

Future Research on Geo-Economic Relations between Iran and Africa

Mohsen Janparvour- Assistant Professor of Political Geography, Ferdowsi University of Mashhad, Razavi Khorasan, Iran

Kazem Zoghi Barani* - Assistant Professor of Political Geography and Geopolitics, Imam Hussein (IHU) University, Tehran, Iran

Sajid Bahrami Jaf- PhD in Political Geography, Ferdowsi University of Mashhad, Razavi Khorasan, Iran

Maryam Tak Roosta- PhD in political geography and geopolitics, Tarbiat Modares University, Tehran, Iran.

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Abstract

Scenario writing is especially important in the field of geo-economics because it prepares geopolitical actors to take advantage of continuous international conditions in the best possible way and reduces risks as much as possible. In the meantime, the Islamic Republic of Iran, to shape its geo-economic relations with the countries of the African continent in general and North Africa in particular, as spaces with high capacity and attraction, necessarily needs to know and understand the upcoming scenarios. Therefore, the present research was done with descriptive and analytical methods and based on library and field findings (questionnaire). The findings of the research show that the 8 sources of power geography are "investment opportunity for the private sector", "strong dependence on technical and engineering services", "cheap labour force", "the presence of rich non-metallic minerals", "availability of legal investment platforms". Foreign direct (ease of investment)", "Entrepreneurial development", "wide agricultural capacities" and "Goeconomic position (sea trade)". respectively, the scores have had the greatest impact on the future of the geo-economic relations between Iran and Africa. The results of the scenario board show the semi-critical and critical situation of the future geo-economic relations between Iran and Africa, which makes it more important to revise the macro strategies and policies in this field.

Keywords: Future Studies, Economic Capacity, Africa, Islamic Republic of Iran.

*E-mail : zoghi@modares.ac.ir

1.Introduction

The current world is a world mixed with wide connections so countries are forced to explain and define their plans and plans in connection with other geographical spaces to grow and move forward (Bridge and et al,2013). Among the most important links that form these links are issues related to the economy, which are discussed in various sectors and areas such as international economy, economic diplomacy and other sectors, and can provide the process to improve the level and status of countries (Al-Thaqeb and Algharabali,2019).

One of the prominent areas that can provide proper understanding and recognition for countries including Iran is the geo-economic perspective(Noorali and Ahmadi,2023). Because the present world is witnessing a kind of geopolitical relations in various forms of cooperation, competition and tension, understanding them and having a proper perception of them is important and has a prominent place for the country's forward movement (Janparvar and et al,2022). In the meantime, the African continent is one of the geographical spaces that, according to the basic conditions and frameworks such as opportunities and suitable geo-economic components, has special conditions that low-cost actors can have the best exploitation there. Because since the 1990s, the ruling discourse in this continent has changed and has placed suitable attractions in front of other countries. In a way, the discourses governing this space in different ways created good conditions for attracting foreign investment and trade and placed this continent at the centre of global attention (Tull,2006).

The Islamic Republic of Iran, as a geopolitical actor by its capacities and potential, to enter the international arena, necessarily needs geographical spaces with special potentials and conditions that can pursue its goals with the least competition and cost, and in this way, in the path of growth and development. Accelerate yourself. Based on this, it seems that the space of the African continent in general and North Africa, in particular, can be a suitable space for the country of Iran. The first step to designing a strategy for the Islamic Republic of Iran to enter the African continent and shape geo-economic relations with the countries of this continent is to understand and recognize the geographical resources of the prominent power in this geographical space so that it can be based on them and adapt to the internal capacities and potentials. Adjust and level your needs and your future scenarios with the countries of the African continent. In this way, while

creating the right conditions for economic growth and development in the continuous global environment, it can provide the necessary conditions to improve its geopolitical position and dignity in the global space.

Therefore, in the present article, the attempt is to provide a proper understanding of the geographical sources of power with the economic approach of the countries of the African continent, and based on them, scenarios are designed to shape geo-economic relations.

2. Research Theory

The term geo-economy was first introduced in Edward Lutwak's article (1990) to describe the post-Cold War world system in the field of economic competition between states. (Lutwak,1990:18). Experts such as Benjamin Barber, Samuel Huntington and Robert Kaplan stated that after the Cold War, measures aimed at economic domination of the world spread (Benjamin,1993). In his book entitled "The American Dream in Danger", Lutvak also believed that national power in the modern era is caused by capital and consumption instead of military innovations and progress in the difficult dimension (Abbasi,2012:183) and he believed in this. that one should try to dominate the markets instead of barracks and military bases (Lutwak,1993).

Therefore, international relations are known with principles related to business methods. The term *geo-economics* is: "a combination of economic and geographical factors that affect international trade". In other words, "a government policy guided by geographic economics" (Merriam-Webster, 2019:1). *Geo-economics* is the use of economic tools to advance geopolitical goals. It can be said that *geo-economics* is the interaction between "international economy", "geopolitics", and "strategy" (Petsinger,2016:25). In this regard, Huntington believes that in a world where military conflict takes place between powerful countries, economic power is of great importance in determining the priority or surrender of governments (Huntington,1993).

Unlike the Cold War period, which was characterized by the concentration of power in the form of a bipolar system, in the current environment, the international system is facing the dispersion of power. The effect of this dispersion is the fluidization of the international system and the creation of a new space for action in regional environments. These are emerging and regional powers that have become active actors and are trying to improve their power and influence in the new space of action (Veicy,2021:216). In

such a situation, the dominance of geo-economic logic and the opportunities for cooperation and prosperity hidden in it have brought relative order and stability to some regions (Mousavi Shafaei,2016:189-190). In this period, economic tools determine power relations in the international arena to a great extent (Kasur Guy,2017:1). Geoeconomics is widely related to foreign policy and national security strategies. Geoeconomics is an important part of the strategic behaviour of regional powers in the new regionalism for convergence and securing benefits (Rigal,2016:136).

Geoeconomics is considered a foreign policy strategy in the new era, which is designed and applied by the government to achieve strategic goals through economic tools of power (Sholvin and Weigel,2018:73). Geoeconomics is the knowledge of knowing, acquiring, and exploiting and maintaining geographical resources of power with an attitude and emphasis on economic nature in sub-national, national, regional and global relations. In other words, the use and exploitation of geographical sources of power with an economic nature to achieve economic goals and strategies in sub-national, national, regional and global relations (Janparvar,2017:68-69). Nowadays, population growth and technological advancement cause increasing demands. It is for resources that must be met. When the expanding demands of countries are aligned, a pattern of "interactive geopolitical relations" between countries is formed (Ashley,2000:162). Therefore, to build capacity and increase the use of domestic and export markets, focusing on high-value-added sectors in supply chains, countries took measures to connect with other regions (Scholvin,2018:14). These measures can include investing or dominating an industry, or interfering in the foreign exchange market to generate foreign exchange reserves and limit imports from other countries, which ultimately leads to strengthening the national power of countries (Janparvar and et al,2021:1139).

3.Methodology

The methodological approach of the article is nationalistic. This means that it is trying to determine the appropriate scenarios for the Islamic Republic of Iran's economic use of Africa by examining the economic capacities available in this continent so that the benefits of development can be used for the benefit of the countries in question. This research was written using descriptive-analytical and exploratory methods with a practical purpose. In this research, library sources were used to formulate theoretical foundations and select indicators to be measured, and also to obtain the data to be

measured, the questionnaire of cross-effects was used in the form of Micmac and Scenario Wizard software. Foresight includes a set of measures that use the analysis of available resources, accepted patterns and constant and variable factors to draw the future potentially (Budaghi and et al,2021: 199). Scenario writing, as one of the methods of future research, is a tool for analyzing policies and recognizing the conditions, threats, opportunities, needs and superior values of the future (Mousavi and et al,2017:562). The purpose of scenario building is to expand thinking about the future and to widen the range of alternatives that can be considered (Janparvar and et al., 2020:7). Planning based on these scenarios is an effective strategic planning tool for long-term planning in uncertain conditions (Janparvar and et al, 2020:306). Considering that the African continent has pristine and significant capacities in the economic field, it is necessary to examine the existing and presentable scenarios in this continent with a forward-looking approach, so that appropriate policies can be provided to increase the acting role beyond the borders. Therefore, in this research, to examine the future of geo-economic relations between Iran and Africa, the opinions of 8 experts (6 geopolitical (geography and political science) professors) and (2 relevant officials) were collected by purposive sampling and it has snowballed.

4. Research Findings

4-1. Africa's Economic Capabilities

Africa is progressing rapidly and in recent decades, we can see the remarkable economic progress of the countries in this region. In the past, however, Africa recorded an average growth of 4 to 5 per cent in GDP, which was considered an unfavourable economic and financial environment in the international arena (ECA,2015,10). The recent growth has been caused by the growth of sales of goods, services, production, etc. In particular, West, East, Central and Southern Africa will reach a GDP of \$29 trillion by 2050. Due to the existence of rich resources, 46% of people live in extreme poverty (IMF,2014:63). A large part of the population is unemployed and they experience significant gender and structural inequality (Baldry,2016:794). Annually, 42 billion dollars leave this continent, which is due to the illegal system and financial corruption in jurisdictions (Layla, 2022:29).

The African continent has living and non-living natural resources such as water resources, plants, various animals, minerals, hydrocarbons, etc. (Mitra and et al,2021:19). 38 countries out of 54 African countries are coastal and

are located in maritime areas under African jurisdiction, which totals around 13 million square meters, including territorial seas and exclusive economic zones (GRID,2015:77); Therefore, this continent is an important economic base with vast oceanic resources. International trade is important to many African economies. About 90 per cent of Africa's imports and exports are carried out by sea (Potgieter,2018:53). In 2017, the African Development Bank reported that Africa is the second fastest-growing economy in the world and estimated that the average growth reached 3.4% in 2017 and increased to 4.3% in 2018 (African Development Bank, 2017). Across the continent, more than a third of African countries have 6% growth, and another 40% grow between 4 and 6% per year (Taylor,2019:1071).

Charles Robertson states that while the Euro has limited African bonds; it is great for investors who are looking for higher returns. (Boston Analytics, 2016); According to the World Investment Report in 2019, foreign direct investment into the continent has increased to 46 billion dollars per year, with an 11% growth compared to 2018 (Unctad.org,2019:1). Africa has many natural resources. In 2012, about 77% of the total export of this continent was related to natural resources, which took 42% of the government's income (Shan and et al,2018:142). This continent has the longest river in the world, the Nile, and the second largest and deepest river in the world, the Congo River, is located in this region. There are about 63 international basins in Africa, which occupy 64% of the area of this continent (Kitambo,2022:1866). It is estimated that Africa's fish sector will support 20.7 million jobs in 2030 and 21.6 million jobs by 2050. For every person directly employed in the fish production phase, approximately 2.6 people will be employed indirectly along the fisheries and aquaculture value chain. It is also projected that total employment in the African fisheries system will reach 58.0 million jobs, representing 2.4% of the total projected population in Africa by 2050. The value of aquaculture production is estimated at 3.3 billion dollars and 20.4 billion dollars per year (Chan and et al,2021:3).

Non-renewable natural resources also play a significant role in the gross domestic product and it is estimated that Africa has about 30% of the world's mineral reserves. The share of oil reserves of the African continent is 4.9% of the total reserves (Chakamera and Alagidede,2018:949). Also, African gas reserves are about 8% of the global share (Frynas and Buur, 2020:1262). Minerals such as gold, manganese, zinc, platinum, diamonds,

bauxite and uranium also exist in Africa, which is known as the leaders in the production of these primary and raw materials (Ericsson and et al,2020: 155). Some economic researchers believe that economic development depends on human development (Omri and Belaïd,2021:2-3; Khan and et al,2021:589; Hechavarria and et al,2019:7) due to the large population in this continent and having a young majority, various plans and projects have been implemented by regional and international organizations to make proper use of this capacity (Chirambo,2018:601). These plans include things such as creating job opportunities, health, education, employment of women in economic affairs, etc. (Michael and et al,2021:74). According to the Human Capital Index in 2018, it can be seen that 40% of African children have a high potential to become a skilled and specialized labour population, and through their strengthening, we can reach an important source of labour in this continent. found (WDR,2019:30).

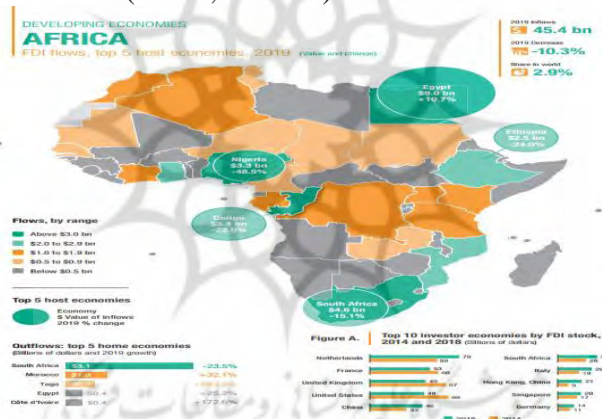


Figure (1): The Main Investment Destinations and the most Important Sources of Foreign Investment in the African Continent
(Source: WIR,2020)

4-2. Statistical Findings

Currently, the way of looking at the developing world is not among the main priorities of the country's geo-economic strategy, and the way of looking at these countries is more in the framework of geostrategic issues. Meanwhile, the change in the attitude and strategy of the central geopolitical actors of the world (USA, China, EU, etc.) due to the volume of foreign investments made in this continent in the past few decades shows the importance of this It has been a continent. Therefore, this research, using the future research method, tries to understand the scenarios affecting Iran's geo-economic

relations with the African continent. According to Table (1), in a general analysis of the system situation, the degree of filling of the matrix is equal to 96.3%, which indicates the high influence of the variables on each other. Out of the total of 810 relationships evaluated in this matrix, 31 relationships have several zeros, which indicates that there is no influence between them, 179 relationships have several ones, which indicates a limited influence of the variables on each other, and 321 relationships have several two, which indicates the average influence of the research objects on each other. Is. 263, the number of the relationship is three, which indicates a great influence and relationship between the variables. Also, values with a P score indicate the potential influence of variables. In general, it can be said that more than 72% of the research, variables have had a good influence on each other, which indicates the favourable relationship between the items.

Table (1): Initial Analysis of Matrix Data and Mutual Effects

| INDICATOR | VALUE |
|----------------------|-------|
| Matrix size | 29 |
| Number of Iterations | 2 |
| Number of Zeros | 31 |
| Number of Ones | 179 |
| Number of Twos | 321 |
| Number of Threes | 263 |
| Number of P | 47 |
| Total | 810 |
| Fillrate | 96.3% |

According to Table (1), which shows the impact and effectiveness of the economic capacities of the African continent for Iran, the influencing and determining variables in the system are very important and affect all the other variables under study and have less influence. accept and also have less uncertainty, including three variables of agricultural capacity (fertile soil), availability of legal bases for foreign direct investment (ease of investment), geo-economic location (four waterways, Suez Canal, Strait of Gibraltar, Bab al-Mandab and Omidnik Cape) is located in it. Bimodal variables of these variables have two common characteristics of high influence and high influence and have more uncertainty, which is divided into two categories of risk and target variables. The risk variables are located above the diagonal line of the northeastern region and have a great capacity to become key players in the system, which in this research are the

presence of rich non-metallic minerals in the continent, cheap labour, entrepreneurship development and investment opportunities for the private sector is placed in this section, which shows the great importance of this variable. The target variables are placed under the northeastern diagonal area of the page, these variables are the evolutionary results of the system and represent the possible goals in a system, the variable of strong dependence on technical engineering services is located in this part. The influencing variables are located in the south-eastern part of the figure and they can also be called the outcome variables. These variables have a very high influence on the system and a low influence on the system, these variables have less importance and also more uncertainty that in this research, 2 variables of the dynamic tourism industry and the existence of rare coastal resources are placed in this sector. The independent variables are located in the southwest part of Figure (2) and have a low influence. In this part, 3 variables of productivity growth in Africa, investment in small industries, and the growth of the industrialization process of this continent are located.

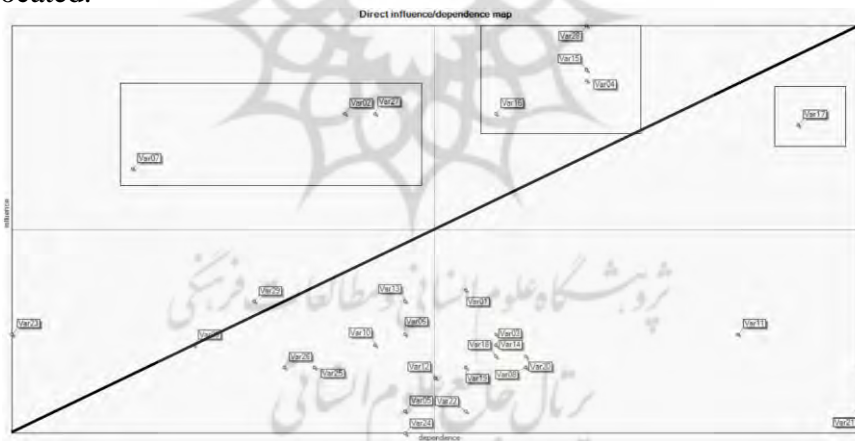


Figure (2): Scatterplot of Independent, Influential, Influential and Dichotomous Variables

In the next step, in order to identify the most important key drivers affecting the future of Iran's geo-economic relations with African countries, the total scores of all items used in the research in the form of 4 indicators (influence and direct influence); (influence and indirect influence); (impact and potential direct impact); (Potential indirect impact) 8 investment opportunity variables for the private sector with a final score of 3736 in the first place, strong dependence on technical engineering services with 3348 in the

second place, cheap labor with 3164 in the third place, the presence of rich non-metallic minerals in Africa continent with 3213 in the fourth place, availability of legal platforms for foreign direct investment (ease of investment) with 3164 in the fifth place, entrepreneurship development with 3145 in the sixth place, fertile soil and agricultural capacities with 3019 in the seventh place, the geo-economic position (maritime trade) of the continent with 2825 in the 8th position was recognized as the most important key variables of the geo-economic system of Iran and Africa.

Table (2): The Final Scores of the Research Variables Based on the Results of Micmac

| Item | Variable | Score |
|-------------|---|--------------|
| A1 | Huge Oil and Gas Resources | 2761 |
| A2 | Fertile Soil and Agricultural Capacities | 3019 |
| A3 | Metal-Rich Minerals | 2667 |
| A4 | Rich non-Metallic Minerals | 3213 |
| A5 | Hydroelectric Potential | 2456 |
| A7 | Geo-Economic Position (four Waterways of the Suez Canal, the Strait of Gibraltar, Bab al-Mandeb and Cape Omidnik) | 2646 |
| A8 | Investing in Nascent Economic Infrastructure | 2825 |
| A9 | Investing in Small Industries | 2635 |
| A10 | Investment in Heavy Industries | 2513 |
| A11 | Dynamic tourism industry | 2817 |
| A12 | Very Wide Import Capacity | 2557 |
| A13 | Economic Diplomacy | 2357 |
| A14 | Regional Organizations | 2619 |
| A15 | Cheap Labour | 3238 |
| A16 | Entrepreneurship Development | 3145 |
| A17 | Strong dependence on technical engineering services | 3348 |
| A18 | Tax and Customs Exemption | 2607 |
| A19 | Higher Rate of Economic Growth Compared to the Global Average | 2700 |
| A20 | The Similarity in Geographic and Economic Structure | 2627 |
| A21 | Coastal scarce Resources | 2766 |
| A22 | The High Growth of the Urban Population | 2478 |
| A23 | Industrialization of this Continent | 2481 |
| A24 | The Potential to Increase Digital and Mobile Access | 2442 |
| A25 | Reduce Inflation | 2571 |
| A26 | Reduction of Foreign Debt | 2388 |
| A27 | Increasing Foreign Direct Investment | 3164 |
| A28 | Investment opportunity for the private sector | 3736 |
| A29 | Productivity Growth in Africa | 2605 |

4-2-1. Possible Situations of Key Ffactors

For each of the main factors, possible future situations of the geo-economic relations between Iran and African countries were determined. For this purpose, you will consult with experts in the field of geopolitical relations. In this way, for each of the factors, three favourable assumptions (green color), a continuation of the current situation and on the verge of crisis (yellow color) and unfavourable or critical (red color) were considered; Therefore, a total of 24 possible situations were designed for 8 main factors, which are presented in the table below (3).

Table (3): The Main Factors and Possible Situations before It

| Key Factors | Possible Situation | Mode |
|--|---|---------------|
| Investment opportunity for the private sector | Increasing the investment opportunities of Iran's private sector in the African market | Optimal |
| | Continuation of the existing situation of the presence of the private sector of Iran in the African market | Semi-critical |
| | The marginalization of Iran's private sector in the African market by competitors | critical |
| Strong dependence on technical engineering services | Increasing the penetration of Iranian engineering knowledge in the African industrial market | Optimal |
| | Continuation of the existing situation of the influence of Iranian engineering knowledge in the African industrial market | Semi-critical |
| | Reducing the penetration of Iranian engineering knowledge in the African industrial market by competitors | critical |
| Cheap labour | Increasing the level of Iran's exploitation of cheap labour in Africa | Optimal |
| | Continuation of the existing situation at the level of Iran's exploitation of cheap African labour | Semi-critical |
| | Reducing the level of Iran's exploitation of cheap African labour by competitors | critical |
| The presence of rich non-metallic minerals | Increasing Iran's exploitation of African non-metallic minerals | Optimal |
| | Continuation of the existing situation in Iran's exploitation of African non-metallic minerals | Semi-critical |
| | Reducing Iran's level of exploitation of African non-metallic minerals by competitors | critical |
| Availability of legal platforms for foreign direct investment (ease of investment) | Improving the level and volume of Iran's foreign investment in Africa | Optimal |
| | Continuation of the existing situation of Iran's foreign investment in Africa | Semi-critical |
| | Reducing the level and volume of Iran's foreign investment in Africa (hardening of the investment process) | critical |
| Entrepreneurship Development | Improving the level of employment for Iranians in the African market | Optimal |

| | | |
|--------------------------------------|--|---------------|
| | Continuation of the current status of employment of Iranians in the African market | Semi-critical |
| | Reducing the level of employment of Iranians in the African market | critical |
| Agricultural capacities | Increasing the level of Iran's exploitation of Africa's agricultural capabilities | Optimal |
| | Continuation of the current status of Iran's level of exploitation of Africa's agricultural capabilities | Semi-critical |
| | Reducing the level of Iran's exploitation of Africa's agricultural capabilities | critical |
| Goeconomic position (maritime trade) | Increasing the level of Iran's exploitation of Africa's geo-economic position | Optimal |
| | Continuation of the current status of Iran's exploitation of Africa's geo-economic position | Semi-critical |
| | Reducing the level of Iran's exploitation of Africa's geo-economic position by competitors | critical |

4-2-2. Analysis and Scenarios

After designing the possible situations, a cross matrix was prepared, and a 24x24 matrix was designed for the mentioned 8 key factors, which was provided to experts in the form of a questionnaire along with how to answer. By asking the question, "If any of the key factors occur, what effect will it have on the occurrence or non-occurrence of other conditions?" They completed the questionnaire based on three characteristics: enabling, ineffective and limiting, and by entering numbers between -3 and +3, they determined the impact of each of the key factors on the future of geo-economic relations between Iran and African countries. Then, considering the simple average of them, the data were prepared to enter the scenario wizard software. Scenario Wizard software generally provides 3 categories of scenarios for the researcher: scenarios with ethnic probability, scenarios with weak probability and scenarios with high compatibility and adaptation probability. According to the size of the matrix and its dimensions, as well as according to the opinions of experts in the Scenario Wizard software, the following scenarios have been obtained:

- Strong scenarios: 1 scenario
- Believable scenarios or high compatibility scenarios: 8 scenarios
- Weak scenarios: 5164

It is reasonable to consider scenarios with high compatibility between strongly limited scenarios and weak broad scenarios, and therefore, the number of 8 reasonable and logical scenarios for planning and policymaking was provided to the research; Therefore, the extracted scenarios can be

completely desirable or completely critical. In other words, the mentioned scenarios are designed based on the logic and algorithm of the Scenario Wizard software analyzer.

| Scenario No. 1 | Scenario No. 2 | Scenario No. 3 | Scenario No. 4 | Scenario No. 5 | Scenario No. 6 | Scenario No. 7 | Scenario No. 8 |
|--|---|----------------|----------------|--|--|----------------|---|
| Increasing the level of Iran's exploitation of cheap labour in Africa | Continuation of the existing situation of the presence of the private sector of Iran in the African market | | | The marginalization of Iran's private sector in the African market by competitors | | | Continuation of the existing situation of the presence of the private sector of Iran in the African market |
| Increasing the penetration of Iranian engineering knowledge in the African industrial market | Continuation of the existing situation of the influence of Iranian engineering knowledge in the African industrial market | | | Reducing the penetration of Iranian engineering knowledge in the African industrial market by competitors | | | Continuation of the existing situation of the influence of Iranian engineering knowledge in the African industrial market |
| Increasing the level of Iran's exploitation of cheap labour in Africa | Continuation of the existing situation at the level of Iran's exploitation of cheap African labour | | | Reducing the level of Iran's exploitation of cheap African labour by competitors | | | Continuation of the existing situation at the level of Iran's exploitation of cheap African labour |
| Increasing Iran's exploitation of African non-metallic minerals | Reducing Iran's level of exploitation of African non-metallic minerals by competitors | | | Continuation of the existing situation in Iran's exploitation of African non-metallic minerals | | | |
| Improving the level and volume of Iran's foreign investment in Africa | Continuation of the existing situation of Iran's foreign investment in Africa | | | Reducing the level and volume of Iran's foreign investment in Africa (hardening of the investment process) | | | Continuation of the existing situation of Iran's foreign investment in Africa |
| Improving the level of employment for Iranians in the African market | Continuation of the current status of employment of Iranians in the African market | | | Reducing the level of employment of Iranians in the African market | Continuation of the current status of employment of Iranians in the African market | | |
| Increasing the level of Iran's exploitation of Africa's agricultural capabilities | Reducing the level of Iran's exploitation of Africa's agricultural capabilities | | | Continuation of the current status of Iran's level of exploitation of Africa's agricultural capabilities | | | |
| Increasing the level of Iran's exploitation of Africa's geo-economic position | Continuation of the current status of Iran's exploitation of Africa's geo-economic position | | | Reducing the level of Iran's exploitation of Africa's geo-economic position by competitors | | | |

Figure (2): Scenario Board of African Economic Capacities

4-2-3. Possible Scenarios with High Compatibility (Believable Scenarios)

In total, there are 8 believable scenarios for the geo-economic relations between Iran and African countries. These scenarios are extracted from the interaction between the statuses of each of the factors about the statuses of each of the other factors, and these 8 possible scenarios; With 3 scenarios with situations (favourable with green color, static and crisis with yellow color, a crisis with red color), it is different in the degrees of probability of realization. As can be seen in Figure 2. From the total of 30 situations on the page of different scenarios, it shows 8 favourable situations (26.7%), 13 situations on the threshold of crisis (43.3%), and 9 unfavourable or critical situations (30%). The results show that almost half of the states on the page

of possible scenarios are in the situation on the verge of crisis, then the critical state and finally the favourable state has the lowest amount.

Table (4): Coefficients, Number and Percentage of each Situation Separately for each Scenario Based on the Three Spectrums

| Scenario | N of statuses separately | | | Status coefficients | | | Favourable conditions | | | Critical situations | | |
|------------|--------------------------|---------------|----------|---------------------|---|-----|----------------------------|-------------|----------------------------|-----------------------------------|-----------------------------|-----------------------------------|
| | Desirability | semi-critical | critical | 3 | 1 | -3 | The degree of desirability | Ideal score | Percentage of desirability | The extent of critical conditions | Maximum critical conditions | Percentage of critical conditions |
| Scenario 1 | 8 | 0 | 0 | 24 | 0 | 0 | 24 | 24 | 100 | 0 | -24 | 0 |
| Scenario 2 | 0 | 6 | 2 | 0 | 6 | -6 | 0 | 24 | 0 | -6 | -24 | -25 |
| Scenario 3 | 0 | 6 | 2 | 0 | 6 | -6 | 0 | 24 | 0 | -6 | -24 | -25 |
| Scenario 4 | 0 | 6 | 2 | 0 | 6 | -6 | 0 | 24 | 0 | -6 | -24 | -25 |
| Scenario 5 | 0 | 2 | 6 | 0 | 2 | -18 | 0 | 24 | 0 | -18 | -24 | -75 |
| Scenario 6 | 0 | 3 | 5 | 0 | 3 | -15 | 0 | 24 | 0 | -15 | -24 | -62.5 |
| Scenario 7 | 0 | 7 | 1 | 0 | 7 | -3 | 0 | 24 | 0 | -3 | -24 | -12.5 |
| Scenario 8 | 0 | 6 | 2 | 0 | 6 | -6 | 0 | 24 | 0 | -6 | -24 | -2.5 |

Based on the results of Table (4), the first scenario with 8 favourable assumptions was the most favourable possible situation for the future of geo-economic relations between Iran and African countries. The fifth and sixth scenarios are the most complicated possible situations of the geo-economic future of Iran and African countries, with 0.75 and 0.62.5 per cent of critical conditions, respectively. The seventh, eighth, second, third and fourth scenarios are considered semi-critical scenarios of the system due to the situation on the verge of crisis.

5. Discussion and Conclusion

The purpose of this research is to examine the future of geo-economic relations between Iran and African countries as two important players in the geopolitical structure of the world. An overview of the economic developments of the African continent shows the increasing importance and improvement of its geo-economic position, and on the other hand, Iran is faced with a fragile and very vulnerable economy due to the extensive international sanctions and the loss of the oil and gas market, as well as the maximum pressure from the western countries. Is; Therefore, it should look for new markets to get out of geopolitical isolation. In the meantime, the African continent has many capacities in the field of natural, capital and human resources, which can be considered as a target market by various countries, including Iran. For this purpose, in this research, firstly, with a library approach, the sources of the geography of power of African countries

were investigated, and finally a list of the most important sources of the geography of power of these countries was identified and in the framework of the future research approach, these resources of the geography of power were prioritized for the country. Iran was identified by geoeconomic experts. The results of prioritizing the experts' opinions have shown the importance of 8 geographic sources of power of this continent for Iran (in the current situation), which were: "Investment opportunity for the private sector", "Strong dependence on technical engineering services", "Cheap labour force". "Existence of rich non-metallic minerals", "Availability of legal platforms for foreign direct investment (ease of investment)", "Entrepreneurship development", "Wide agricultural capacities" and "Geoeconomic situation (maritime trade)". In the next step, to examine the future of the geo-economic relations between the two actors, the sources of power geography (African capabilities) are of particular importance to Iran in the current situation according to the opinions of experts in the form of a table of mutual effects (under the cover of Scenario Wizard software) to the discussion was done by experts. The results of the cross-impact matrices showed that the future of geo-economic relations between Iran and Africa has different situations (different situations of Africa's power geography resources for Iran), which according to the results of the scenario board, are semi-critical and completely critical situations of complete domination. There will be two players in Sepehr's geo-economic relations, and this issue indicates that the geo-economic strategies being implemented by Iran to use Africa's capabilities are inappropriate and need to be changed and transformed. Therefore, considering the importance of overcoming the existing economic conditions in the country and the role of the African continent in this issue, Iran's geopolitical strategies should be aimed at recreating and rebuilding the existing conditions and the future of relations with this continent.

Since the ultimate goal of geopolitical knowledge is to provide strategies to power players to achieve national interests, geopolitical thinkers should be able to provide the best strategies to power players (politicians) while understanding various states and possibilities in the future of the country's geopolitical relations. To achieve maximum national benefits, therefore, in the continuation of the research, according to the results obtained from the field findings section, the following four strategies are proposed for

different states of the future geo-economic relations between Iran and Africa:

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1.Strategy of critical conditions: change and replacement of views towards the African continent: before the Islamic revolution, Iran's view of Africa was completely in harmony with the West and the United States of America, but after the victory of the Islamic revolution in Iran's policies in Africa Developments took place in such a way that immediately after the Islamic revolution, supporting African liberation movements was put on the agenda and Iran's relations with some countries were cut off. Currently, the continent of Africa is known as a poor and deprived continent, and this continent is often viewed as an underdeveloped and marginal region; Therefore, this point of view has caused the Islamic Republic of Iran to ignore the existing capacities in this continent. Hundreds of documents of cooperation in various economic fields have been signed between Iran and Africa, but due to various reasons, including the lack of experience on the part of the businessmen of our country and the unwillingness of the government sector, the desired results have not been achieved, and the African continent has become a place for testing and Iran's mistake in this section became. If the countries of this continent need raw materials and agricultural and food products on a large scale, and on the other hand, African markets can provide a suitable opportunity for Iran's economic development; Therefore, the statesmen's view of this continent should move towards the opportunistic view and attitude of the deprivations of the countries of this region. It means being able to formulate programs in such a way that it plays the role of economic leadership in this continent. Although Western countries and the United States of America have always prevented Iran's presence in this continent with their policies, some countries such as

Egypt have differences with Iran, and these factors negatively affect the attitudes and level of regional interventions. has found.

2. The strategy of situations on the brink of crisis or semi-crisis: re-creating and re-creating the role of the government in Africa: apart from neighbours such as Iraq and the United Arab Emirates or a country such as China as an emerging giant of the world economy, in the current situation Iran has several potential markets that can They cannot be accessed. The United States of America and Canada will not provide any great opportunity to Iran due to political differences, the situation in Australia is not much different from North America, and at least in the current situation, it is not possible to plan for a strong presence in them. In the meantime, the European Union has been a cautious trading partner for Iran and continues to do so. Despite Europe's insistence on remaining in the JCPOA, America's threat to companies that cooperate with Iran has practically closed the way to business expansion, and even new statistics indicate that Iran's trade with a country like Germany has decreased by 50%. Meanwhile, the only remaining capacity to expand the presence of the African continent is. A continent with a very wide export capacity, which is practically untapped for Iranian exporters due to not paying for it. Statistics show that more than 50 African countries have a trade of about 1000 billion dollars during the year, of which about 600 billion dollars is devoted to imports and 400 billion dollars to exports. The extent of forgetting this important market in Iran's economy is clear when studies show that Iran's annual trade with all African countries is about one billion dollars. Of this number, 600 million dollars are allocated to exports and 400 million dollars to imports, and practically Iran has no share in this 1000-billion-dollar market. A review of the import situation of African countries in 2018 shows that these countries imported about 576 billion dollars in one year. Among these countries, South Africa is the largest importer with about 93 billion dollars, followed by Egypt with 80 billion dollars, Morocco with 51 billion dollars and Algeria with 48 billion dollars. The exact statistics of Iran's trade with Africa show that Iranian businessmen have exported 651 million dollars to Africa this year. Egypt has the largest share with the import of 215 million dollars, followed by Kenya with 137 million dollars, Sudan with 59 million dollars and South Africa with 37 million dollars. Thus, Iran has exported only 37 million dollars to South Africa as the main economy of this continent and the biggest importer, which practically does not show any share in the 93 billion

dollars import of this country. In addition, Iran has exported the most to Egypt, with which it did not have special diplomatic relations within the previous 40 years, and this shows that the existing capacity is very high, but no one has approached it. Therefore, the government should take into account the distance dimension and the channels related to banking and currency interactions and formulate appropriate policies in its plans to create a kind of rotation to focus more on the African continent and exploit its virgin and potential economic resources; Therefore, the government should strengthen its role in monetary and banking policies in interactions and communications with this continent so that it can achieve the desired economic goals in this content without the intervention of other countries; Therefore, the distance and bank exchanges have caused the Islamic Republic of Iran to be in a semi-critical situation for its presence in the African continent.

3. The strategy of the continuation of the status quo: multi-product economic systems: African countries such as Egypt, Morocco, South Africa and Tucson have major manufacturing and service industries. In the past decades, service sectors such as construction, banking, telecommunications and retail accounted for more than 70% of their GDP. Since 2000, the population of their cities has increased by more than 10 million people, and the main consumer spending has grown by 3 to 5 per cent every year. Today, more than 90% of households have some miscellaneous expenses. These economic systems have the lowest unsustainable GDP growth in Africa and are driven to benefit widely from increased relations with the global economy. However, today multi-product economic systems have a higher labour cost (value) than China and India and they must be ready to compete with more valuable industries. Looking to the future, these countries are facing challenges such as developing exports to global and local markets, expanding education to train the skilled workforce required by advanced industries, and creating the necessary infrastructure to support the growth process; Therefore, the Islamic Republic of Iran will be able to provide the driving engine of economic growth and development for the country as well as for this continent by formulating appropriate programs for more and more active presence in various economic sectors of this continent.

4. The strategy for improving the existing situation: research and investigation and market science and market measurement in African countries:

Africa continues to benefit from increased global demand for oil, natural gas, minerals, food and arable land and other natural resources. This continent boasts of rich wealth including 10% of the world's oil reserves, 40% of gold reserves, and 80% to 90% of chromium and platinum group metals. Demand for raw materials has increased the most due to emerging economies, which now account for half of Africa's total trade. As trade patterns have changed, African governments have created new types of collaborative economies in which buyers give these countries advance payments, make infrastructure investments, and share management skills and technology. Foreign direct investment in Africa increased from \$9 billion in 2000 to \$62 billion in 2008, roughly the same trend (calculated as GDP) in China. Africa's long-term growth also increasingly reflects interdependent social and demographic trends that are the new engines of domestic economic growth. Meanwhile, urbanization and increasing the middle class of African consumers are the most important. In 1980, only 28% of Africans lived in cities, and today this amount has increased to 40%; That is, a percentage close to the urban population of China and more than India, which will also increase according to the plan. As more Africans switched from agricultural work to civilian occupations, their incomes increased. In 2008, about 85 million households received an amount of \$5,000 or more, and at this higher level of living, they spent half of their income on non-food items. According to the long-term plan of economic growth, the number of households with additional (miscellaneous) expenses will increase to 50% in the next 10 years; Which means it will reach 128 million households. Meanwhile, the labour force in Africa is increasing. By 2040, this amount is going to reach 1.2 billion and surpass China and India. If Africa can provide its young population with the education and skills they need, this huge workforce will make a major contribution to global consumption as well as production. Due to various reasons and issues and problems such as the one-sidedness of trade (which mainly includes Iran's exports), the unknown nature of African markets, inappropriate economic and commercial infrastructure and political instability in many African countries, the lack of suitable commercial infrastructure such as goods transportation systems. and travellers and banking relations between the two

sides, low social communication and tourism between the people of the two sides and the lack of desire for the direct presence of Iranian business activists in the markets and African countries due to the lack of welfare and health facilities and security doubts, etc., so far we have not been able to fully use the potential and capacities in African markets; Therefore, to improve Iran's economic situation in the African continent, it is necessary to first gain market knowledge and the number of resources available in this continent, so that by assessing the needs of different markets, we can find out the needs and also the available facilities to take advantage of the economic advantages of this continent; Therefore, to improve the existing situation, the authorities should first pay attention to this issue so that they can have an active and effective presence and participation in this continent. One of the reasons for Iran's lack of success is the lack of sufficient knowledge of oil and gas resources, the introduction of the economic capacities of this continent to private sector investors, etc. Because these factors can directly affect the growth and development of this continent as well as its industrialization.

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