

# Strategic Planning for Port Development: Improvement of Container Transit from the Iranian Southern Ports Terminals

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**ABSTRACT:** The author attempts to highlight the significance of the Iranian southern ports development strategy planning which allows for the maximum container transit with minimum resources such as service capacities, human resources, and financial potential in order to expand the Iranian container transit. It should be noted that the strategic objectives, the business strategy and its implementation can be arranged only after the port vision and mission obviously delineated. For the purpose of improving the outcome of the ports operational management, it is recommended to concentrate on new strategies such as exploit of transit corridors for development of the Iranian South Ports. The main part of this paper is dedicated to evaluate the role of container transit from the Iranian south ports terminals from various transport corridors in order to improve Maritime Transport in Iran. The importance of defining the existing and potential competitors at the Persian Gulf and making a comparison between their and our own strengths and weaknesses is of utmost importance. Sometimes, the real business opportunities and threats are placed beyond one's own line of industry and business. It is therefore necessary to make a careful analysis of the port environment. After the port competition and environment have been analyzed, it would be possible to initiate the building of the SWOT analysis for the Iranian Southern Container Terminals such as Khoramshahr, Imam Khomani, Busher, Bandar Abbas and Chabahar port which have suitable strategic position as transit base in the region. The SWOT analysis method is therefore applied aiming at defining the weaknesses and strengths of the economic subjects as well as opportunities and threats coming from the environment. The next segment of this paper is dedicated to consider the role of dry ports and the International North-South Transit Corridor for the purpose of improving the Iranian container trade.

## 1 INTRODUCTION

### 1.1 *The main systems and mechanisms of regulation of the global maritime transport*

Although, cargo as container has been increased more than five times since 1990, therefore it caused that the world's fleet of container ships has developed about seven times. Apart from the significance of time and expenses on transit of containers, safety of containers

or quality of container handling operation is vital issue at the container terminals.

It should be noted that in the last two decades, container transportation system has been faced under increasing development, in such a way that the rate of this development has reached to 7 or 9 percent in a year and it is predicted that this increase will have a rate of about 10 percent until 2020 while for other sea transportation means, the rate will be just 2 percent annually.[1] The development of dry ports has

become possible owing to the increase in multi-modal transit of cargoes utilizing road, rail and sea.

## 2 GLOBAL CONTAINER TRADE

Table 1 shows part of the latest figures available on world container port traffic for 65 developing economies and underline Islamic republic of Iran with an annual percentage growth of container trade which changes between 2008- 2009 to 10.31 and between 2009-2010 to 17.50. It should be noted that Container trade in 2010 increased by 8 per cent on the Far East-Europe route, and by 10 per cent on the trans-Pacific Asia-North America route.

In 2010, the port of Shanghai for the first time took the title of the world's busiest container port from Singapore, with a throughput of 29.2 million TEUs. The 10 countries registering the highest growth were Ecuador (49.2 per cent), Djibouti (45.7 per cent), Namibia (44.7 per cent), Morocco (32.9 per cent), Jordan (15.8 per cent), Lebanon (15.4 per cent), the Syrian Arab Republic (12.2 per cent), Dominican Republic (11 per cent), the Islamic Republic of Iran (10.3 per cent) and Sudan (10.3 per cent).[2]

The country with the largest share of container throughput is China, with nine ports in the top 20. The Dominican Republic has been on the list of ports with double-digit growth for the last three years. The country with the largest share of container throughput continues to be China. [3]

Table 1. Container port traffic of the Islamic republic of Iran  
Source: The Report of UNCTAD 2011

Country	2008	2009	Preliminary estimates for 2010	Percentage change 2008-2009	Percentage change 2009-2010
China	115 060 978	107 492 861	128 544 458	-6.58	19.58
Singapore <sup>a</sup>	30 891 200	26 592 800	29 176 200	-13.91	9.72
China, Hong Kong SAR	24 434 229	21 040 096	23 532 000	-14.10	11.84
Republic of Korea	17 417 723	15 699 161	18 457 580	-9.87	17.76
Malaysia	16 034 829	15 671 296	17 975 796	-2.21	14.71
United Arab Emirates	14 756 127	14 425 039	15 195 225	-2.24	5.34
China, Taiwan Province of	12 971 224	11 362 097	12 302 111	-12.48	8.37
India	7 672 457	8 011 810	8 942 725	4.42	11.62
Indonesia	7 404 831	7 243 557	8 960 360	-2.18	23.70
Brazil	7 238 976	6 574 617	7 979 626	-9.18	21.37
Egypt	6 009 218	6 250 443	6 965 401	2.48	6.64
Thailand	6 726 237	5 897 936	6 648 532	-12.31	12.73
Viet Nam	4 393 699	4 840 598	5 474 452	10.17	13.09
Panama	5 129 499	4 597 112	5 906 744	-10.36	28.49
Turkey	5 218 316	4 521 713	5 502 974	-13.35	21.83
Saudi Arabia	4 652 022	4 430 676	5 313 141	-4.76	19.92
Philippines	4 471 428	4 306 723	5 048 669	-3.68	17.23
Oman	3 427 990	3 768 045	3 774 562	9.92	0.17
South Africa	3 875 962	3 726 313	4 039 241	-3.96	8.40
Sri Lanka	3 697 465	3 464 297	4 000 000	-6.05	15.46
Mexico	3 312 713	2 874 267	3 708 806	-13.23	29.03
Chile	3 164 137	2 795 989	3 162 759	-11.64	13.12
Russian Federation	3 307 075	2 337 634	3 091 322	-29.31	32.34
Iran (Islamic Republic of)	2 000 230	2 206 476	2 592 522	10.31	17.50
Pakistan	1 938 001	2 058 056	2 151 098	6.19	4.52
Colombia	1 969 316	2 056 747	2 443 796	4.44	18.82
Jamaica	1 915 943	1 689 670	1 891 770	-11.81	11.96
Argentina	1 997 146	1 626 351	1 972 269	-18.57	21.27
Bahamas	1 702 000	1 297 000	1 125 000	-23.80	-13.26
Dominican Republic	1 136 471	1 263 456	1 382 601	10.98	9.43
Venezuela (Bolivarian Republic of)	1 325 194	1 238 717	1 228 354	-6.53	-0.84
Peru	1 236 326	1 232 949	1 539 809	-0.20	24.41
Morocco	919 360	1 222 000	2 058 430	32.92	68.45
Bangladesh	1 091 200	1 182 121	1 360 453	8.33	14.24
Ecuador	670 831	1 000 896	1 221 849	49.20	22.08
Lebanon	861 931	964 601	949 155	15.39	-4.57
Guatemala	937 642	906 326	1 012 960	-3.34	11.70
Costa Rica	1 004 971	875 687	1 013 483	-12.86	15.74
Kuwait	961 684	854 044	888 206	-11.19	4.00
Syrian Arab Republic	610 607	685 299	710 642	12.23	3.70
Côte d'Ivoire	713 625	677 029	704 110	-5.13	4.00
Jordan	582 515	674 525	610 000	15.80	-9.57
Kyrgyz	615 733	618 816	643 569	0.50	4.00

Table 2 shows the world's 20 leading container ports for 2008-2010. This list includes 14 ports from developing economies, all of which are in Asia; the remaining 6 ports are from developed countries, 3 of which are located in Europe and 3 in North America.[2] The majority of the ports listed remained in the same position for the third consecutive year, although the ports further down the league were subject to considerable shifting of fortunes and jostling for position. The top five ports all retained their respective positions in 2010, with Shanghai retaining its lead as the world's busiest container port, followed by Singapore, Hong Kong, Shenzhen and Bussan as shown in table.2. The gap between Shanghai and Singapore shortened as it shows that Singapore was in first step in 2008 and 2009, the modification of the figures for the both terminals in 2010 is 638,200 TEUs, and in 2009 is 864,400 TEUs.

The resumption of manufacturing activity and global trade in containerized goods led to a recovery of demand for liner shipping services in early 2010. In 2009, however, the market was particularly bad for container shipping, as demand dropped by 9 per cent while supply grew by 5.1 per cent (Fig.2), the difference between these two figures being a staggering 14.1 percentage points. For the first time since 2005, demand is now forecast to grow faster than supply (in 2010).

Table 2. Top ten container terminal and their throughput  
Source: The Report of UNCTAD May 2011

Port name	2008	2009	Preliminary figures for 2010	Percentage change 2008-2009	Percentage change 2009-2010
Shanghai	27 980 000	25 002 000	29 069 000	-11	16
Singapore <sup>a</sup>	29 918 200	25 866 400	28 430 800	-14	10
Hong Kong	24 434 229	21 040 096	23 532 000	-14	12
Shenzhen	21 413 888	18 250 100	22 509 700	-15	23
Busan	13 452 786	11 954 861	14 157 291	-11	18
Ningbo	11 226 000	10 502 800	13 144 000	-6	25
Guangzhou	11 001 300	11 190 000	12 550 000	2	12
Qingdao	10 320 000	10 260 000	12 012 000	-1	17
Dubai	11 827 299	11 124 082	11 600 000	-6	4
Rotterdam	10 800 000	9 743 290	11 146 804	-10	14
Tianjin	8 500 000	8 700 000	10 080 000	2	16
Kaohsiung	9 676 554	8 581 273	9 181 211	-11	7
Port Klang	7 973 579	7 309 779	8 870 000	-8	21
Antwerp	8 662 891	7 309 639	8 468 475	-16	16
Hamburg	9 737 000	7 007 704	7 900 000	-28	13
Los Angeles	7 849 985	6 748 984	7 831 902	-14	16
Tanjung Pelepas	6 600 000	6 000 000	6 530 000	-7	9
Long Beach	6 487 816	5 067 597	6 263 399	-22	24
Xiamen	5 034 000	4 680 365	5 820 000	-7	24
New York/New Jersey	5 265 053	4 561 831	5 292 000	-13	16
Total top 20	247 221 180	220 900 801	254 387 632	-11	15

A market segment of particular interest to many developing countries is containerized trade in refrigerated cargo, such as fruit, vegetables, meat and fish. Until the mid-1990s, the majority of this trade was transported in specialized reefer vessels. Since then, the entire growth in this market has been taken over by container shipping, installing slots for reefer containers on new container ships

At the beginning of 2010, the capacity to carry reefer cargo in containers stood at 2,898 million cubic feet, which was 9.5 times greater than the capacity on specialized reefer ships. The export of refrigerated cargo by container benefits from the global liner shipping networks and better door-to-door transport services. At the same time, it obliges ports and exporters to invest in the necessary equipment. Over the last decade, exporters have benefited from the

increased competition between containerized and specialized reefer transport providers. As the reefer fleet is getting older and vessels are being phased out, this market segment will become almost fully containerized.[2]

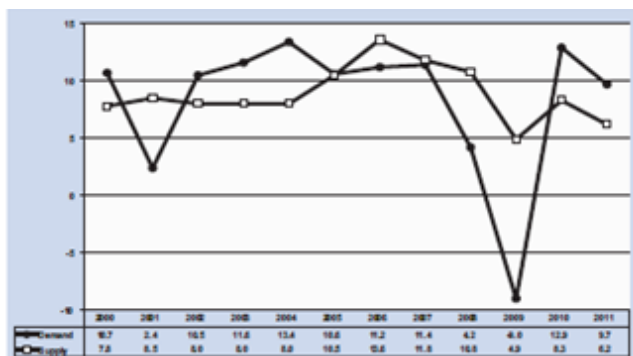


Figure 1. Supply and Demand of container shipping, 2000-2011, Source: The Report of UNCTAD 2011

### 3 IRANIAN CONTAINER TERMINALS OPERATION

Location of the Iranian container terminals are as follows: Khoramshahr, Imam Khomani, Bandar Abbas, Bushahr and Chabahar Port in South and Bandar Anzali, Noshahar and Amirabad Port in North of Iran. It should be noted that due to additional available capacity and a strong market, traffic at Bandar Abbas, Iran's main container terminal, has continued to increase. The port handled 2,231,200 TEU in 2010, an increase of 15% on the same period of 2009. The port is expecting to handle around 2.5M TEU for the year as a whole. Phase one of the port's second container terminal opened in February 2008, increasing overall capacity to 3.3M TEU per year and there are plans to double that in the next 36 months. Phase II of the new facility with another terminal operator became operational at 2012. Since 2010 a computerized system or automation system called TCTS 2010 system installed at Shahid Rajaei container terminal which is located a Bandar Abbas port. Based on the International regulations an online communication system can be carried out by port operator, custom, cargo receivers, shipping companies, and Transportation companies, etc.

### 4 ADVANCED EQUIPMENT REDUCE HANDLING TIME OF TRANSIT CONTAINERS AT THE TERMINALS

Container terminals are designated for the handling, storage, and possibly loading or unloading of cargo into or out of containers, and where containers can be picked up, dropped off, maintained, stored, or loaded or unloaded from one mode of transport to another (that is, vessel, truck, barge, or rail). Normally, a container terminal consists of different section such as POV (Parking Of Vehicles), Administration Building, Container yard, MY (Marshalling Yard) with inbound and outbound flow of containers in the terminal. It should be noted that the latest efficiency in container

terminal automation provided by Zebra Enterprise Solutions is aimed at increasing container terminal capacity while improving port safety and security.[3] Designed to assist container terminal operators in the management of manned and automated port equipment, our container terminal automation solutions improve procedures and processes, as well as enhance container terminal equipment usage accuracy. Equipment management information such as maintenance schedules, equipment idle times, fuel levels and driver accountability of motorized and (non-motorized vehicles) and equipment can be tracked, monitored and managed in real-time. There have been a number of recent changes in the uses of advance technologies at Port container terminals that are designed to improve efficiency and productivity of operations. It is becoming common practice to see terminals operate with Optical Character Reader (OCR), Automatic Equipment Identification (AEI), Electronic Data Interchange (EDI), and other technologies such as cameras that are all designed to speed up the processing of containers through the terminal. In recent years, simulation has become as an useful tools in order to improve container terminal operation. Simulation can be distinguished as the following three groups: Strategically, operational, and tactical simulation. Strategically is applied to study of terminal layout and efficiency and costs of equipment, operational simulation is related to test different types of terminal logistics and optimization methods and finally, tactical simulation means integration of simulation systems into the terminal's operation systems.

### 5 DRY PORTS AS LOGISTIC POINT FOR CONTAINER TRANSIT OF THE TERMINALS

At first, it is better to understand the concept of a dry port. Mrs.Violeta Roso senior lecturer of Chalmers University in Sweden stated in this regard that "A "dry port" is defined as "an inland intermodal terminal directly connected to a seaport, with high capacity traffic modes, where customers can leave/collect their goods in intermodal loading units, as if directly at the seaport". And also, H.Yousefi (2011) expressed that A dry port is generally a rail terminal situated in an inland area with rail connections to one or more container seaports. The development of dry ports has become possible owing to the increase in multi-modal transit of goods utilizing road, rail and sea. This in turn has become increasingly common due to the spread of containerization which has facilitated the quick transfer of freight from sea to rail or from rail to road. So, Dry ports can therefore play an important part in ensuring the efficient transit of goods from a factory in their country of origin to a retail distribution point in the country of destination.[4]

The Persian Gulf has an area of approximately 240,000 km<sup>2</sup> and is very shallow, averaging just 50m-80m (1994; 1997), with only one opening- the Strait of Hormuz linking the Persian Gulf with the Arabian Sea. There are eight littoral Gulf States - Iran, Iraq, Kuwait, Saudi Arabia, Emirates, Bahrain, Qatar and Oman. The establishment of a shared place as dry port for all the above Gulf States will improve

maritime transportation at the Persian Gulf. Based on IMO and WTO and the other relevant International regulations, it is necessary to consider the experiences of the container terminals operation at the Persian Gulf ports. It is useful for specifying the hub of container terminals at the Persian Gulf for further consideration. The capacity and operational methods of maritime transport, trade and transit of container at the terminals can be analyzed by using the Balanced Scorecard as an effective management tool which is used for improving container terminals activities at the Gulf. At the operational stages, relevant agencies including government departments directly involved in daily operations of dry ports are shown in the diagram below: In order to run a dry port efficiently, various agencies including government and nongovernment agencies with due authority are to be placed in the designated dry port premises.

## 6 DRY PORTS IN IRAN

### 6.1 Aprin central Terminal

Aprin is located at 21 kilometer of south western Tehran which is at the intersection of East-West & North-South railway junctions and is accessible to a number of highways. Aprin goods interchange central area is 100 hectares & construction of 110 storage houses & container Terminals are predicted in its area which their establishments are not completed. Before the Islamic Revolution in 1977, a region called Aprin was earmarked to the IRISL, which is linked to the railway. A dry port is a yard used to place containers or conventional bulk cargo, and which is usually connected to a seaport by rail or road and has services like, storage, consolidation, and maintenance of containers and customs clearance. They may be used for shipping, receiving and distribution centers designed to relieve the congestion in increasingly busy seaports, like an inland port. Aprin Terminal as a dry port has the potential to feed Tehran consuming Market & its surrounding industrial regions. At present, a storage house having the area of 9000 m<sup>2</sup> is activated at Aprin center & its annual output is approximately 5000 TEU. Aprin Terminal which upon its formal activation commencement will be classified as off-shore dry ports, would have considerable interests; in case of coordinating with customs, the corresponding goods will be transported to the destination of Aprin center through railway after discharge & loading at sea ports of Shahid Rjaee in this context goods owners are able to directly refer to Aprin Center to receive their respective goods.

Aprin terminal which is equipped with Reach Stacker, Side lift, Lift truck, Bascule, container washing equipment 10 ton lift truck, the telescopic boom 35 ton crane, and a version of TPTS comprehensive & commence software is able to commence its activity as the first Iranian dry port. Recently, the Managing Director of Islamic Republic of Iran Shipping Lines stated that Maragheh Special Economic Zone (SEZ) in Iran will turn into a dry port in the near future.



Figure 2. Three Intermodal Terminals in Iran  
Source: Feasibility of establishment of “Dry Ports” in the developing countries—the case of Iran, Springer Science, Sep 2010.

Since Maragheh boasts railroad and is adjacent to Kurdistan province, the proposed terminal in Maragheh will expedite cargo transport and make it easier to provide services.



Figure 3. Iran, Container Port Traffic (TEU:20 Foot Equivalent Units)  
Source: trading Economics.com

### 6.2 Shahid Motahhari terminal

This terminal is located at 36 km south of the city of Mashhad in the north-east of Iran. The site also has an access to the national highway. Its area is about 190 ha and there are required facilities to handle container transport needs. This terminal is managed by private sector (Domestic Various Related Statistics and Information [7]).

### 6.3 Sarakhs terminal

This terminal is located at 170 km north-east of city of Mashhad in the northeast of Iran at Iran-Turkmenistan border. Its strategic position can be looked as an important gate to the markets of some land-locked countries. The site is also outfitted by required facilities (Domestic Various Related Statistics and Information [7]).

#### 6.4 Sirjan terminal

Sirjan is located at Kerman Province which is away 180 Km from the capital of the state, its distance from Banadr Abbas Port is 300 Km. Since Sirjan linked to Bandar Abbas port and Tehran through railway, therefore it has good location in order to support Shahid Rajae Container terminal at Banadr Abbas Port.

### 7 THE INTERNATIONAL NORTH-SOUTH CORRIDOR

India has taken the lead in what it calls “kick-starting” an “international north-south corridor” from Iran to Russia via Turkmenistan and Kazakhstan to ensure a seamless connectivity to Central Asia. It should be noted that India wants this corridor to be operational by 2013. The North-South Transport Corridor is a term used to describe the ship, rail, and road route for moving freight from South Asia to Europe through Central Asia, the Caucasus, and Russia. [11] The route primarily involves moving goods from India via ship to Iran. From Iran, the freight moves by ship across the Caspian Sea or by truck or rail to Southern Russia. From there, the goods are transported by truck or rail along the Volga River through Moscow to Northern Europe. In 2001, Russia, Iran, and India signed an agreement to further develop the route. The Government of India had started this project with the view to enhance trade relations between South Asia and Central Asia. The primary step towards trade enhancement, was signing of Memorandum of understanding between Indian and Iran over the development of Chabahar port and transshipment facility at Banadr Abbas and Imam Khomani port. This “International North-South Transport Corridor” will have its starting point from Mumbai, and via transshipment the goods will reach Bandar Abbas Port in Iran, then a railway link will be established between Iran, Turkmenistan, Kazakhstan and it will finally reach Russia. India and Russia will strive to revive the North-South Transport Corridor (NSTC) through Iran that has failed to take off more than 10 years after the three countries signed an agreement to set up the trade route. India and Russia agreed to “enhance connectivity” through the NSTC including through China, the Embassy release said. The international North-South transport corridor (ITC) linking India, Iran and Russia is becoming increasingly popular, and is likely to become the “Silk Road “20th century.” This trade route will cut by two-thirds the time of cargo transportation from Indian Ocean areas and Persian gulf to Europe, and reduce the price of shipment of each cargo container by 400 dollars. By 2005 Russia, India and Iran plan to double cargo flows, bringing them to eight million tones.

ITC is to ensure the delivery of cargos from Indian Ocean and Persian Gulf regions to Iranian ports on the Caspian Sea, to be taken up by ferries to Russia’s railroad terminals or, by river-marine vessels, through Russia’s inland waters to countries of eastern and central Europe and Scandinavia. Distance of new route (Green line in the following figure) in comparison to the previous route is 40% shorter; it

means that instead of 45-60 days it becomes 25-30 days.



Figure 4. Green line as new, short, and cheap route  
Source: Internet, Site of Wikipedia

In addition, in the new route the price of shipment of each cargo container 30% cheaper than previous route.[11] The ITC Coordination Council such as representatives of Iran, India, and Russia, had invited delegations of Belarus and Kazakhstan, to attend. The latest meeting of the Coordinating Council in Tehran approved Belarus, Kazakhstan, Oman and Tajikistan as new ITC members. The applications from Syria, Azerbaijan and Armenia are currently under consideration. Tajikistan and Oman will join the ITC agreement shortly. The INSTC was expanded to include eleven new members, namely: Republic of Azerbaijan, Republic of Armenia, Republic of Kazakhstan, Kyrgyz Republic, Republic of Tajikistan, Republic of Turkey, Republic of Ukraine, Republic of Belarus, Oman, Syria, Bulgaria (Observed). The Astrakhan transport hub occupies an important location in the North-South ITC. It is a transit point for some three million tones of cargoes bound for Caspian Sea ports of Iran. An increase in cargo flows, which began after the emergence of the ITC, required the construction of additional port facilities in this region.

In near future, train ferries will take cargos to the port of Amir Abad in Iran. The construction of a container terminal in the port of Makhachkala began in 2002, and by the end of this year its capacity will reach 30520 TEU a year.



Figure 5. Astrakhan as main location of North South ITC  
Source: Source: Internet, Site of Wikipedia

It is planned to bring the capacity of the terminal to 61000 TUE a year in the nearest future. At present, container shipment through the port of Makhachkala mostly proceeds along the Russia-Iran route.[11]



Figure 6. The location of Makhachkala port in Caspian Sea. Source: Source: Internet, Site of Wikipedia

At present, several operators work on the ITC transport market, who gained the necessary experience, made business contacts and now successfully fulfill cargo owners' orders. A healthy competition between them ensures a stable high level of transport services. The North-South ITC will have a tremendous economic, political and strategic significance this century. To bridge the two continents is the important mission of the North-South ITC.

### 8 THE ROLE OF SWOT ANALYSIS

SWOT matrix is a method for the identification of internal Strengths and Weaknesses, external threats and opportunities in the context of the realization of a particular project. The SWOT matrix is shown in table.3 of this paper.

Table 3. SWOT matrix

	Positive	Negative
Internal Factors	Strengths (S)	Weaknesses (W)
External Factors	Opportunities (O)	Threats (T)

SWOT analysis is a widely acknowledged strategic tool and constitutes an important element of strategic (long term) planning. SWOT analysis is a method which provides for the balance to be introduced between the internal capabilities and external possibilities. In other words, it is a set of logical methods used to evaluate one's own capabilities and weaknesses with the opportunities and threats in the environment as the strategies shown in table.4 of this section.

Table 4. SWOT analysis

Internal factors	List of Strengths (S)	List of Weakness (W)
External factors		
List of Opportunities (O)	How do you control your strengths to benefit from opportunities?  (SO- Strategies)	How do you ensure your weaknesses will not stop you from opportunities?  (WO- Strategies)
List of Threats (T)	How do you use your strengths to minimize the impact of threats?  (ST- Strategies)	How will you fix weaknesses that can make threats have a real impact?  (WT- Strategies)

In order to have a successful implementation of the strategy, it is necessary to understand the port competition, to focus at the competition weaknesses and avoid their strengths. It is therefore important to determine the existing and potential competitors, making a comparison between them. In order to establish a real market position of the port, it is necessary to make a list of the port essential business factors, drawing a parallel with those of the competitors. No SWOT (Strengths, Weaknesses, Opportunities, and Threats) Matrix can be worked out before analyzing the port competition and environment. It shall not only cover all the conceptions but also give the strategy proposals based on the analysis of external and internal factors. In this regards, table.5 of this paper shows a comparison between Bandar Abbas, Dubai and Rotterdam port for the purpose of their ranks, capacity of container handling, use of advanced equipment, etc in 2011.

Table 5. Competitive Matrix

Success factors	W.C		B.Abbas		Dubai		Rotterdam	
	S	W.S	S	W.S	S	W.S	S	W.S
Share of Container Market in the World in 2011	0.20	2	0.40	3	0.60	4	0.80	
Capacity of Container Transport in 2011 (TEU)	0.15	2	0.30	3	0.45	4	0.60	
The Equipment for Container Handling Operation	0.20	3	0.60	4	0.80	4	0.80	
Container Port in the World Rankings in 2011	0.25	2	0.50	3	0.75	4	1.00	
Rank of Container Operators at the port	0.20	1	0.20	3	0.60	3	0.60	
Total	1.00	2.00	3.20	3.80				

Key of the table:  
W.C: Weighted Coefficient,  
S: Score  
W.S: Weighted Score

The general questionnaire for SWOT analysis, created within the project, focuses mainly on the logistics of cargoes, transportation flows, types of cargo transport and other questions related to the logistics of container substances. This questionnaire

was addressed to cargo plants, logistics' corporations and institutions/organizations related to the field of container handling and logistics and it was answered during personal interviews realized with competent managers of the relevant organizations.

In other words, the efforts shall be made to analyze the port strengths and weaknesses and make an evaluation of the opportunities and threats in the environment. The Matrix would therefore allow for the identification of the relevant factors, positive or negative, which have a considerable impact on the realization of the strategic targets, and as such make it possible for us to influence the factors in time, i.e. bring a new approach to the realization of the strategic objectives. SWOT analysis was divided into two main sectors. External Threats and Opportunities were scrutinized in the first segment, while internal Strengths and Weaknesses were monitored in the second segment. The word "External" refers to a factor from the external environment of the company, which cannot be influenced by the interviewed in the existing situation. "Internal" refers to a factor, which can be influenced by the company itself. The SWOT questionnaire was divided into subcategories such as economic, social, cultural, political, and technological trends and so on.

## 9 CONCLUSION

Improvement of the Iranian container transit from the International transit corridor can be carried out by using the advanced equipment for handling operation at the container terminals; it causes to reduce the time vessels spent in the ports. It should be noted that the Competitive advantage of a container terminal at the Iranian ports is achieved by the integrated scheduling of various types of handling equipment with an aid of the useful Strategic Models at an automated container terminal. It can be observed that use of an optimum strategic planning at the container terminals may cause to develop the efficient scheduling of the equipment in order to increase the productivity of the container terminals. Apart from the significance of strategic planning on container transit, the other factor which has great influence on developing the Iranian south ports is the establishment of dry ports under the following three categories: a). Close to the Iranian container terminals, b). At the costal water area, c). Very far from the Iranian South Ports, in order to increase the capacity of Iranian transit ports. It should be noted that the Iranian South Ports will be improved by analyzing the internal and external environment factors using SWOT analysis in order to help for determining the current condition and to identify major predictions and challenges that could significantly impact strategy implementation of container transit.

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