



## Presenting an Evaluation Model of Chabahar Free Zone Potentials using Multiple-Criteria Decision Making Under Resistance Economy

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**Key words:** Potentials of Chabahar free zone, resistance economy, multiple-criteria decision making, hierarchical analysis, entropy

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**Abstract:** This study focuses on evaluation of potentials in Chabahar free zone using multiple-criteria decision making under resistance economy. The research has a practical purpose following a descriptive-analytic method. In order to achieve its goal, the potentials in the area have been studied in five different categories. Each category has got some defined sub-criteria. Then using questionnaires, information has been gathered on the potentials' categories and defined sub-criteria. This research has utilized two methods namely entropy and hierarchical analysis. The entropy was employed to assess the sub-criteria and hierarchical-analysis helped us to decide on priorities while resistant economy existed. With the help of the outcomes, the classifications of the potentials of the Chabahar region were done according to their importance: Agricultural potentials, tourism development, new job opportunities, local and foreign investments, import and export augmentation.

## INTRODUCTION

The main roles of free zones in developing countries are changing economic ideology and bringing about a harmony between national and global economies. Currently, the process of economic liberty is inevitable all around the world. Therefore, it is vital to study and look into the importance of free zones from a global perspective. It is mandatory to understand and welcome economical, technological, social, cultural and environmental variations in free zones according to pilot ratio. The most important means of going global are production, technology, investment and commerce among which investment is the crucial one functioning as the driving force of others. Nowadays, in successful free zones around the world enhancing economic and trading

activities which lead to more investment is due to providing safe and well-equipped environments and in turn, satisfied customers. Amazing enhancement and boosting of some free zones resulting in development of their countries make us give it a more serious consideration. At the present time, there are seven industrial commercial free zones in Iran. Chabahar free zone is located at the South-Eastern part of Iran. It is the only ocean port in the vicinity of Oman Sea and Indian Ocean. As important as being a suitable port for ocean sailing ships, it is considered Iran's commercial free zone. Taking into account the strategic and geopolitical significance of this port, suffice it to say that during the imposed Iran-Iraq war, it was through this port that Iran could manage its global trading activities. In the last two decades, changes including the destruction of the army

bases in the East and new governments gaining power in Central Asia, all have caused Iran (specifically the South-Eastern part and Chabahar) to become an asset in economic existence and development of central Asia. In the last decade to magnify this chance Iran has made an attempt to develop its economic and commercial relationships with Central Asia by boosting Chabahar assets. This has made Chabahar the commercial pole of Central Asia, Persian Gulf vicinity and the Far East. To catch up with Iran, Pakistan also has tried to make its free zones commercial poles with the help of China's investments in the region. Comparing the contributions of Chabahar and Gwada in developing commerce in Central Asia as well as considering the potentials and priorities in Chabahar, it is obvious that Chabahar is the one to be the economic pole in the region. Therefore, in this study, we try to analyze this golden opportunity of Chabahar as the main commercial pole in the region. To achieve this goal we present an assessment model based on potentials in Chabahar using multiple-criteria decision making method under resistance economy circumstances.

### Subjective concepts

**Free zone:** The first countries interested in free zones were socialist countries with closed economy. In Iran, however, it was theoreticians of government economy who suggested having free zones as a way to avoid closed economy. In 1367 and 1368, many experts concentrated on the fragility of economy based on oil export. According to statistics, oil export brought the country 7 billion dollars in 1367; while in some years the whole sum of income exceeded 20 billion dollars. Thus, the government decided to enhance the country's non-oil income. To achieve this Iran officially announced Chabahar as a commercial-industrial free zone.

To have a pattern of development of free zones, we should first look at it as a process, trying to recognize its contributing factors. Generally speaking, we have 3 main procedures in a process (Fig. 1).

**Step 1:** primary requirements of this process are classified into 2 groups:

- A: hardware requirements
- B: software requirements

Hardware requirements refer to the basic needs that the most significant ones are transport, logistics, energy, welfare, ICT, commercial and office buildings. Worldwide, in all free zones either public or private sector is demanded to provide hardware requirements. However, after the free zone opens, it is very usual that these needs are provided by private sector investments.

Software requirements refer to the law and policies of free zones. They include rules and regulations such as

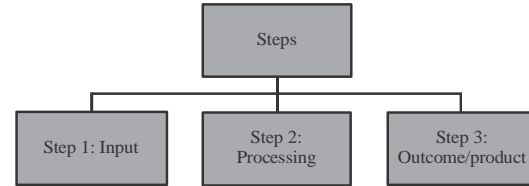


Fig. 1: Free zone growth and development diagram

those regarding exemptions and the length they are validated, customs duties, monetary rules and other related topics needed to make the free zone systematic.

**Step 2; processing:** This step in free zone domain is a challenging undertaking which demands large scale economic activities which are ongoing at the moment. Trading, transit, community services, monetary matters, higher education, tourism, etc. are immeasurable operations that are the outcomes of accomplishing subjects such as tax exemptions, free commuting of foreigners, free capital and profit flows and other facilities available in free zone dominion<sup>[1]</sup>.

But what are the products of this process? The answer is simply too broad and is out of the span of this research, however, it is plausible to give a brief explanation of the main topics. These days, the economists have created some factors which are capable to turn into quantitative inputs. To do so, they also considered the expectations of the countries having free zones<sup>[1]</sup>. These features are as followed:

- Conducting local and Foreign investing potentials (outward, inward)
- Increasing commerce including import and export
- Boosting export and transit
- Enhancing technological products and transporting them
- Facilitating higher education and medical care
- Communicating and IT development
- Boosting tourism
- Providing banking services
- Global presenting of standardized technical and engineering services
- Providing new job opportunities and increasing skills
- Developing the region by providing better environments and societies
- Providing/increasing income

**Resistance economy:** Resistance economy is a measure taken by sanction targeted countries to circumvent the sanction. As there are trade barriers such as band export and import, these nations are economically pressured specially in some areas. Resistance economy assists these nations to detect these areas and control them. Ideally, however, they may be able to turn this pressure into an opportunity. To achieve resistance economy and

resilience, sanctioned countries should try to substitute local inputs and domestic products for imported inputs; thereby, they can become independent. Iran's government officials believe that the concept of resistance economy makes it necessary to withstand sanctional pressures and to overcome them in order to accomplish national strength. This cannot be achieved without nationwide cooperation and shrewd, perspicacious management. We can also define resistance economy as devaluing reliance on others and appreciating domestic and national products which will eventually lead us to independence<sup>[2]</sup>.

The current economic situation of Iran has never been experienced theoretically or practically before. As a result, Islamic Republic itself is responsible to conceive new methods and viewpoints which are suitable for the present situation. The implementation of resistance economy along with these methods and viewpoints are essential for all nations rising against brutality<sup>[2]</sup>.

Even studying every book on economy cannot provide us with comprehensive, compiled information about resistance economy. In all these resources no presupposition or measures taken about sanction against central bank can be found. The reason is clear; it has never been done before. As a result, it seems unmanageable to deal with this issue. Even if there have been some studies and information, it is secretive and not available to ordinary researchers. This means Islamic economists have no access to this information to be used to tackle economic issues. The best solution to this problem is to create our own Iranian Islamic informational, technological movement and by so, doing to inspire other independent nations. In this article we will touch upon four different definitions of resistance economy. We can also have four different combinations of these definitions that can be followed as patterns in national projects<sup>[2]</sup>.

**Parallel economy:** In this definition there is a resemblance between resistant economy and parallel economy in the sense that as the Islamic Republic of Iran devised required and suitable organizations such as "komite emdad", "jahad e saزندegi", "sepaahpastaran" and "bonyademaskan" for the betterment of Islamic Revolution. It is also obligatory to continue resistance economy to achieve its goals. The reason is easy to understand, IRR needs resistance economy and these organizations since what is achieved through them can't be done otherwise. Thus, it should create parallel organizations for resistance economy as well. It means we need "prim economy".

**Maintenance economy:** The second definition refers to a kind of system that tries to make economy resistant, to remove economic damages, to tackle economic problems and finally to maintain inefficient economic organizations. It means if in the previously used economic

system some departments couldn't satisfy us the new system should be able to make them satisfactory by redefining the internal policies of them. For instance, in this new definition, we demand central bank and ministry of commerce to detect the troublesome areas of the economic system and to redefine them in conformity with Islamic Republic's new requirements.

**Defensive economy:** This third definition focuses on 3 different concepts "attacker survey", "defensive survey" and "defense of survey". It helps identify how our enemies attack our economy and trigger economic problems in our country. So, prior to resistance economy coming into existence, we should know our enemies' strategies and schemes. Only then we can plan our defense and fulfill it.

**Pattern economy:** The last conceptualization should not be considered a short-lived, ephemeral, defensive measure. Unlike the previous three definitions that consider resistance economy as defensive and short-lived, this endeavor has a major, long-lasting influence of Iran's economic system. This concept as a forward-looking suggested course of actions seems not to be far from Iran's supreme leaders' attitude. What we are seeking, in this respect is an ideal economy that is both Islamic and upgrading our economy to be dominant in the area. This system must be efficient and inspiring for the whole Muslim world progressing us towards the great Islamic civilization.

**Multiple-criteria decisions:** In modern world, most of the times, managers should make complicated decisions that need multidimensional-framework strategies as they are affected by many qualitative, quantitative and often opposing factors. Since, a wrong decision may result in a great financial loss, the managers try to choose the best options. The higher the manager's rank and authority, the bigger the loss of the wrong decision is. Naturally, making multiple-criteria decisions involve intricate issues that cannot be solved easily. This happens, especially because in majority of cases these criteria don't go hand-in-hand with each other and giving priority to one of them makes the other one less favorable. Therefore, to take care of such problems, it is recommended that they acquire Multiple-Criteria Decision Making (MCDM) and Multiple-Attitude Decision Making (MADM). MADM has got a variety of decision making techniques. They compare options with each other and choose the best ones. MADM's methods are based on mathematical formulas choosing the best options based on their priorities.

Since, each of these methods has their own suppositions to solve a problem, they will get to different answers under different circumstances. Also, one of the main assumptions is the validity of the attitudes adopted by the related techniques of each method. Broadly speaking, the validation done in this method is both

subjective and objective. Clearly, altering the outcomes of this validation will affect the techniques to obtain the best options. Thus, having scientific and experimental criteria to validate the outcomes and to confirm the answers as the best options is substantial. In this respect, the previous researchers showed that there was a statistical interconnection among options levels, agreement among specialists etc.<sup>[3]</sup>.

**The research background:** Ziari etc. in a descriptive-analytic article talked about the contribution of Chabahar in the development of Sistan and Baluchestan province. Based on their studies the following are the main factors hindering Chabahar and in turn, Sistan and Baluchestan Province from developing:

- Lack of proper management
- Lack of flexibility regarding rules and regulations of investment
- Lack of basic facilities in the area

Local and foreign investment's significant influence on economic boosting of the area cannot be denied. It can eradicate unemployment in the area; moreover, the area can be fully promoted if the potentials are benefited from properly.

For the recreational purpose Ardekani *et al.*<sup>[4]</sup> divided Chabahar into different recreational zones adopting multiple-variant decision making model. The zoning was done based on social economic yardsticks. The features taken into consideration were soil, proportional humidity, geological stability and distances from shallow sources of water, main roads, the sea, the port, downtown, historic sights, the fault, army bases and finally other special sites. They analyzed the results benefiting from hierarchical-analysis and linear-analysis methods. The research showed that 554 acres of the area could be used for 13 recreational centers, however, taking into account the environmental limits and sensitivities, the vicinity next to the Gulf is not supposed to be utilized for tourism purposes.

Rajabi etc., dedicated their research to potentials in the south of Mekran with the purpose of coming to managerial guidelines for the betterment and development of the area. This research was done based on descriptive-analytic method employing Suwat management model. Their research targeted capacities and potentials available in this vicinity. It, moreover, concentrated on the ways these capacities and potentials can be activated along the south of Mekran. The main question was, "What are the main capabilities of this domain to prosper?" This study assumes that this region has very important geostrategic and geo-economic condition. If these capacities can be in full growth, they can provide jobs, increase income, help the nation flourish, protect the environment, present the local cultural values of the area to the world and on the whole, prosper the country.

Also, Nafas etc., examined how Chabahar could contribute in providing more job opportunities in the district. Following descriptive-analytic methods they tried to gather information through studying books and other related documents in libraries. However, a significant amount of their information was gathered by having interviews with officials in charge and other such ways. The insights, we got from this study involved the hindering factors stopping the region from achieving its goals. The factors included lack of proper management, basic needs and infrastructure. Their studies further revealed that local and foreign investments and making the district suitable for new job opportunities would be able to affect the economic situation greatly. They also claimed that if Chabahar free zone flourished, unemployment would lessen even more.

Zar and Bahar<sup>[5]</sup> focused on influencing factors on tourism industry in Chabahar implementing Analysis Network Phenomenon (ANP). Their study was based on practical purpose and descriptive-analytic method. Their research revealed that from among all influencing factors "tourism foundation" and "financial status" are the most determining factors in the development of the area. In fact the findings made us aware of the main problems in boosting tourism industry in the vicinity, i.e., in spite of the fact that Chabahar has the capacity to be a unique tourist destination, lack of proper foundation and suitable advertising don't let it flourish. This research, however, showed us the positive, facilitating factors such as job opportunities, sport and recreational attractions, beautiful natural sceneries and investments of the vicinity as well.

## MATERIALS AND METHODS

**Methodological survey:** Examining the previously done, related studies and reviewing the literature, a group of criteria and indexes was gathered. This study is quantitative regarding the input and descriptive, determining regarding the output.

**The area of the study:** Chabahar city with the area of 1090 acres is located in the far end of the southeastern part of Iran in Sistan Baluchistan province in the vicinity of Oman Sea at east Chabahar Golf. Out of 14 acres of this city, 10 is allocated to industrial activities and 4 is used for trading, tourism and economic activities. Chabahar port is Iran's access to Oman Sea that is one of the most important international waterways. Economically this access is of prominent importance to Iran as it is Iran's pathway to have access to big and small ports in the world. The main industries and activities in Chabahar consist of transporting goods, local commencing, harboring goods and raw materials, providing and processing products for export, rendering oil industries including fuel and finally helping tourism industry develop.

**Statistical population:** The participants are the officials of related departments, professors, researchers, recognized scientists, skilled experts and Chabahar local people. Out of the statistical population, 20 who are more familiar with area and its potentials were chosen as statistical sample.

**Data gathering methodology:** In this research, the first method applied to gather information was investigating articles in the libraries and different site online. Additionally, “double comparative questionnaires” were implemented to gather further data regarding the area’s potentials. The sample population were asked to express their opinions while taking into account the resistance economy.

**The research variants:** This research concentrated on the following variants while examining Chabahar’s potentials under resistance economy implementation.

**Local and foreign investment potentials:**

- Increasing import and export
- Boosting tourism industry
- Providing new job opportunities
- Being suitable for producing more agricultural products

The five items mentioned above are considered as the study variants and are classified according to their priorities. Each of the main potentials grouped as the main criteria has its own sub-criteria as well (Table 1).

Table 1: The main potential grouped as the main criteria

Main criteria	Sub-criteria
The potentials of domestic and Foreign investment	Attracting domestic investment in agricultural, handicrafts and tourism sectors
Tourism industry	Attracting investment in trading sea creatures and sea product
	Attracting Foreign investment to develop agricultural facilities and products
	Attracting foreign investment to make sea science well equipped
	Unlimited possibility of investment for both Iranians and foreigners
	Legally guaranteed and safe foreign investment
	Low paid local manpower
	Low tariffs compared to other free zones
	Accessibility of cold storage and warehouses at the harbors and depots
	Suitability of the area for producing and processing industrial products and handicrafts
	Banking system well equipped with international information network
	Possibility of purchasing land and niches facilitating by no interest installment plan
Increasing imports and exports	Accessibility of borderline markets
	Suitable geographical location being next to the Sea and international ways
	The shortest path to countries like Afghanistan and the Middle East for export and transit
	Availability of air transport from Chabahar airport providing special facilities
	Appropriateness of the area to reach 350 million people market in Afghanistan, Pakistan and the middle East
	Giving special facilities for imports based on the law passed by the board of directors
	Availability of Shahid Kalantari and Shahid Beheshti harbors for the ships to moor in shelter
Tourism industry	Rich historical sites and cultural heritage:
	Favorable weather in cold season
	Variety of natural, uncultivated sceneries
	Enjoying Oman sea coastline and Persian Gulf countries
	Suitability for investing on and planning tourism
	Cultural historical and athletic attractions
	No limitations concerning planned needed for tourism industry
	Abundant sources of energy, various wildlife and wild birds such as flamingos, herons, tawny eagles and Eurasian teal
Agriculture	Attracting tourists through geopark
	Cultivating methods of agricultural products and fast ripping of some of the crops compared to other parts of the country
	Possible planting of variety of tropical and half tropical agricultural products
	Having the best meat Sistani cattle breeds, Dashtyari cattle, Khazak and Dashtyari chicken breeds and Baloochi sheep breeds that produce the best wool used in carpet industry of the country
	Using more than 18,000 acres of the land to produce agricultural products and to plant water gardens. The agricultural products exceed 400,000 tons per year
	Having countless capacities of planting due to different kinds of plants and different times of planting
Agriculture	Favorable weather conditions, suitable to produce crops out of their seasons
	Creating sites to produce tropical saplings and send them to other parts of the country such as Booshehr and Khozestan
	Chabahar International University and Zabool University for teaching and training fishery and agricultural experts
	Having more than 10,600 acres under pressurized irrigation system to make the best out of the water sources available
	Benefiting from tissue engineering agriculture in order to increase the best kinds of banana for export
Providing job opportunities	Providing job opportunities in tourism industry
	Providing job opportunities through the sea
	Providing job opportunities regarding handicrafts
	Providing job opportunities through investing in agricultural sector

**Input analysis method:** To analyze the data gathered in this study, hierarchical analysis was implemented. Also, entropy method was utilized to assess the value of sub criteria. These two methods, i.e., entropy and hierarchical analysis have been encoded in MATLAB Software.

**Entropy method:** When all the information gathered of a decision making matrix has known weighted correlation coefficients, it is proposed to use entropy weights. Entropy is a very important concept in social science, physics, and information theory. In information theory, entropy is an uncertainty criteria which is defined by probability distribution  $P_i$ . The measurement of this uncertainty is explained by Shannon. The formed decision making matrix will turn quantity measures into quality measures and take the following steps to give the final answer.

**Step 1:** Calculation of  $P_i$ :

$$P_{ij} = \frac{a_{ij}}{\sum_{i=1}^m a_{ij}} \quad \forall j$$

**Step 2:** Calculation of entropy measure:

$$E_j = -k \sum_{i=1}^m [P_{ij} \ln P_{ij}] \quad \forall j$$

**Step 3:** Calculation of uncertainty criterion:

$$d_j = 1 - E_j \quad \forall j$$

**Step 4:** Calculation of weights:

$$w_j = \frac{d_j}{\sum_{j=1}^n d_j} \quad \forall j$$

**Step 5:** Calculation of:

$$w_j = \frac{\lambda_j w_j}{\sum_{i=1}^n \lambda_j w_j} \quad \forall j$$

**Hierarchical analysis method:** This method was first proposed by Saati 1981. Data analysis in this method is similar to what happens in our brain. This method enables us to calculate a coefficient called incompatibility coefficient. It means, we can study how different complicated situations are influencing each other at the same time. It gives a chance to decision makers to find the priorities based on their own knowledge, experience, and purposes while they don't have to ignore their feelings

and judgment either. It has a more flexible methods when it comes to measuring the values of criteria and utilizes double compare method among criteria. In fact the decision makers should decide which one of the two criteria has priority over the other one. Hierarchical analysis shows the result of this comparison in the form of Double compare matrix to highlights the priority of one over other. There are four steps in applying this method.

**Step 1; Making a model:** The first step gives the problem to be solved into a hierarchical analysis process and break it down into list of the influencing criteria. The factors involved are decision making criteria and possible alternatives. When we break a problem into different components in a hierarchical way, the upper levels show the main purpose of this decision making that can, in turn, be broken into less important components in the lower level. The last level will include the alternatives to make a decision on.

**Step 2; Paired comparison:** Prior to choosing from among alternatives, the criteria influencing each of them must be fully examined. The relative importance of each of them are represented using numbers. This can be accomplished comparing pairs of alternatives as taking into consideration the values of them presented in numbers.

**Step 3; calculating relative weights:** To evaluate the weights of elements involved a set of numbers is used, then utilizing paired compare method, one of them will be prioritized over the other. The calculation of the numbers will be done based on mathematics. First of all, the sum of the numbers in each column will be obtained, then to recomputed the values of each of the elements in each column, they will be divided by the sum of the same column. This new matrix is called "normalized matrix". The normalized matrix of each level is the average obtained from that level which represents the relative value of each criteria.

**Step 4; the amalgamation of different weights:** We can prioritize the alternatives by multiplying the weight of each criterion by the weight of the criteria in upper levels; by so doing, we have the final weight of each criterion.

## RESULTS AND DISCUSSION

**The calculated results:** In this study the result of the research will be presented in two parts: the first part is devoted to inlaying the relative weights and importance of sub-criteria using entropy method; the second part is about prioritizing different potentials in Chabahr based on AHP method.

Table 2: Pj values

Criteria/options	1	2	3	4	5	6	7	8	9
1	0.0769	0.0909	0.0645	0.1026	0.0909	0.1389	0.0811	0.0976	0.0857
2	0.1282	0.1136	0.1290	0.1026	0.0909	0.0833	0.1081	0.1220	0.0857
3	0.1282	0.0909	0.1290	0.1282	0.1136	0.1111	0.1351	0.1220	0.1429
4	0.1026	0.1136	0.0968	0.0769	0.0909	0.0556	0.0541	0.0976	0.0857
5	0.1026	0.1136	0.1290	0.0769	0.1136	0.0833	0.1081	0.0976	0.1143
6	0.1026	0.1136	0.0968	0.0769	0.0909	0.0556	0.1081	0.0976	0.0857
7	0.0769	0.0682	0.0645	0.1026	0.0909	0.1111	0.0811	0.0732	0.1143
8	0.1026	0.1136	0.0645	0.1026	0.1136	0.1111	0.1081	0.0976	0.1143
9	0.1026	0.0909	0.0968	0.1026	0.1136	0.1111	0.1081	0.0732	0.0857
10	0.0769	0.0909	0.1290	0.1282	0.0909	0.1389	0.1081	0.1220	0.0857

Table 3: The outcomes of entropy and uncertainty

Criteria	1	2	3	4	5	6	7	8	9
$E_j$	0.2286	0.2291	0.2265	0.2286	0.2296	0.226	0.2279	0.2288	0.2285
$d_j$	0.7714	0.7709	0.7735	0.7714	0.7704	0.774	0.7721	0.7712	0.7715

**The results obtained from entropy method:** As mentioned before, this study is a research done on the potentials in Chbahar free zone such as “local and foreign investments”, “increasing import and export”, boosting tourism industry”, “providing job opportunities” and “suitability of the area for agricultural products”. In this articles the sub-criteria presented in Table 1 have been evaluated and prioritized by conducting a survey in which 10 experts were given questionnaires to answer. The results were analyzed based on entropy method and the values were calculated through the following steps:

**First step:** The answers were analyzed and the amount of Pj was calculated (Table 2). Each matrix is presented in 10 levels and 9 columns ; the levels show the number of people and the number of columns are the number of sub-criteria studied. To make the research manageable, we just study 9 of the sub-criteria.

**Second and third steps:** The second step is computing  $E_j$  (entropy method) in which  $K= 0.1$ . The third calculation gives us  $d_j$  that is the uncertainty index (Table 3).

**Fourth and fifth steps:** The outcomes of the calculations in these two steps are the primary and final weights shown in Table 4.

Having a look at the ranks ordered by the table, it is noticeable that “Having countless capacities of planting due to different kinds of plants and different times of planting”, “favorable weather conditions, suitable to produce crops out of their seasons”, ‘using more than 18,000 acres of the land to produce agricultural products and to plant water gardens. The agricultural products exceed 400,000 tons per year’ and “Having more than 10,600 acres under pressurized irrigation system to make the best out of the water sources available” are the first 4 ranks respectively. So, number 1 to 4 are agricultural potentials; other high ranks are from providing job sub-criteria, the reason of which is doing the research under resistance economy circumstance.

**Ranking results from hierarchical analysis:** Using the weights obtained from entropy method and AHP , ranking of Chabahr’s potentials under resistance economy was done following some steps.

**Step 1:** In this stage alternatives (the decision making aims) were formed using a hierarchy of related criteria. The model devised in the study consists of three levels. The first level is devoted to ranking, the second one to sub-criteria and; finally, the last one to Chabahr’s potentials in resistance economy existence.

**Step 2 & 3:** In this step, employing the data gathered from the questionnaire, paired-comparison matrix was created (attached). The relative weights for each and every potentials was decided on in the 3rd step. As there are too many sub-criteria resulted from these steps, this table is not included.

**Step 4:** It was the time to calculate the final weights of alternatives by multiplying the relative computed weights by the weights of criteria. The result are shown in Table 5.

According to the table “agriculture” with the weight of 0.2824, “boosting tourism industry” 0.1639, “Providing jobs” 0.1503, “Domestic and foreign investments” 0.1098, and finally “Increasing imports and exports” 0.0319 occupied ranks 1 to 5, respectively.

This research was done with the purpose of studying Chabahr’s potentials applying multi-criteria decision making model, entropy method and hierarchical analysis method (AHP) when resistance economy is the resort to take care of economic problems in the country. Data gathering method of this research was employing a questionnaire based on the potentials and sub-criteria being studied. Entropy method was used to assign weights to the sun-criteria and hierarchical analysis method was employed to prioritize the potentials under resistance economy. Entropy method showed us that “Having

Table 4: Calculation of two steps primary and final weight

Rank	Weight	Sub-criteria
25	0.0021	Attracting domestic investment in agricultural, handicrafts, and tourism sectors
22	0.0031	Attracting investment in trading sea creatures and sea product
28	0.0008	Attracting foreign investment to develop agricultural facilities and products
31	0.0005	Attracting foreign investment to make sea science well equipped
18	0.0041	Unlimited possibility of investment for both Iranians and foreigners
16	0.0062	Legally guaranteed and safe foreign investment
14	0.0067	Low paid local manpower
17	0.0055	Low tariffs compared to other free zones
32	0.0004	Accessibility of cold storage and warehouses at the harbors and depots
12	0.0073	Suitability of the area for producing and processing industrial products and handicrafts
20	0.0039	Banking system well equipped with international information network
24	0.0023	Possibility of purchasing land and niches facilitating by no interest installment plan
30	0.0006	Accessibility of borderline markets
26	0.0012	Suitable geographical location being next to the sea and international ways
29	0.0007	The shortest path to countries like Afghanistan and the Middle East for export and transit
25	0.0021	Availability of air transport from Chabahar airport providing special facilities
20	0.0039	Appropriateness of the area to reach 350 million people market in Afghanistan, Pakistan and the Middle East
28	0.0008	Giving special facilities for imports based on the law passed by the board of directors
15	0.0063	Availability of Shahid Kalantari and Shahid Beheshti harbors for the ships to moor in shelter
33	0.0003	Rich historical sites and cultural heritage
29	0.0007	Favorable weather in cold season
21	0.0034	Variety of natural, uncultivated sceneries
22	0.0031	Enjoying Oman sea coastline and Persian Gulf countries
23	0.0029	Suitability for investing on and planning tourism
13	0.0068	Cultural historical and athletic attractions
27	0.0009	No limitations concerning planned needed for tourism industry
33	0.0003	Abundant sources of energy, various wildlife and wild birds such as flamingos, herons, tawny eagles and Eurasian teal
33	0.0003	Attracting tourists through geopark
7	0.0039	Cultivating methods of agricultural products and fast ripping of some of the crops compared to other part of the country
6	0.043	Possible planting of variety of tropical and half tropical agricultural products
8	0.031	Having the best meat Sistani cattle breeds, Dashtyari cattle, Khazak and Dashtyari chicken breeds and Baloochi sheep breeds that produce the best wool used in carpet industry of the country
3	0.11	Using more than 18,000 acres of the land to produce agricultural products and to plant water gardens. The agricultural products exceed 400,000 tons per year
1	0.29	Having countless capacities of planting due to different kinds of plants and different times of planting
2	0.19	Favorable weather conditions, suitable to produce crops out of their seasons
8	0.031	Creating sites to produce tropical saplings and send them to other parts of the country such as Booshehr and Khozestan
11	0.008	Chabahar International University and Zabool University for teaching and training fishery and agricultural experts
4	0.059	Having more than 10,600 acres under pressurized irrigation system to make the best out of the water sources available
19	0.004	Benefiting from tissue engineering agriculture in order to increase the best kinds of banana for export
10	0.011	Providing job opportunities in tourism industry
9	0.016	Providing job opportunities through the sea
6	0.043	Providing job opportunities regarding handicrafts
5	0.048	Providing job opportunities through investing in agricultural sector

Table 5: The final results of the Chabahr's potential under resistance economy

Rank	Weight	Brand
4	0.1098	Domestic and Foreign investments
5	0.0319	Increasing imports and exports
2	0.1639	boosting tourism industry
1	0.2824	Agriculture
3	0.1503	Providing jobs

countless capacities of planting due to different kinds of plants and different times of planting”, “Favorable weather conditions, suitable to produce crops out of their seasons”, “Using more than 18,000 acres of the land to produce agricultural products and to plant water gardens. The agricultural products exceed 400,000 tons per year”, and “Having >10,600 acres under pressurized irrigation system to make the best out of the water sources available” are the first 4 ranks, respectively. All of them

are from agriculture category. Moreover, number 5-10 are also from agriculture and providing job categories. This can be easily explained as when resistance economy dominates a country, domestic products and working hard are of great importance. Additionally, AHP revealed that “agriculture”, “boosting tourism industry”, “Providing jobs”, “Domestic and foreign investments” and finally “Increasing imports and exports” occupied ranks 1-5, respectively.

## CONCLUSION

Taking into consideration the key value and strategic importance of Chabahar, the government can achieve its economic goals and independence by investing in agricultural sector of Chabahar which in turn will provide jobs in this area as well.



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