

Delineation of an Optimal Security Perspective for the Caspian Region

Mohammad Bagher Ghalibaf - Associate Professor of Political Geography, University of Tehran, Tehran, Iran.

Majid Gholami* - PhD, Political Geography, Department of Political Geography, University of Tehran, Tehran, Iran.

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Abstract

The security-based futurology of political units is a type of futurology focusing on geographic areas to assess their security status in the future. The Caspian region as one of the regions facing various factors has gained geopolitical significance, has a wide range of probable futures. The operational objective of this study is to identify the criteria affecting the security of this region and its final objective is to delineate an optimal security-based future for the region through a future study approach. It is a qualitative case study being formulated based on some qualitative and quantitative models and the relevant literature is used as the basis for classifying security standards into six groups of military, economic, spatial, sociocultural, political and environmental. The results were used to present 18 criteria of this region security. Then, 26 questionnaires were distributed among a group of faculty members of geopolitics from the universities of Russia, Iran, Azerbaijan, Kazakhstan, and Turkmenistan. The collected data were analyzed using the combined mean TOPSIS method and key criteria of the Caspian region security were extracted. The findings indicated that the three key criteria of joint military and weapons investment, commercial relations and human development as the most critical geopolitical criteria of security in this region formed eight security scenarios and finally the scenario based on 'regional joint military and weapons investment, free trade, and the homogeneous human development' with higher scores were introduced as the criterion for the delineation of security perspective for the leaders of countries in this region.

Keywords: Security, Caspian Region, Futurology, Geopolitical Criteria, Scenario.

* E-mail : majidgholami@ut.ac.ir

1. Introduction

A kind of God was questioned in the long past in order to know about the future and non-scientific approaches such as foretelling were used. After that, relatively scientific predictions with a contextual attitude were replaced but such methods lost their efficiency gradually over time. With the increase of the speed of evolutions in the world, planning at all levels from trans-national to local has faced some problems that if it cannot adapt to the speed of evolutions, the main objectives of planning will not be realized. Futurology is an approach appearing in all science fields since the final years of the 20th century and aims to build an optimal future for planners instead of foretelling the coming years.

On the other hand, security is the most known concept of the history of humanity from tribe to the world's empires, government, the cities of ancient Greece, etc. and today's, the most territorial type of sovereignty is the contemporary state-nations and the effort for achieving a secure situation is the first choice of any political unit (Buzan,2006:1-25). Based on the human necessities and deep attention to security, the research studies on security have become an undeniable need in the present era. The passing of time has changed security from the mere existential security and according to Robert Mandel, security has been transformed and the economic, sociocultural, environmental, geographical, and other kinds of security have emerged. Evans and Newnham believed that security is a term implying the lack of threat in scarce values and is considered as the base value and final goal of the state behavior as hidden to declared (Evans and Newnham,2005). Zbigniew Brzezinski considered security as the situation based on the preservation and establishment of some measures keeping the country safe from the influence of enemy (Williams,2012). Arnold Wolfers considered security objectively as the lack of threat in acquired values and subjectively as the lack of fear from attacking such values (Davis, 2016: 201-209). In conclusion, it can be stated that the most important features of security are security relativity (Baldwin,1995), security subjectivity (Williams,2012), and security indivisibility (Wæver,2004).

Security in the Caspian region had unique geopolitical features but it faced some flaws at the beginning of the 21st century when the regional and trans-regional efforts for achieving a secure situation for this region failed. The main issue about this region being associated with geopolitical complexities

is how can the Caspian region be secured and how can it be explained perfectly?

In other words, the Caspian region is faced with the security issue as one of its most important priorities and concerns due its conditions to be the most geo-strategic and geopolitical region. Due to the permanent crises and main problems of the countries in the region, the weakness of modern nation-state process, lack of hegemonic legal regime, the role of powers out of the region, intra-regional ethnic competitions, and intra-regional energy competition, security is one of the most important and complicated issues for case study in this regard (Pradhan,2020:218-232).

Accordingly, the present study aimed to present some suggestions for security in the Caspian region by focusing on the geopolitical criteria of this region. In order to achieve this goal, the following goals can be raised:

- ✓ Explaining the theoretical approach of futurology as a framework for realizing the geopolitical security.
- ✓ Identifying the effective geopolitical criteria in the Caspian region security in order to facilitate and strengthen the process of security-building.
- ✓ Delineating the optimal future of the Caspian region using futurology approach in the framework of security.

The present study used heuristic approach to discover the geopolitical criteria of security-building in the Caspian region and achieve an optimal future with futurology approach. Accordingly, no hypothesis was used and this study did not aim at confirming or rejecting any specific hypothesis due to the heuristic approach of the study. In this regard, the assumption of this study can be considered as: among the geopolitical criteria affecting the Caspian region security, some are important and play a higher role in the realization of security goals which can be identified and explained. Another assumption of the study is that an optimal future of the Caspian region security can be depicted by implementing the futurology. Accordingly, the two main questions of this study included:

- ✓ Which one of the geopolitical criteria play a more important role in the process of the Caspian region security?
- ✓ How can be delineate the optimal future of the Caspian region security?

2. Theoretical Concept: Futurology

There are many concepts and terms about future prediction. Although the first and oldest concept is foretelling which has a non-scientific aspect more than other concepts and is a term questioning a kind of God about future events or invisible affairs which are usually considered as God's message according to some signs (Miles and Keenan,2003:14). However, futurology or future studies with scientific approach is a study about the probabilities and preferences of the world, worldviews, and myths which establish them. In fact, futurology is a branch of social sciences which seeks to understand what will happen in the future and what should we do (Simandan,2018:35). In fact, this theory looks for the systematic understanding and a model based on past and present and also determines the probability of future events and procedures. The methodology of this discipline in comparison to natural sciences or even social sciences, like sociology and economics, is much far from positivism. In this regard, even some researchers raise the question that if this discipline is art of science and is even known as pseudoscience by some scholars (van Doorn and van Vught,1983:504-51).

Futurology can be defined in a systematic and organized way in relation to planning knowledge, process of guessing, and predicting future achievements. In other words, futurology is not a one-time activity but it is due to the regular repetition and review that the previous hypotheses are supported or canceled being replaced by new hypotheses (Hammershoj,2017:1-20). In addition, futurology is a tool for policy-making more than anything else (Nyiri,2003:8). The goals and activities of futurology are expressed in six groups of making perspective, identifying priorities, identifying newfound technologies, teaching and publishing information, networking, and creating the culture of thinking about future (Gavigan,2001). This science, as an interdisciplinary knowledge, indicates an extensive range of the approaches which improve the process of decision-making (Simandan,2018:42).

3. Case Study: The Caspian Region

The map below shows the near and far countries present in the Caspian geopolitical region. Bayramov believes the Caspian region is one of the important focal points for world geopolitical game (Bayramov,2021:3-4) and it has been one of the most important geopolitical scenes since the dissolution of the Soviet Union.

Figure (1): Caspian Sea and its Near and far Neighbors

(Source:Devonshire-Ellis,2018)

The strategic value of the region is determined by the following factors: First, geographically, the Caspian region, covering Caucasus, adjacent to the sea areas of Russia, northern Iran and western parts of Kazakhstan and Turkmenistan, is located in central part of Eurasia. The region is situated between politically and economically important regions of the world – Europe, Middle East, South and East Asia. The Caspian area provides the best land routes connecting these regions. Geographical location of the Caspian region and its strategic importance to the littoral states, the existence of common and diverse national interests, great and regional powers, energy factor (Azghaliyeva,2019) (Mossalanejad,2020:12). and international situation as a whole are those political factors which largely determine geopolitical conditions at the region.

Second, the Caspian shelf is among the richest oil fields in the world. Proven crude oil and natural gas reserves have been estimated at up to 3% and 4% of the world total, respectively. Regional proven oil reserves range between 17 and 33 billion barrels, depending on various sources. Proven natural gas reserves are estimated at 232 trillion cubic feet (TCF) (including Uzbekistan) . Oil factor plays an important role in international relations. It defines the strategic importance of a region and historically determines political environment there. Great powers are historically involved in oil rich regions and countries to control them. The situation is complicated by

the fact, that hydrocarbon resources are not renewable and not evenly distributed around the world (Pradhan,2020: 220-242) (Hafeznia and others, 2019).

4. Methodology; Materials and Methods

There are many methods about the scientific study of future. Such methods are mentioned in the following table in a comprehensive classification.

Table (1): Classification of Future Research Implementation Methods

Approach	Methods			
Identify the topic	Environmental Scanning	SWOT		Issue Survey
Outsourcing	Trend Extrapolation	Simulation Modelling	Genius Forecasting	Delphi
Innovative	Brain Storming	Expert Panels	Cross-Impact Analysis	Scenarios
prioritize	Critical (and key) Technologies		Technology Road Mapping	

This study combined the methods of scenario-building and identified the key priorities to review and discuss the present subject. The importance of scenario- building is because scenarios consider the complexities of the real world and represent the alternative attitudes about future with a logical order of events. In general, scenarios are the images of possible futures indicating the logical order of events. Porter considered scenario as an attitude with internal and content consistency than whatever which can occur in the future (Ogilvy,2015). Schwartz considered scenario as a tool for arranging the perceptions of a person about the alternative future environments where the decisions of the person will be made (Hayashi and Shingo,2017). Ringland considered scenario as a part of strategic planning which is used as a tool for the management of future uncertainty (Bastide,2017:23).

In addition, when the selection of priorities is considered in futurology projects, the method of key priorities is considered as a useful approach. In this method, a list of important priorities is specified using a set of criteria being used for measuring the importance of priorities (Miles,2003:3).

4-1. Explaining the Research Implementation Method

The present study was a case study based on pseudo-numeric or judgmental approach in the area of futurology method which is a combination of

qualitative research plans including case study, grounded theory, and participatory method. Judgmental method in futurology is something between qualitative methods (non-numerical) and quantitative (numerical) of futurology. In most cases, subjective judgements require quantifying through a series of rules or definitions. In addition, probable mental estimates are used in this method (Hines,2014:43). In the field of methodology, futurology is a combination of key priorities and scenario-wiring method.

Implementing research and collecting data through targeted questionnaires with the attitude of expert groups formation to look for key geopolitical criteria of security and finally search the optimal future through scenario planning. Accordingly, the research criteria were distributed among the desired target group in the framework of a closed and targeted questionnaire. After collecting data, the questionnaires with contradiction were deleted by comparing the standard deviation of answers and comparing the answers of each geopolitical criterion to the items of its subset to correct the current contradictions in the questionnaires. The result of analyzing the questionnaires was the scores gained for each criteria, sub-criteria, and item which could be evaluated without changing the scale. Finally, all the studied criteria were analyzed using the combined mean and TOPSIS (without weighing and analytic hierarchy). The identified key criteria were used for developing the security-building scenarios and according to the number of the identified criteria, the paired orthogonal scenarios were developed. Then, the developed scenarios were scored based on the criteria and the top scenario was selected. The top scenario based on the evaluated criteria can be used for depicting the security perspective of the Caspian region.

4-2. Identifying the Target Group

Based on the research subject and emphasizing the identification of some suggestions for the Caspian region security with an emphasis on the geopolitical criteria of this country, the target group includes some professors and faculty members of authentic universities of Iran in the field of geopolitics.

4-3. General Descriptions about Questionnaire

The research questionnaire was designed based on two types of general questions. The first type was based on the questions targeting the prioritization and questioning all criteria, sub criteria, and items. This type

of questions was raised as grouping and in fact their answers which were numerically prior, were analyzed separately. In this regard, first the respondents were asked to number the importance of geopolitical criteria of the Caspian region such as military, economic, spatial, sociocultural, political, and environmental criteria from 1 to 6. Then, the desired questions asked prioritization from numbers 1 and 2. For example, the priority between “communication situation” and “promotion of the Caspian region security) was identified with 1 and 2. The third step in this type of questions was questioning the priority of each type of item (dual expressions of the desired sub-criterion). In this regard, for example from the geopolitical criteria of culture, the pluralism – mutuality with items of complete preservation of ethnical, cultural, and religious separation lines versus creating deep bonds between tribes and religions was questioned. This three-step process was repeated for all criteria- sub-criteria, and items.

In the second type of questions which was raised based on Likert scale, the respondent was asked to determine the importance of each sub-criterion. The purpose of such questions was first testing the questionnaire, so that after collecting the questionnaires, the group of answers which were different in terms of mean deviation caused the elimination of the questionnaire. Secondly, the purpose of this type of question was accurately measuring the opinion of the respondent or exploring the subject. In other words, the raised questions measured the validation of the questionnaire and on the other hand, provided the researchers with the opportunity of presenting two different analyses.

The total number of questions in the final questionnaire included 49 questions of which 28 questions looked for prioritization (first type) and 21 questions gained the importance (second type) according to the respondents. However, due to the explanation presented for the questions of type 1 which had priority depending on questions 2 to 4, a total number of 93 items were analyzed. It should be noted that in prioritization questions (first type), number 1 was considered as the most important value. For this reason, in case of the questions on extent of importance (second type), the term very high was considered as the numerical equivalent of one that the current values in the database with the same vectors were aligned. In the present study before distributing and collecting the questionnaires, first the initial version of the questionnaire was distributed as test among 15 different

individuals with the target population and its results after the analysis caused the required corrections in the questionnaire. After finalizing, a total of 26 questionnaires were distributed and after collecting through matching the answers and matching the scoring questions to the importance rate questions, were analyzed and reviewed.

4-4. Introducing the Criteria and Sub-Criteria

If we accept Colin Flint's hypothesis in the book "An Introduction to Geopolitics" based on the fact that geopolitical agents provide the geopolitical mechanism and in other words geopolitical agents guide geopolitics and since the most important features of these agents according to Flint are:

- Agents cannot act freely, but they are able to make choices.
- Agents act within structures.
- Structures limit, or constrain, the possible actions of the agent.
- Structures also facilitate agents; in other words, they provide opportunities for agents to attain their goals.
- An agent can also be a structure and vice versa (Flint,2012:26).

The geopolitical agents considered by Flint can be introduced as the geopolitical criteria of the present study. In fact, geopolitical criteria are the same mere natural, human, or geographical phenomena which can be affected by decision-making in a political unit and use the direct geographical relationship by affecting the power of political unit. Due to the important hypothesis of the direct relationship of politics, geography, and power and on the other hand, another important hypothesis, the direct relationship of geopolitics and security (Colin,1988:3) affect the security of political units.

In case of security, different security doctrines present specific and sometimes combined criteria on security with a specific attitude. The general review of all presented criteria in these doctrines can show the result that firstly a main part of main criteria between different researchers was common and secondly, the main criteria were somehow repeated in all studies (Benner,2001:170). Accordingly, the authors believe that all raised criteria in different studies have the desired totality and also it can be concluded by focusing more on the criteria that most divisions of security doctrines have a kind of conceptual overlap. In other words, every researcher divides the general and accepted indicators of security-building

depending on the subject, level of action, audience, and specific parameters. With the above-mentioned interpretations, the present study aimed to identify the geopolitical criteria affecting security by using the past research achievements in this field and through the innovation of using the geopolitical approach. It should be noted that firstly, the recent criteria were studied separately by researchers depending on the research subject because a sufficient totality was perceived on the criteria affecting security while the separation of every criterion from others means the specific importance of that criteria for researchers. Secondly, although the extension and number of geopolitical criteria affecting security are high and diverse, emphasizing the desired geopolitical criteria in this study does not mean the insignificance of other criteria or lack of their effectiveness. Thus, the following criteria were raised as general grouping for facilitating the judgment and analysis and was obvious that such criteria were not unique and absolute. Based on the recognition obtained from the research subject, six groups of geopolitical criteria affecting security were identified including economic, military, spatial, sociocultural, political and environmental.

4-4-1. Economic Criteria

Geo-economy is the combination of geography, power, and economy and it seems that politics as the driving force of geopolitics has been replaced by economy in the geo-economic attitude (Luttwak,1990(A):17-23). In a geo-economic analysis, the main hypothesis is that powers apply and lead the economic politics in local, regional, and global spaces. The founder of emphasizing the geo- economic criteria in geopolitics was Edward N. Luttwak who explained and expanded his theory in contrast to the idea of the end of history by Fukuyama. Emphasizing the economic methods instead of military methods is the main difference between his attitude and other geo-politicians. Luttwak believed that capital is the technical innovation, production, business, and power determining market in the world after the Cold War and ammunitions, soldiers, and garrisons were marginalized. He continued that based on this fact that business can be affected by war, the main emphasis on governments is relying on the reasons and tools of economic power. Thus, he suggested that whenever business disputes led to political differences, the governments should use economic solutions (Luttwak,1990(B):365-391). In this regard, the authors believed that emphasizing the geo-economy in the security strategy of

political units in the Caspian region can be analyzed through economic development methods, active and generative human resources, business exchanges, etc. (Kavianifar and Sazmand,2016).

4-4-2. Military Criteria

The military power of political units is one of the most important criteria forming the politics of that political unit. In the international level where the jungle law is governing, having a powerful, efficient, and high-quality military power is necessary for preserving security which cannot be neglected (Snow,2011:30). Considering the security of land equal to military power is a tradition and one of the regular methods although the military power is dominant, it should be said that using such a power is not rightful these days. Although many realistic thinkers emphasize the importance of the military facilities of political units in preserving and expanding security, Quincy Wright, the contemporary realist thinker, discussed this issue in his studies and stated that military facilities are the most important criteria in preserving the global peace, stability, and security (Knorr,2015:4). Although the military power of a country cannot be identified and analyzed accurately and completely without identifying the other dimensions of power and their analysis, the national power of a country gets possible through analyzing, studying, and calculating the military power of that country at critical and sensitive times since the other criteria and dimensions of power are influenced by military power. Walter Lipman believed that security will be always associated with military power (O'Sullivan and Subramanian,2015). In this regard, the authors believed that emphasizing the military dimension in the security approach of political units in the Caspian region can be analyzed through trans-regional military powers, military facilities inside the countries, military and weaponry investment, etc.

4-4-3. Spatial Criteria

The hypothetical country "Hypothetica" made by Haggett is an example for the fact that geographical criteria play effective roles in the foreign relations of countries in creating tension and insecurity among those countries (Zaki and Others,2015). This British thinker focused on this hypothetical landlocked country having twelve elements of tension in relation with its neighbors and attempted to discuss the importance of spatial role of geography for a country (Haggett,2001:521) and also present his

geopolitical explanation on security-degeneration with an emphasis on geographical determinism. In this regard, the authors believed that emphasizing the spatial criteria in the security strategy of political units in the Caspian region can be analyzed through border and territorial disputes, geographical and communicative opportunities, service distribution system, etc.

4-4-4. Sociocultural Criteria

The geo-cultural attitude, which is referred to as the geopolitical discourse of new world order in some references, is a set of different cultural attitudes attempting to prove the contrast of cultures and civilizations (Hajjabadi, 2019). Although the famous article of “the end of history” by Francis Fukuyama and the theories of Michael Klare and Timothy Luke with the subject of “the temporary end of the east and west conflict” is known by geo-cultural emphases, most critics considered Samuel Huntington as the holder of this attitude. Huntington is one of the conservative thinkers considering the new world order after the Cold War as a cultural-political war among different civilization groups to defend the traditional scores of the US and defend the west. According to him: the contrast of civilizations will form the dominant aspect of global politics and in future, the fault lines between the civilizations will be the battle lines between them (Huntington,1993:22). In this discussion, he attributed the future wars out of the governments’ borders and into the civilization borders through a geopolitical explanation with the expansion of ideological boundaries. In this regard, the authors believed that emphasizing the sociocultural criteria in the security strategy of political units in the Caspian region can be analyzed through focusing on religious bonds, social development indicators, social health criteria, etc.

4-4-5. Political Criteria

The importance and priority of political management and government can be considered in the security-building strategy for political units. Knowing how political units are organized, how they look at the world and neighboring countries, how is the security attitude of the country, how are the potentials of this country organized, etc. are the most important subjects in this regard (Beeson,2014:12-43). Most political geographers attempted to analyze and study security issues from this perspective. In this regard, the authors believed that emphasizing the political criteria in the security

strategy of political units in the Caspian region can be analyzed through focusing on the national security supply methods, relation with foreign neighbors, transparency, accountability, etc.

4-4-6. Environmental Criteria

Thomas Homer-Dixon is known as the pioneer of emphasizing the geo-ecological criteria and emphasizing the environmental stress-generation directly or indirectly is the turning point of his theories (Yazdanpanah Dero and Gholami, 2018:160-161). According to him, stress-generation directly occurs in countries due to some changes in the environment and natural risks such as water shortage, access to sea food resources, access to underground resources, natural disasters, etc. In the indirect level which is much more dangerous, stress is the result of some issues like identity, deprivation, etc. and manifest in form of immigration and conflict in achieving the appropriate environmental conditions to continue life. In the deprivation level, environmental considerations are manifested in form of economic shortage. The issue which finally leads to a break in different regions and then weakens the legitimacy of political system (Homer-Dixon, 1991:76-116). In this regard, the authors believed that emphasizing the geo-ecology in the security strategy of political units in the Caspian region can be analyzed through water resources management methods, natural potentials, natural and human risks, etc.

5. Results: The Integrated Explanation of Criteria and Sub-Criteria

The research criteria were conducted using similar studies and the experts' opinions were also applied in the final classification. The sub-criteria were obtained through the direct and indirect exploitation of security studies and review of literature.

Table (2): Criteria, Sub-Criteria, and Research Items

Criteria	Sub-Criteria	Item
Military	The presence of trans-regional military forces	Support-non-support
	Domestic military facilities	Domestic capability- foreign dependency
	Military-armed investment	Regional joint- trans-regional joint
Economic	Economic development	Self -sufficient- dependent
	Human resources	Generative- non-generative
	Business exchanges	Free trade - economic nationalism

Spatial	Territorial and border disputes	Negotiation-competition
	Geographical and communicative opportunities	Convergence-divergence
	Service distribution system	Centralized- decentralized
Sociocultural	Religious bonds	Strengthening- weakening
	Human development	Homogenous-heterogeneous
	Social health	Maximum-minimum
Political	National security	Local-dependent
	Relation with foreign neighbors	Convergent- divergent
	Clarity y and accountability	Clarity of information - Transparency of cooperation
Environmental	Water resources management	Traditional - smart and modern
	Natural potentials	Raw material wholesale- Processing
	Natural and human risks	Active - Passive

5-1. Research and Questionnaire Analysis

From the 26 questionnaires, the final answers presented with weight equalization and answers direction with mean analysis method, the most important criteria were military criteria with score 4.66 and then economic criteria with score 6.66. Accordingly, the sociocultural criteria with score 7.00, political Criteria with score 11.33, spatial criteria with score 11.66 and, environmental criteria with score 15.59 are at the next ranks. In other words, according to the respondents, military criteria have the most importance in creating security in the Caspian region regardless of sub-criteria merely due to the elicited connotation and conceptual meaning. Obviously, the questions of the sub-set which were questioned as a part of whole in a criterion should be considered more in order to scrutinize tis judgement. Accordingly, different methods were considered for ranking the criteria with an emphasis on two techniques of Mean and TOPSIS. The important point is that each of the above-mentioned methods was compared once for the question of type one, once for the question of type two, and once as integrated. It should be noted that the weighing step of TOPSIS method was eliminated from TOPSIS method with the aim of considering the opinion of respondents and preventing the application of researchers' opinions. In addition, the quarter rank of each criterion were specified in its sub-group in order to standardize the judgement in addition to ranking based on the gained score. By comparing all above-mentioned states in ranking, a firm framework can be presented for the final ranking. Although the final conclusion can be achieved by a comparison based on expert opinion,

averaging the ranks of each criterion can be performed to reach the final ranks. As is obvious in the following table, the sub-criterion of regional joint military and weapons investment with average of 3.17, gained the first rank, free trade with average of 3.33 gained the second rank, and the homogeneous human development with average of 3.95 gained the third rank. Only these three sub-criteria were placed at the first quarter of key sub-criteria with a considerable difference.

Table (3): Comparing the Rank of Sub-Criteria in Six Ranking Methods

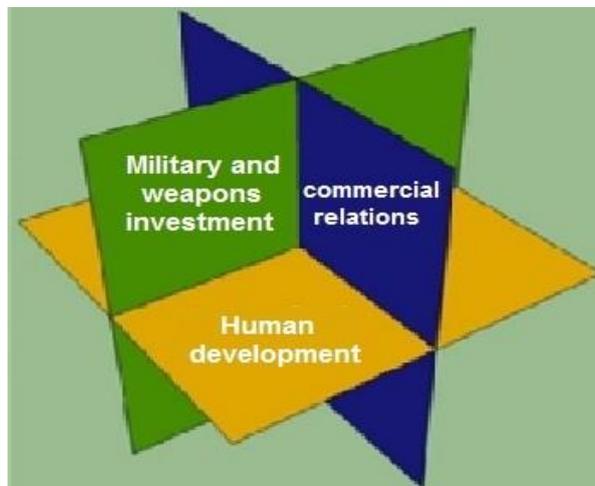
Row	Sub-Criteria	Average of Main Question	Rank	Average of Question of Importance Rate	Rank	score of Calculation of Average	Rank	TOPSIS of Main Question	Rank of Main Question	TOPSIS of Question of Importance Rate	Rank of Question of Importance Rate	Multiplication of TOPSIS	Rank of Multiplication of TOPSIS	Average Rating	The Rank of Average Rating
1	Non-support of the presence of trans-regional military forces	1.46	4	1.54	5	1.50	2	0.52	6	0.59	8	3.26	7	5.33	4
2	Domestic empowerment of military facilities	3.04	15	1.62	8	2.33	14	0.49	7	0.60	7	3.39	8	9.83	9
3	Joint regional military weapons investment	1.36	1	1.58	6	1.47	1	0.69	3	0.63	6	2.31	3	3.33	2
4	Self-sufficient economic development	1.75	8	1.62	7	1.69	7	0.57	4	0.49	11	3.59	10	7.83	7
5	Generative human resources	3.39	17	1.46	2	2.43	16	0.44	14	0.66	3	3.45	9	1.17	11
6	Free trade exchanges	1.46	4	1.54	5	1.50	2	0.52	6	0.59	8	3.26	7	5.33	4
7	Negotiating on territorial and border disputes	1.42	2	1.92	15	1.67	5	0.54	5	0.58	9	3.19	5	6.83	6
8	Using the common geographical and communicative opportunities	2.14	11	1.81	12	1.97	12	0.46	13	0.45	13	4.88	12	1.17	12
9	Promoting the service production system	2.13	10	2.62	18	2.38	15	0.46	10	0.25	18	8.55	18	1.83	17
10	Promoting religious bonds	1.96	9	1.5	3	1.73	8	0.49	8	0.64	5	3.20	6	6.5	5
11	Promoting the level of homogenous human development	1.43	3	1.69	9	1.56	3	0.73	2	0.67	2	2.04	1	3.95	3
12	Promoting the level of social health	1.58	6	2.15	17	1.8	9	0.46	12	0.42	16	5.17	15	1.50	13
13	Establishing and promoting local national security	1.54	5	1.81	11	1.67	6	0.48	9	0.41	17	5.09	13	1.17	10
14	Relation with foreign neighbors	2.25	13	1.5	4	1.88	10	0.42	16	0.76	1	3.14	4	8.00	8
15	Promoting the level of clarity and accountability	2.45	14	1.81	13	2.13	13	0.35	18	0.46	12	6.26	17	1.50	16
16	Correcting water resources management methods	2.17	12	1.69	10	1.93	11	0.44	15	0.44	14	5.16	14	1.67	14
17	Exploiting natural potentials	3.13	16	1.81	14	2.47	17	0.46	11	0.50	10	4.38	11	3.17	15
18	Dealing with natural and human risks	3.57	18	2.00	16	2.78	18	0.41	17	0.43	15	5.71	16	1.67	18

As it is obvious in the above table, only the sub-criteria which were in the first quarter in all ranking methods included the three sub-criteria of ‘regional joint military and weapons investment’, ‘free trade’, and ‘homogeneous human development’. This point indicated the significance of these sub-criteria and their placement in a group higher than other sub-criteria.

5-2. Delineation of Scenarios

Delineation of scenarios has different solutions that authors selected the strategy of full scenarios delineation based on three criteria. In this method, eight full scenarios from the intersection of three criteria were simultaneously developed because eight spatial corners were created from the collision of three pages in a three-dimensional space. In this case, if each page represents a security criterion which is divided into positive and negative parts and is the twofold representative of that criteria, then there will be some unique spaces which are the result of the simultaneous effect of all three criteria. The prominent feature of this method to matrix analysis methods is the possibility of its spatial visualization.

Figure (2): The Visual Visualization of the three Criteria Affecting the Research Scenario-Building



Accordingly, three key criteria with their twofold expressions were placed in the above-mentioned three-dimensional axes and the following eight spatial corners were created:

Table (4): Security Perspective Scenarios of the Caspian Geopolitical Region

Sc.	The First Criteria	The Second Criteria	The Third Criteria
1	Regional joint military and weapons investment	Economic nationalism	Heterogeneous human development
2	Regional joint military and weapons investment	Free trade	Heterogeneous human development
3	Regional joint military and weapons investment	Economic nationalism	Homogeneous human development
4	Regional joint military and weapons investment	Free trade	Homogeneous human development
5	Trans-regional joint military and weapons investment	Economic nationalism	Heterogeneous human development
6	Trans-regional joint military and weapons investment	Free trade	Heterogeneous human development
7	Trans-regional joint military and weapons investment	Economic nationalism	Homogeneous human development
8	Trans-regional joint military and weapons investment	Free trade	Homogeneous human development

At this step, the score of scenarios could be measured based on the score of each two-fold which was received as mean in TOPSIS and mean analysis. In the following table, the numbers in the columns of three-fold dimensions at two rows of mean analysis and TOPSIS analysis were from the table of calculating scores elicited from questionnaire. the numbers in the final analysis row of each scenario are the result of adding the score of mean analysis to the reverse of TOPSIS analysis in each criterion (reversing was performed with the aim of align). The total score in both analysis methods was the result of multiplying the final analysis score of each dimension in TOPSIS analysis score by the mean analysis score of the same dimension. The standard score column was the total score of each analysis group in

each scenario divided by the mean of the same analysis group in all scenarios.

Table (5): Comparing the rank of Scenarios

Scenario		First Criteria: Military	Second Criteria: Economic	Third Criteria: Sociocultural	Total Score	Standard Score	Rank
		Regional joint military and weapons investment	Economic Nationalism	Heterogeneous human development			
1	TOPSIS analysis	0.22	0.5	0.35	2.973	0.892	6
	Average analysis	1.92	1.98	1.77	2.801	0.926	
	Final analysis	0.74	1.01	0.91	10.551	0.913	
		Regional joint military and weapons investment	Free trade	Heterogeneous human development			2
2	TOPSIS analysis	0.22	0.63	0.35	4.121	1.236	
	Average analysis	1.92	1.62	1.77	3.437	1.136	
	Final analysis	0.74	1.25	0.91	13.657	1.182	
		Regional joint military and weapons investment	Economic nationalism	Homogeneous human development			5
3	TOPSIS analysis	0.22	0.5	0.65	3.238	0.972	
	Average analysis	1.92	1.98	1.23	2.976	0.984	
	Final analysis	0.74	1.01	1.46	11.322	0.979	
		Regional joint military and weapons investment	Free trade	Homogeneous human development			1
4	TOPSIS analysis	0.22	0.63	0.65	4.386	1.316	
	Average analysis	1.92	1.62	1.23	3.612	1.194	
	Final analysis	0.74	1.25	1.46	14.428	1.248	
		Trans-regional joint military and weapons investment	Economic nationalism	Heterogeneous human development			8

5	TOPSIS analysis	0.78	0.5	0.35	2.280	0.684	
	Average analysis	1.08	1.98	1.77	2.436	0.806	
	Final analysis	1.71	1.01	0.91	8.690	0.752	
		Trans-regional joint military and weapons investment	Free trade	Heterogeneous human development			4
6	TOPSIS analysis	0.78	0.63	0.35	3.428	1.028	
	Average analysis	1.08	1.62	1.77	3.072	1.016	
	Final analysis	1.71	1.25	0.91	11.796	1.021	
		Trans-regional joint military and weapons investment	Economic nationalism	Homogeneous human development			7
7	TOPSIS analysis	0.78	0.5	0.65	2.545	0.764	
	Average analysis	1.08	1.98	1.23	2.611	0.864	
	Final analysis	1.71	1.01	1.46	9.461	0.818	
		Trans-regional joint military and weapons investment	Free trade	Homogeneous human development			3
8	TOPSIS analysis	0.78	0.63	0.65	3.693	1.108	
	Average analysis	1.08	1.62	1.23	3.247	1.074	
	Final analysis	1.71	1.25	1.46	12.567	1.078	

Accordingly, the third scenario “Regional joint military and weapons investment, Free trade, Homogeneous human development” was considered as the top scenario.

6. Discussion: Delineation of Security Perspective

Perspective is an image of the optimal future and depicting a perspective means the visual creation of an optimal future. Perspective means empowering others in reaching the desired goals to create a change in the kind of national attitude. In this study, the general principles of perspective

delineation such as the time of actions, interconnectedness, clarity, lack of idealism, and the principle of realism were observed.

The Caspian region as one of the most important geopolitical regions in the world where its insecurity dimensions have been extended by entering the 21st century. In order to achieve a better security in the coming years, the geopolitical criteria of the countries in this region should be emphasized and:

- **In the field of military criteria:**
 - The non-support of the presence of trans-regional military forces should be strengthened in this region instead of supporting this presence.
 - Domestic capability strategy should be followed in the field of promoting military facilities instead of foreign dependency in this field.
 - The regional military-weapons investment should be preferred to the trans-regional military-armed cooperation.
- **In the field of economic criteria:**
 - Economic development should be followed based on self-sufficiency strategy instead of dependency in this field.
 - Exploit the region's energy resources jointly instead of individual activities
 - The strategy of business exchanges with a focus on free trade should be strengthened instead of economic nationalism.
- **In the field of spatial criteria:**
 - Completion with territorial and border disputes should be converted into negotiation in this case.
 - In order to exploit the geographical and communicative opportunities, convergence should be preferred to divergence and such opportunities should be nationally used.
 - The strategy of decentralization in service distribution system should be followed instead of centralized service distribution.
- **In the field of sociocultural criteria:**
 - Promoting and strengthening religious bonds should be at the first priority.
 - Human development indicators should be promoted in a homogenous and decentralized way.
 - Social health criteria such as justice, fighting corruption, etc. should be followed maximally and the strategy of achieving the minimums in this field should be avoided.

- **In the field of political criteria:**
 - The strategy of native national security promotion should be selected instead of dependent national security.
 - Convergence should be preferred to divergence in relation to foreign neighbors.
 - The clarity of information and transparency of cooperation should be in priority.
- **In the field of environmental criteria:**
 - The strategy of water and energy resources management should be followed with modern and smart models instead of traditional models.
 - The strategy of raw resource wholesale and natural potentials should be changed into the export of process strategy of the products with higher value-added.

Cooperation and activity should be in priority instead of passivity for natural risks and human-made risks in the Caspian Sea such as like pollution.

7. Conclusion

Security as a vital phenomenon for all political units and futurology can present a framework called security futurology as a new approach through combination at the level of method and operational strategies. Although the effective criteria in security can be largely identified, based on different approaches in the field of security and similar studies, a total of 18 security criteria were classified as sub-criteria under six titles of military, economic, spatial, sociocultural, political, and environmental.

In order to answer the question “which one of geopolitical criteria play a more important role in the Caspian region security process?”, the prioritization of security -building criteria for the Caspian region was specified after an accurate field survey, completing questionnaire, and interviewing the professors and faculty members of authentic universities in Iran in the field of geopolitics. Accordingly, the key criteria of the joint military and weapons investment, commercial relations and human development introduced as the three criteria which could play a key role in security-building for this region. In order to answer the second question of the study in the field of depicting an optimal future for the Caspian region security. Based on these three criteria and based on the raised twofold for each criterion, eight scenarios were explained using the three-dimensional scenario-building. These eight scenarios were scored and then ranked based on the score of each dimension

in that scenario. Finally, the selected scenario was developed based on the 'Regional joint military and weapons investment, Free trade, Homogeneous human development'. Thus, the criteria affecting the Caspian region security were depicted and delineated by combining the selected scenario and using futurology.

Finally, the authors recommended to open a new door to present this model in increasing the richness of literature in these fields by institutionalizing the futurology approaches in security, strategic, geopolitical, and other studies. Obviously, other quantitative methods and innovative methods should be used for promoting the concepts and levels of studies.

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