job creation and satisfaction by ship owners have been mentioned as substantial effects of these services. Business competition throughout the world to attract the ships especially regional competitions rely on supply of diverse services than that of for competitors. The main problem lies on this fact that Arabic countries in the Persian Gulf have worked out successfully in supply of fuel for the business ships especially tankers, that so many years have passed from no exploitation from the earning out of fuel in our country, yet there are valuable facilities and capabilities in our country for progress and advancement of this industry with the best quality. In the present research, concerning this hypothesis that Kharg Island has the capability to deliver Mazut - fuel oil to the tankers, we aim to identify the barriers and advantages of revitalization of this industry so as to address different aspects. The importance of this issue lies on this fact that Kharg Island welcomes about thousands of commercial ships including oil tankers, gas tanker and ships to pass through Bandar Imam Khomeini, that the biggest oil tankers enter into this island; Kharg oil station has been mentioned capable of meeting maximum needs for fuel of ships with high quality, whereby this causes improving country's economic and political status. In the present, different aspects have been considered via SWOT method, whereby necessary approaches are proposed. Results of this research indicate that Kharg oil station equipped with necessary infrastructures such as docks, storage tanks and pipelines has been mentioned as a suitable site to provide and deliver fuel to ships, mentioned with the capability for competition with other ports.

**Keywords:** *Bunkering, Tanker, Dock, Oil Station, SWOT*

### **INTRODUCTION**

The fuel used in ships has been served as the blood flood in vital routes of marine transport, that definitely the transport world without fuel will remain meaningless. Nowadays, fuel industry has been mentioned as one of the lucrative businesses throughout the world that causes prosperity of other lateral jobs in addition to income earning and job creation. Owners and lenders of ships prefer to receive other services pertaining to ship including supply of provisions, spare parts, water and other services in parallel with receiving fuel. About 50000 freight ships pass through Strait of Hormuz that one third of them develop from oil tankers (MEMAC Circular 02/11). A supertanker ship consumes about 50 tons of fuel per day, which such figure represents high importance of fueling in ports. Currently, Persian Gulf countries especially United Arab Emirates have invested to a large extent from many years ago. Despite profitability in this industry and access to sufficient infrastructures in Kharg Island including docks, pipelines, storage tanks and two refineries in Bandar Abbas and Abadan, those in charge at the macro level have neglected revitalization of this industry. Lack of a strategic national plan at marketing areas, improvement of infrastructures and systems in ports throughout the country especially international Kharg station have caused loss of numerous opportunities.

#### **Bunkering**

Bunkering refers to a term which is used for the fueling operations to ships in marine and around dock or refers to the retail distribution of refined products (furnace fuel oil) for ship consumption. Yet, currently bunkering has been transformed to an industry under which supply of further extensive services to ships has been developed (Iranian Oil Terminals Company, 2012).

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### **Marine Gas Oil (MGO)**

Marine gas oil refers to a fuel similar to the fuel used in diesel engines called with type 2 furnace fuel oil, appeared as gas condensate from crude oil (Mirza, 2010).

### **Marine Diesel Oil (MDO)**

Marine diesel oil refers to a type of heavy gas oil that there is no need to heating it to use it as combustion engine. This fuel has a substantial amount of heavy furnace oil that rest of diesel fuels lack such characteristic.

### **Intermediate Fuel Oil (IFO)**

This refers to a combination of gas oil and heavy furnace oil that the amount of their gas oil is under the amount of marine diesel oil (MDO).

### **Marine Fuel Oil (MFO)**

This enjoys characteristics of heavy furnace oil. Under some conditions, some oil products that are accounted as the wastes are mixed in this fuel (Mirzapoor, 2010).

### **Problem Statement**

Nowadays, fueling industry is accounted as a source for earning in most of countries, while some countries have not even oil resources and supply their fuel from other countries. experience of Persian gulf countries indicates that development of fueling services to ships in southern ports of Iran can raise earning for million dollars per year, yet this capacity has not been used properly due to inattention to issue of fueling and defect in executive rules, under which this issue has faced inconsistency and challenge for several years. Significance of this problem indicates that implementation of any comprehensive economic plan dependant on size of investment and range of its activity for the community in addition to job creation will be followed by positive achievements such as dynamism and economic development. Yet, if this issue is evaluated through a strategic view and in a special form, it can say that fueling in these dimensions and an efficient formula for strategy and operational indicators as supply chain of services in ports of country is accounted as a substantial development in economic dimension, whereby creation of such developments in marine activities is seen with their real values in case this development intertwines with overview of weaknesses, strengths, opportunities and threats. One of the most important challenges and barriers in bunkering industry lies on inattention and lack of a deep management view on this industry, and this is in a way that fueling companies in Emirate with less lifetime than Iranian companies pursue their investments in global market.

### **Research Questions**

In this research, after discussion on successful companies and success criteria as well as elaboration of principles of duties and responsibilities and laws undergoing activity of fueling companies regarding this significance that development and improvement of bunkering industry have a huge effect on quantity and quality of economy and enhancement of competitive status of country with other countries and proliferation of development of foreign trade of Islamic republic of Iran under the success at this area, the present research seeks to examine the success factors in foreign fueling companies in line with a general study so as to give a response to the questions below:

- is there a significant relationship between the strategy for maintenance and evaluation of performance of bunkering industry in Kharg?
- is there a significant relationship between the strategy for development and growth and evaluation of performance of bunkering industry in Kharg?
- which type of strategy is considered to determine the qualitative indicators?
- which applied and executive indicators have been considered to select the sustainable approach?
- which standard approaches and operational indicators have been considered to examine the abilities?
- which fluid indicators existing in operations have been evaluated to evaluate the realization of the aims?

### **Theoretical Background**

Energy exchange has been considered as the most important economic approach in Persian Gulf from the long lost past to date, considered as the basis for economic, social and political development. Lack of a sufficient and suitable strategy from oil exporting countries will be followed by economic collapse and

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decline in contrast with the competitors. Hence, revision of bunkering strategy and fueling in this industry especially in Kharg Island can be assumed as a suitable pattern for economic sovereignty resulting in the required developments and modifications. With regard to this approach, this model as a suitable strategy might diminish the weaknesses and threats and intensify the strengths and opportunities. For this purpose, internal weaknesses and strengths and external opportunities and threats under four general states including SO, WO, ST and WT have been linked to each other, resulting in creation and selection of strategy items (Harrison and Karun, 2004). The rules governing SWOT matrix are based on these principles:

SO- how maximum exploitation from the opportunities can come to realize through exploitation from strengths?

ST-how removal or reduction of threats can come to realize through the strengths?

WO-how the weaknesses can be transformed to strengths through exploitation from the opportunities?

WT-how reduction or removal of threats come to realize through reduction of weaknesses?

In summary, it can say that analysis and overview of opportunities and threats of an external environment lie on evaluation of this problem that a system and process can obtain the opportunities and avoid the threats, especially when an uncontrollable external environment is faced under the current period.

### **Aims and Framework of Research**

Representation of different approaches to implement an effective and practical strategy based on the strategic indicators in bunkering industry has been aimed to improve productivity in this industry and examine the processes contributing in the value chain and its support activities and ultimately improve the marketing process in Persian Gulf. In this regards, major and secondary aims will be as followed:

Major aims of research

- 1-measurnment of desirability of development strategy approach in bunkering industry in a field study
- 2- Measurement of desirability of defensive strategy approach in bunkering industry in a field study
- 3- Measurement of desirability of integration strategy approach in bunkering industry in a field study
- 4- Measurement of desirability of diversity strategy approach in bunkering industry in a field study

### **Secondary Aims of Research**

- 1-evaluation of bunkering ability of Kharg oil station based on the characteristics of suppliers of this industry
- 2-overview of weaknesses, strengths, opportunities and threats based on SWOT model and characteristics of suppliers
- 3-identification of the challenges in this industry at different managerial and operational areas
- 4-representation of an approach to resolve the challenge based on strategy pattern in field study

### **Research Hypotheses**

- 1-there is a significant relationship between desirability of adoption of conservative strategy and evaluation of performance of bunkering industry in Kharg station
- 2- There is a significant relationship between desirability of adoption of offensive strategy and evaluation of performance of bunkering industry in Kharg station
- 3- there is a significant relationship between desirability of adoption of defensive strategy and evaluation of performance of bunkering industry in Kharg station
- 4- there is a significant relationship between desirability of adoption of competitive strategy and evaluation of performance of bunkering industry in Kharg station

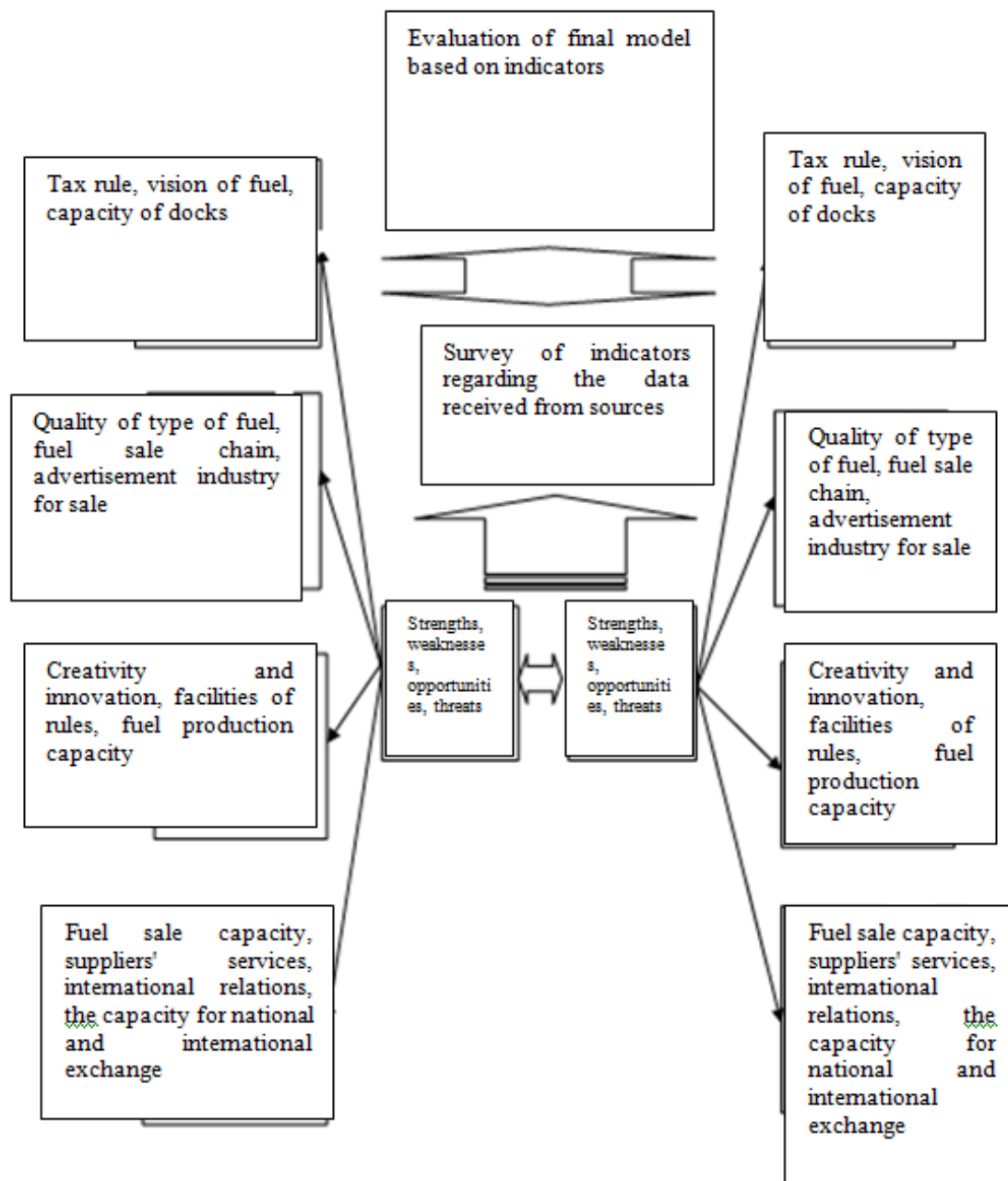
## **MATERIALS AND METHODS**

### **Research Method**

In descriptive method, a researcher makes an attempt to report what exists without any intervention or mental conclusion and infers from the situation. Hence, it can say that descriptive research describes what exists and pays attention to the existing conditions or relations, common beliefs, current processes, tangible effects or growing procedures. Notably, descriptive research pays attention to the current time, however it can examine the events and what happened in the past which pertain to the existing conditions.

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The present research has been conducted via a descriptive correlation method, in which library and field methods have been used as the data collection instruments. The scientific databases including internet, books and journals used in field studies have been used to achieve the literature review. Further, the present research has aimed to represent suitable strategies for implementation of development and desirability of performance of bunkering industry through exploitation from the concepts of strategic planning and SWOT model. To implement SWOT method through questionnaire, experts', managers' and staffs' views are used. Then, through calculation of the final score for internal and external factors, status of desirable strategy in bunkering industry will be determined in SWOT table. Data are collected through database available in the concerned organizations in distribution of bunkering industry as well as questionnaire. Further, the conceptual model of research is as follow:



**Chart 1: Conceptual model for desirability of strategic approach of bunkering industry**

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### **Statistical Population**

The researcher should select a certain group of individuals to conduct the research and generalize the findings acquired from the special participants to a larger group of participants. This larger group is called the statistical population.

The statistical population consists of the elements that we intend to infer it. Statistical population is called to a series of individuals or objects which have heterogeneous or measurable characteristics (Naderi, 1997). The statistical population (1245) consists of all the personnel working in line and staff units across Kharg oil station.

The statistical population consisting of the personnel working in line and staff units has been selected under supervision by professors and familiarity of personnel manager in oil stations with the concepts of educational management and productivity and high level of academic education in line with coming to an end in a more accurate way.

### **Sample Size**

Sample has been mentioned as a part of population that is the representative of the statistical population, so that we intend to select a part of the population for research in selection of each sample group that has all the characteristics which are mentioned important for research (Homan, 1995). Cochran formula has been used to determine sample size as follow:

$$n = \frac{\frac{z^2 pq}{d^2}}{1 + \frac{1}{N} \left( \frac{z^2 pq}{d^2} - 1 \right)}$$

n, d, t and N represent minimum sample size, sampling error, constant number (1.96), size of research population, respectively; further, p(0.83) and q(0.17) represent existence or lack of existence of characteristic so that the multiplication of p by q represents standard deviation.

With regard to formula above, n is calculated as follow:

$$n = \frac{(1.96)^2 \times 0.1411 \times 1245}{0.0025(1244) + (1.96)^2 \times 0.1411} = 185$$

### **Sampling Method and Data Collection Instruments**

Random sampling method corresponding to the sample size has been used to selection sample group. In this method, all the members of statistical population have the same chance for being selected. To determine the sample size in each of staff and line units, simple random method has been used based on the stages below:

- 1-the entire number of statistical population has been specified at each unit.
- 2-the sample size has been specified at each unit.
- 3-N/n has been calculated.
- 4-the sample size has been selected based on checklist of all the statistical population via the random number table for the sample size.

### **Data Collection Instruments**

The questionnaire has been considered as the most common method for data collection in descriptive correlation studies. In the studies in which the questionnaire is used, the members of statistical population or sample group give assistance to the researcher by filling the questionnaire and returning it to the researcher.

For this, the questions used in the questionnaire should be enough clear so as to let the respondent gives a response to the questions simply.

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### Tables of Research and Statistical Analysis

**Table 1: The calculations for amount of IFE and EFE**

NO	Internal factors contributing in strengths and weaknesses	NO	Internal factors contributing in strengths and weaknesses	NO	external factors contributing in threats and opportunities	NO	external factors contributing in threats and opportunities
1	2.54	56	2.64	1	2.64	56	2.63
2	2.53	57	2.3	2	2.67	57	2.43
3	2.24	58	2.75	3	2.65	58	2.62
4	2.44	59	2.63	4	2.57	59	2.67
5	2.51	60	2.23	5	2.98	60	2.54
6	2.39	61	2.51	6	2.7	61	2.3
7	2.56	62	3.54	7	2.52	62	3.27
8	2.73	63	2.45	8	2.52	63	2.46
9	2.66	64	2.44	9	2.73	64	2.58
10	3.22	65	2.86	10	2.5	65	2.13
11	2.44	66	3.01	11	2.58	66	2.22
12	2.46	67	3.05	12	2.53	67	2.65
13	2.26	68	2.96	13	2.59	68	2.42
14	2.65	69	2.44	14	2.63	69	2.61
15	2.41	70	2.86	15	2.58	70	2.13
16	2.44	71	2.88	16	2.58	71	2.94
17	2.57	72	2.42	17	2.5	72	2.52
18	2.7	73	2.51	18	2.48	73	2.86
19	2.52	74	2.61	19	2.49	74	2.51
20	2.49	75	2.45	20	2.56	75	2.49
21	2.61	76	2.24	21	2.49	76	2.36
22	2.44	77	2.58	22	2.58	77	2.39
23	2.44	78	2.39	23	2.58	78	2.55
24	2.58	79	2.45	24	2.73	79	2.44
25	2.54	80	2.44	25	2.64	80	2.64
26	3.51	81	2.52	26	2.49	81	2.68
27	2.86	82	2.61	27	2.64	82	2.49
28	2.79	83	2.35	28	3.1	83	2.64
29	2.51	84	2.51	29	2.6	84	2.62
30	2.62	85	2.66	30	2.57	85	2.6
31	2.57	86	2.5	31	2.3	86	2.57
32	2.67	87	2.34	32	2.82	87	2.54
33	2.31	88	2.42	33	2.24	88	2.43
34	2.38	89	2.74	34	2.3	89	2.56
35	2.34	90	3.06	35	2.4	90	2.91
36	2.21	91	2.44	36	2.47	91	2.6
37	2.53	92	2.46	37	2.61	92	2.41
38	2.37	93	2.47	38	2.47	93	2.48



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**Table 1: the calculations for amount of IFE and EFE**

	Internal factors contributing in strengths and weaknesses	NO	Internal factors contributing in strengths and weaknesses	NO	external factors contributing in threats and opportunities	NO	external factors contributing in threats and opportunities
39	2.58	94	2.53	39	2.46	94	2.54
40	2.49	95	2.4	40	2.48	95	2.85
41	2.92	96	2.46	41	3.1	96	2.41
42	2.98	97	2.33	42	2.67	97	2.59
43	2.44	98	2.73	43	2.56	98	2.52
44	2.39	99	2.06	44	2.59	99	2.58
45	2.48	100	1.92	45	2.47	100	2.05
46	2.32	101	2.54	46	2.65	101	2.62
47	2.52	102	2.54	47	1.85	102	2.64
48	2.37	103	2.54	48	2.52	103	2.38
49	2.49	104	2.07	49	2.52	104	2.88
50	2.06	105	2.62	50	2.34	105	2.57
51	2.58	106	2.44	51	2.67	106	2.22
52	2.32	107	2.7	52	2.68	107	2.26
53	2.66	108	2.54	53	2.72	108	2.59
54	2.53	109	2.36	54	2.54	109	2.53
55	2.35	110	2.93	55	2.61	110	2.52
Mean	2.545			2.555			

## Calculation of the Final Score for External Factor Evaluation (EFE) Matrix

Factor Evaluation (EFE) Matrix=sum of scores for the entire external factors/the number of interviewees= $3.5+4.5+3.6+3.5+3.3+3.1+2.8+...../110=2.55$

## Calculation of the Final Score for Internal Factor Evaluation (IFE) Matrix

Factor Evaluation (IFE) Matrix=sum of scores for the entire internal factors/the number of interviewees= $2.5+2.4+2.8+3.0+3.3+3.1+2.8+...../110=2.54$

Determination of the status of internal strategy of organization in Strategic Position and Action Evaluation (SPACE) Matrix

According to an overview on internal factors followed by detection of key internal factors (weaknesses and strengths) through overview of the associated organization, the key internal factors must undergo evaluation so as to specify whether the organization has weaknesses or strengths. The instruments for evaluation of internal factors in internal Factor Evaluation (IFE) Matrix seem similar to those in External Factor Evaluation (EFE) Matrix. Using this matrix, each of strengths and weaknesses are set in a column of matrix and scored through the special ranks and coefficients so as to specify whether the organization has strengths or weaknesses.

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**Table 2: Strategic Position and Action Evaluation (SPACE) Matrix**

		final score for internal Factor		Evaluation (IFE) Matrix	
		Poor		Strong	
		1	2	3	4
final score for External Factor Evaluation (EFE) Matrix	Strong	4	I	II	
		3			
	Poor	2	III	IV	
		1			

(Erabi, 2010)

Interpretation of status of internal strategy of organization in Strategic Position and Action Evaluation (SPACE) Matrix

If sum of the final score of organization goes beyond 2.5 in this matrix, this will imply that the strengths will overcome the weaknesses based on the predictions; further, if sum of the final score of organization goes under 2.5 in this matrix, this will imply that the weaknesses will overcome the strengths based on the predictions (Erabi, 2010).

Hence, with regard to the scores of Strategic Position and Action Evaluation (SPACE) Matrix, the status of organization is under strengths.

Final score for internal Factor Evaluation (IFE) Matrix=2.54

Economic, social, cultural, ecological, environmental, political, legal, governmental, technological and competitive events and processes refer to external threats and opportunities that can benefit the organization or damage it. Threats and opportunities are more likely out of control of an organization, thus the term external is used. The organizations should make an attempt to formulate a strategy to exploit from external opportunities and avoid the effects from external threats or reduce them. In this regards, success of organization can come to realize due to detection, supervision and evaluation of external threats and opportunities. Each of strategic factors in more specialized environments is evaluated via External Factor Evaluation (EFE) Matrix. The factors have been set in the first column of matrix and scored via the coefficients in special ranks so as to specify whether the organization will have more opportunities in a future

Final score for external Factor Evaluation (IFE) Matrix=2.55

In 9-box matrix shown in table below, if the status of an organization or industry sets in one of the boxes II, III and IV, adoption of growth and development strategy will be suggested. If the status of an organization or industry sets in one of the boxes I, V and IX, strategy of maintenance or stability will be suggested. If the scores are set in one of the boxes VI, VII and VIII, reduction, withdraw and transfer strategy will be suggested.

With regard to the calculations and data represented above as well as the calculation formula below in overview of the evaluation of internal and external strategy, the scores for both internal and external strategies have equaled to 2.55 and 2.54, respectively. With regard to 9-box matrix, the status of organization will be set in box "V" which implies selection and preference of the strategy for maintenance or stability in organization.



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9-box matrix for internal and external matrix					
Final score for internal Factor Evaluation (IFE) Matrix					
		Poor		Average	
		1		2	
Final score for external Factor Evaluation (IFE) Matrix	Strong	I	II	III	
	Average	IV	V	VI	
	Poor	VII	VIII	IX	

**PERSIAN NUMBERS AND WORDS NOT ALLOWED. PLEASE REPLACE THEM WITH ENGLISH WORDS AND NUMBERS**

## RESULTS AND DISCUSSION

### Research Findings

With regard to overview of 9-box matrix model and the score from this box evaluated with "V", the organization should have made an attempt in line with strategy of maintenance, stability and internal support at all structural levels and physical, material and information dimensions under the executive strategy and theorization of the indicators to achieve aims and avoid collapse. Hence, the first hypothesis of research has been confirmed and the second, third and fourth hypotheses of research have been rejected regarding the results of research. In this regards, four general states of SO, WO, ST and WT have been proposed as the strategic and applied approaches to provide 40 strategies that the organization can take a step to adopt conservative strategy as the basis for development.

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### **Discussion and Conclusion**

#### **Executive Suggestions as the Strategy for Results of Research**

With regard to evaluation and obtained results in 9-box matrix, the results below are determined as the strategy for stability and maintenance in interpretation of applied strategies in bunkering industry.

#### **SO Strategies**

-the production capability of furnace fuel oil and increasing need of tankers to fuel will result in investment. Continuity of this approach will induce the customers to production attractions and capacity of furnace fuel oil in refineries will increase the possibility for competition in contrast with regional customers.

-standard quality of furnace fuel oil in contrast with standards of competitors' ports will induce the customers to sale departments in private sector, that continuity of this constructive pattern under domestic waterway conditions and favorable capacity of tankers under favorable geographic conditions will transform the opportunities to strengths regarding development of catering clubs.

-establishment of two refineries can conduct creation of capacity for further production and induce the customers to private sector. This assists for capacity of construction of strategic reserves and increases production power and storage. The more capacity of strategic reserves increases, geopolitical conditions of region will raise further attractions against competitors, whereby capacity of strengths will increase.

Economic geography of ports in contrast with competitors under development of catering system, support of customers and development of sale departments will provide desirability of investment. This approach requires a reengineering and restructuring in revision of local representatives in development of local market across the region and exchange of local and regional agreements, whereby this opportunity will be transformed to one of the strengthened.

-the required commutation of tankers from southern coasts of Qeshm island, capacity of productivity from development of local markets, and supply of fuel services to international shipping with the approximate opportunity of 40 km will make the involvement by competitors inevitable.

-development of catering along this waterway with changing the current strategy to strategy of stability of the conditions under constructive capacity in creation of fueling attractions will induce the customers, appearing as an opportunity.

-commutation of international shipping has appeared as a necessity, that increasing need to fuel of shipping will intensify under creation of catering in contrast with competitors.

#### **ST Strategies**

-the effect of international sanctions has increased by creation of capacity fuel reserves and the required commutation of shipping waterway in Persian gulf has increased and ultimately effect of international sanctions has decreased.

-effect of lacking notification and advertisement facilities has reduced this threat by establishment of private sector by dimensions 1800 km coastline and development of enterprises in private sector based on supply chain indicators.

-lack of currency stability and reduction of value of fuel sale can reduce the threat by employing the support policies for production of furnace oil and banking support in private sector and distribution of bonds helping for currency stability and tax discount to the refineries in contrast with competitors

-reduction of quality of domestic fuel has helped for reducing the threat through strengthening the standard indicators in refineries and stabilizing the supply chain indicators for customers' satisfaction. This approach in contrast with the necessity for updating the standards of quality and competitors' tendency to improvement of fuel quality corresponding to existing standards will focus on domestic production in line with creation of attraction in supply of bunkering industry.

-effect of low power of bargaining with foreign customers can reduce the threat by increasing standard quality of fuel in ships and necessitating the shipping trade by 1800 km coastal waterway. Strengthening a standard basis and geopolitical position of region and customer's loss and profit indicators will increase strengthening the power of bargaining than competitors to attract customers, reducing the threat.

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-effect of qualitative services for foreign customers can be increased by strengthening the supply chain indicators and technology capabilities, reducing the threat.

#### **WO Strategies**

-lack of bunkering companies along coastal ports can be reduced by development of sale departments at private sector and development of customer-oriented services as well as development of new local markets for customers and generalization of supply chain indicators, removing it through structural enhancement.

-lack of advertisement facilities and notification for customers can be reduced through the mechanism for development of catering system and support for customers by 1800 km coastal line with competitors, removing this weakness by supply of bank subsidies to private sector.

-limitation in bunkering supply chain contracts can be strengthen by development of sale departments in private sector and development of services as well as increasing need of tankers to maintenance of new local markets, undergone removal.

-lack of a mechanism for bunkering sale to customers can be reduced by adoption of supply chain approach in contrast with competitors and development of catering system and support from private sector so as to supply services to the customers at shipping in line with new local markets, removing this weakness under this strategy.

-high consumption of fuel in domestic industries along ports can be distributed through the approach under distribution of standard indicators in ports and development of these indicators in contrast with competitors in region and increasing need to fuel of tankers, for which a proper policy can be considered to reduce this structural weakness.

-lack of a stable policy for exporting sale of furnace oil can be centralized in line with enhancement of the standards in competitors' ports in development and growth of regional capabilities in a structured way, reducing this weakness by strengthening the focus on stable policies and transferring these policies to private sector and development of services.

#### **WT Strategies**

-lack of bunkering companies along coastal ports can develop the international sanctions, that it can avoid transforming these deficiencies to threat with investment in private sector and enhancement of tax and bank exemptions for revitalization of the structure in private sector

-lack of advertisement facilities can result in enhancement of competitors in region and reduction of contribution by regional market. In this regards, it can pave the way for acquisition of customers by development of private sector along coastal ports, reducing the weakness under lack of advertisement in bunkering industry and reducing the threat.

-the limitation in supply chain contracts in domestic and foreign bunkering can prolong the threat under lack of planning for supply of fuel at shipping. In this regards, it can make an attempt to revitalize planning in private sector and pave the way for signing contracts by development of tax and banking exemptions, reducing threats.

-lack of bunkering mechanism can result in threat in reducing supply of services to foreign customers and loss of the power of bargaining at the area of development strategy of fuel. In this regards, it can assist for enhancing these entities at private sector by employing private entities and supplying banking credits and avoid transforming this weakness to threat.

-lack of a stable policy in furnace oil sale can result in threat and weakness in organizational structure of bunkering industry. In this regards, it can avoid weakness and threat by adoption of reconstructing the centralized structure due to the tanker fuel refinery and continuity of tankers in coastal waterway helping for continuity of exports.

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