## **МИРОВАЯ ЭКОНОМИКА**

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# CLUSTERING AS A FACTOR OF INCREASING INVESTMENT ATTRACTIVENESS OF THE ISLAMIC REPUBLIC OF IRAN

Investment policy is the basis of the formation and development of national economy. It aims at giving new job opportunities, realizing structural changes in different industries and other sectors of management on the basis of using new equipment and technologies as well as raising various forms of capital. The main objective of the present research is adjustment of the previously developed authorial methodology of express analysis of the investment attractiveness of the regions to analyze the Middle East & North Africa (MENA) countries investment attractiveness and clustering experience dissemination in the innovation activity field. In the framework of the present research, an analysis of the MENA countries was conducted and the advantages and disadvantages of the MENA countries were identified. The analysis of the investment attraction of the MENA countries can be helpful in making decisions by investors, governments, and everyone concerned. Developed countries such as the USA, Japan, Germany, and France show their experience in the implementation of cluster conception as an effective instrument contributing to enterprise development, innovation and competitiveness boost among the cluster-based regions as well as the country on the whole. As a result of the research, the authors give their recommendations on the implementation and spread of innovative clusters on the territories of the Islamic Republic of Iran, corresponding to the world trends of accelerating introduction and increase of technological innovation economic influence on the world market. The systemic approach and synthesis, methods of bibliographic and logical analysis were used within the framework of the present research.

Keywords: investment, investment attractiveness, investment climate, investment attractiveness index, analysis of investment attractiveness, cluster, industrial cluster, innovation cluster, economic efficiency, competitiveness

### Introduction

In today's context, the most important condition for the functioning and stable development of the territory (of the country, province or region in particular) is realization of its socioeconomic potential with the investment part being one of the key elements of the process. It becomes the indicator for the business activity on the territory and includes formation of the favorable investment climate, the degree of attractiveness of which contributes to formation of management subjects' activity aimed at seeing a lasting social-economic effect.

Investments can be one of the major factors of positive changes of the country's economy through investment into the regional management sectors where greater potential has been identified. Today, investment prominence has risen on

the country, region and enterprise levels, as it gives opportunities for manufacturing and infrastructure development, for creating new workplaces, which is one of the principal factors of improving the quality of life in the region as well as in the country on the whole.

Evaluation of investment attractiveness enables to reveal the current situation in the economic activity and its investment support, to find out characteristic problems and regularities on the current stage of development, and to mark possible areas for the regional adjustment program.

At present, integration processes represent a special driving force of the economy, and they foster the creation and improvement of competitiveness of enterprises, regions, and countries on the whole, promoting their investment attractiveness at the international level. Representatives of business, science, authorities are interested in the integrated forms of bringing together economic entities, which is conditioned by the scientific and technological progress, competitiveness, and the increased importance of intangible assets.

One of the forms of such integration is clusters representing a group of interrelated companies and associated organizations, concentrated in a particular territory and a particular sector [1]. Territorial closeness is not the only characteristic of clusters. Clusters presuppose cooperation of participants in the production, with their effective interaction contributing to the synergy effect achievement.

#### **Review of Works on Investment Attractiveness**

Investments are the basis for the development of both separate enterprises and regions on the whole. They guide the effective functioning of socioeconomic systems. Investments are considered to be the central factor of growth and development, expanding productive capacity of the economy and stimulating new job opportunities [2]. Different types of investments from physical assets to intellectual capital can contribute to both quality changes (power increase and efficient use of resources) and quantity changes (output growth through the accumulation of production factors or process optimization).

The major part of investments is made by local investors, but only international ones can provide additional benefits apart from the fixed capital. Such investments can serve as a channel for the local spread of technology and expert knowledge by creating links with local providers and access to international markets.

A cause and effect relationship between investments and economic growth is generally recognized. D. Keynes defined investments as the economic growth factor [3]. The functioning of the economy sector of the country is impossible without investments contributing to the elaboration and development of industrial, innovative, social programmes and projects, enabling to increase production and improve the functioning efficiency of social production.

Investment attractiveness in its turn represents complex characteristics which can be applied both to a particular investment object and a region on the whole and reflects conformity between the region, the investment object and the objectives of a particular investor [4].

Investment attractiveness issues are widely discussed by researchers, the main problems being the comparison of "investment attractiveness" and "investment climate" [5–6], economic growth factors of the territories [7–12]. Lots of assessment of investment attractiveness nowadays [13–17] differ in indicators for assessment, mechanisms of information gathering and processing, in national peculiarities of the development of territories under analysis.

While making decisions even at a high expected return of an investment project, investors take into consideration a favourable investment climate. Yenchzhao Lu, T.V. Pekna & Sun Vei [12] mark out four groups of factors taken into account while making decisions:

- macro- and meso-economic rate dynamics (GDP, GNI, GRP, level of industrial development, inflation rate, development of the banking sector, etc.);
- national investment policy (state support of foreign investments, participation in international treaties, stability and effectiveness of the state policy, etc.);
- legal and regulatory basis for the investment activity (tax legislation, customs regulation, regulation and oversight of organization activities, disputes and differences settlement, etc.);
  - data (facts, statistics, general framework for investment, etc.).

A favourable investment climate contributes to the accumulation of capital, skills, technology and resources of industry, which encourages the expansion of organizations, productive use, effectiveness growth due to competitiveness crowding out inefficient industry. Besides investments have an economic and social influence on improving living standards in the long term.

On the regional level, organization and regulation mechanisms of the investment activity are rather complicated and dynamic because of their dependence on the micro-level. Goals and objectives of the regional investment policy must meet the main directions of the socioeconomic development of the country [18].

Researchers have different points of view concerning investment processes in the region being state-influenced. Thus, A. Haletska [19] thinks that the influence of regional authorities on the investment processes should foster effective functioning, resolution of socioeconomic, ecological and other problems. T. Bova [20] points out the significance of the state influence on reducing territorial development inequality. T. Misikova [21] states the necessity of state support development in the activities which can play the role of "points of growth" in the region economy.

Investment attraction presents a very significant task to the territorial units of the countries (regions, provinces), which explains the importance of defining the most effective mechanisms for increasing investment attractiveness and makes it topical within the framework of the present research.

### Mechanisms For Increasing the Investment Attractiveness of the Regions

The investment activity development of the most significant spheres of the socioeconomic development must become the major priority of the socioeconomic development of a territory. To a great extent, the high level of the economic activity of the territories and the significant growth of investment flows

into the economy are conditioned by the result of the longstanding and successful work of the executive power aimed at the investment attractiveness growth.

All the mechanisms of influencing the authorities with a view to increasing the investment attractiveness of the territory can be divided into legal, regulatory and infrastructural [22].

Removing any barriers to the capital market access, the implementation of effective legislative and practical mechanisms, the protection of interests and rights of investors, the simplification of procedures via "one-window" principle are worth mentioning among other legal instruments of investment attractiveness increase.

In the formation of an effective market infrastructure, it is worthwhile to note accessibility to information on the organisations for the purpose of analysis and choice of investment objects and improvement of information support of the business on the whole, for the balancing of competitive conditions and development of investment institutions.

Integration mechanisms, contributing to the cooperation and mutually beneficial co-partnership are also worth mentioning. Representatives of business, science, and power take an interest in integrated forms of bringing together economic entities, which is conditioned by the development of science and technology progress, competitiveness and increased significance of intangible assets [23]. One of such integration forms is the clustering conception which was tested by such developed countries as the USA, Japan, Germany, and the Netherlands.

Cluster is a group of organisations, joined economic subjects, and institutions closely located and large enough to develop special knowledge, services, and resources to find common suppliers.

The experience of other countries proved the effectiveness of cooperation on a particular territory of scientific-educational organizations for the purpose of achieving the synergetic effect of cooperation, thus supporting the development of the regions. M. Porter [1] formulated advantages of such integrations, namely the overcoming of the science and technology gap, the upgrading of the industry, and, consequently, the development of the territories and the living standards increase.

Clusters influence competitiveness of the regions via:

- productivity improvement at the level of firms and branches;
- creation of opportunities for innovation and industry growth;
- stimulation and facilitation of new business establishment, supporting innovations and expansion of the cluster.

Cluster core comprises big enterprises of several branches (extracting and manufacturing), closely connected by the same technological chain. A whole group of small enterprise forms is formed at each venture. They support different stages of innovative and manufacturing processes.

In cluster management, special emphasis is placed on small and mediumsized businesses, making more than 50% of the whole number of participants characterized by flexibility and adaptability to implementation of innovations. In fact, the number of people belonging to the specialty branch of the cluster is not less than 30 to 50 participants.

The development of a cluster presupposes interaction of business, power, science, and education. Such partnership is called Triple Helix [24], and it implies participation of all the key participants—state authorities, business, and science-education complex with the leadership of each of them. As the main problem is harmonization of interests of the participating representatives of educational and scientific institutions, business and government bodies, only those associations in which interests of both sides correlate with common objectives can succeed.

Cluster structures have specific characteristics:

- geographical closeness, contributing to the spread of knowledge and maintaining a relatively cheap access to the necessary factors of the enterprise;
- accumulation of information and interaction experience between the cluster entities;
  - maintainance of interchangeability of the cluster participants;
- functioning of large amounts of representatives of small and medium-sized businesses, characterized by flexibility and adaptability to the implementation of innovations [25–26].

Functioning of the territorially close innovative businesses stimulates and supports industry development. Establishment of innovative territorial clusters contributes to the realisation of business initiatives, and work of scientific research institutes, all this resulting in the creation of new work places and improving skills. Innovative clusters technologically influence other spheres, which results in the improvement of their international competitive position.

Innovative territorial clusters are characterized by a full production cycle of a scientific organisation; production of innovative technologies, production and services.

The problems of cluster competitiveness and its effectiveness were investigated by many researchers [27–33], quite a big number of works deal with the assessment of potentially effective clusters and its participants [34–37]. In the framework of the previous research, the authors developed a three-staged assessment system of effectiveness of territorial cluster funding, which includes indicators showing how the cluster influences the economy in the region, indicators of the development of the cluster itself, and indicators of the financial position of the enterprises-cluster participants [38]. This system can be used in decision-making in the distribution of investments.

The implementation of a sound investment policy requires a precise and rather objective analysis of the investment climate, determination of criteria for assessing the investment situation in the country and in the region, elaboration of a methodology basis, adequate to the economic situation. Informative methodology on data collecting and processing is necessary to get information concerning data on investment attractiveness of the territories. We give an adapted methodology of assessment of investment attractiveness of the MENA countries.

### **Methodology and Data Explanation**

# The Technique of Assessment of Investment Attractiveness of the MENA Countries

The purpose of assessment of investment attractiveness of the MENA countries according to different criteria was to reveal strong and weak points of the Islamic Republic of Iran. The assessment covered 20 indicators, characterising the region with regard to basic (stable) indicators such as economic and geographical position, as well as changing data, characterising the dynamics of the investment climate level in the region and the level of investment risks.

Within the framework of the present investigation, we assessed the investment attractiveness of the MENA countries (Middle East and South Africa countries, including Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malta, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, and the United Arab Emirates).

The countries have enough oil and natural gas resources, which is a very important source of global stability. About 6% of the world population lives in the investigated geographical region (according to the World Bank). The dynamics of the economic development of the MENA countries is positive and is on the level of 1.4% (according to the 2017 International Bank official information), and further growth is expected.

As part of the previous studies [4], we developed an authorial methodology of assessment of investment attractiveness of the regions, which is more oriented towards the Russian Federation and its regions. As part of the present research, we modified and adapted the previously elaborated the methodology of calculation of basic conditions ratio, investment climate of the territory and investment risks, which became the basis for the calculation of the integral indicator of investment attractiveness assessment of the MENA countries.

Information for the calculation of the investment attractiveness index based on the present methodology is available to anyone interested in it, and this is its significance.

As part of the present research, we made calculations of investment attractiveness of the MENA countries based on three groups of indexes, characterising basic conditions, investment climate, and investment risk (Table 1).

1. Basic conditions ratio	2. Investment climate ratio	3. Investment risk ratio
		Rate of the needy popula-
Economic and geograph-	ment.	tion with income of 3.10
ical position (EGP).	Gross indicator of coverage of higher	US dollars a day in terms
Existence of natural gas.		of purchasing power pari-
Existence of oil fields.	State budget expenditures on educa-	ty in shares of total em-
Existence of farmlands.	tion.	ployment.
Existence of forest fund.	Gross investments in fixed capital.	Debt level.
	Standard of living.	Unemployment rate.

Table 1. System of rate to calculate investment attractiveness index

1. Basic conditions ratio	2. Investment climate ratio	3. Investment risk ratio
	The level of development of the ex-	Mortality per 1,000 live
	tracting and processing productions.	births.
	Privileges on taxes/rent for business.	Crime level.
		Potential/ongoing military
	Index of attracted foreign direct in-	conflicts
	vestments.	

The investment attractiveness index elaborated for the analysis reflects the factors presented in Table 1 and equals to an algebraic sum of the weighted ratio of basic conditions, investment climate, and investment risk.

Index of IA = 
$$0.2 \cdot BC$$
 ratio +  $0.6 \cdot IC$  ratio +  $0.2 \cdot IR$  ratio. (1)

It is worth mentioning that as a result of the conducted calculations, statistic information was rather complicated as either it was not available or it did not exist (Djibouti, Libya, Yemen). Exclusion of some parameters from the general index is considered to be inappropriate, that is why those countries were not included into the general chart.

The cost-of-living standard within the present methodology is calculated as the ratio of average monthly wages (1 person) to the fixed minimal wages in the country. As state fixed minimum wages do not exist in some countries, the costof-living standard is not determined.

The authors believe that war conflicts and business benefits are important in choosing countries for investment and developing business. Thus, these data are rather significant as part of methodology – from 0 to 1. Index is 0 if there are no conflicts and it equals 1 if there are any (potential). While calculating tax/rent incentives for business in the country, index is 1 in case of the war conflict, in some countries taking into account restrictions of those enterprise activities which can qualify for benefits, the rate is at the level of 0.5.

The results of the tested methodology of the assessment of the investment attractiveness of the MENA countries are presented in the Results of Analysis of Investment Attractiveness of MENA Countries section (Figure 1 and Table 2).

# Existing and Potentially Possible Clusters on the Territory of the Islamic Republic of Iran

The Islamic Republic of Iran is the second largest oil-producing state among the OPEC countries [39], and has a developed industry. The main export accounts for oil, industrial goods, machinery and equipment, as well as metal products. The main partners of Iran are China, the UAE, India, Turkey, and South Korea.

The committee on export development strategies lays special emphasis on the creation and development of industrial clusters in the country. Thus, industrial clusters are actively developing on the territories (ostans) of Iran, for instance a building cluster in Teheran.

Industrial clusters of Iran are established and headed by a group for businesscluster development and are implemented together with the Iran Small Industries and Industrial Park Organisation (ISIPO). The latter established their own order of cluster-building, consisting of stages of cluster-development analysis possibilities, establishing contractual relations, research, investigation, formation of development plans, and their immediate realisation.

There is a rise in the proportion of export on the world market, as there is strive for competitiveness, though Iran, occupying the 89th position in the global competitiveness index rating, is marked as a less open country than Ethiopia. As it is stated in the report at the World Economic Forum [40], openness of the country is significant for its competitiveness openness of economy contributes to the development of innovations, and markets are competitive.

As a result of the earlier studies based on the method of correlativeregressive analysis of innovative development data and subindex of cluster development of the global competitiveness index in the countries of the world in 2018, a close connection (correlation rate 0.7086 which is the evidence of a high connection according to Chaddock's scale) was revealed between the investigated factors, which proves the significance of the cluster conception in the development of innovative systems.

The Islamic state of Iran should not stay behind the transition of strategic importance, as the entire leading world economies take the innovative way of development. For that purpose, the elaboration and implementation of strategies of the innovative development of Iran should be viewed. Priorities should be given to the implementation of knowledge-based manufacturing enterprises, technologies, inflows of innovative investment, technological modernisation of the enterprises, formation on their basis of competitive innovative and territorial clusters.

The most labour intensive and important process in the cluster formation is its identification. Mapping is one of the most important methods of cluster revealing. By means of mapping, information on professional, interdisciplinary connections and clusters in the regions and the level of their development is visualized.

According to the current administrative-territorial division the Islamic Republic of Iran consists of 31 ostans, the biggest of which according to the number of population and development level are:

- Teheran: it is one of the main economic supports of the country and the biggest industrial center of Iran, where 44% of the workers of workshops of the whole country are employed and more than 50% of textile and electronic goods are produced.
- Isfahan: it hosts the largest metallurgical and petrochemical industries of the country. The stable economic growth of the ostan based on science and technology can be viewed.
- Khuzestan: it is rich in oil and petroleum, it is the locomotive of the southwest of Iran, and it takes the second place in the metallurgic development of the whole country.

It is these kinds of districts that are suitable for cluster policy development due to the concentration of different enterprises, different forms of property, personnel, transportation, and scientific research institutions. As the authors believe, the main participants of the innovative territorial clusters in the Islamic Republic of Iran are:

- state businesses, which, according to Article 44 of the Constitution of the Islamic Republic of Iran [41], include heavy industries, banking and insurance activity, infrastructure companies—the important participants of the cluster in the running and ensuring of the businesses;
- private sector, particularly small and medium-sized businesses, which is supplementary and supportive on each stage of the value chain, and is characterized by adaptability to the approbation of innovative ways;
- scientific research institutions, such as Royan and SRI of fundamental sciences under the Ministry of Science and Technology of the Islamic Republic of Iran, which is the centre of idea development;
- coordinative cluster body, which presents the active group of business-clusters development.

Assessment of the potential possibilities and the overall effect of cluster creation are considered important. There are different methods for it, for instance, the widely spread methodology of the European cluster observatory for the identification and assessment of potential clusters, and many others [42–44], which should be paid more attention to by the executive power bodies during the innovative cluster policy formation in the Islamic Republic of Iran.

# Results of Analysis of Investment Attractiveness of MENA Countries

The results of the assessment of the investment attractiveness analysis of the MENA countries adapted according to the authorial methodology are presented in Tables 2 and 3 and the figure below.

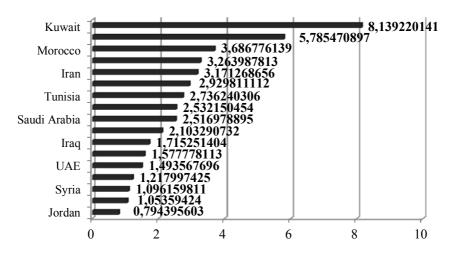


Figure 1. Index of investment attractiveness of MENA countries

Table 2. Index of investment attractiveness of MENA countries and its components (Part 1)

Indicators	Algeria	Algeria Bahrain Egypt	Egypt		Israel Jordan	Irad	Iran	Qatar Kuwait	Kuwait
	onditions	Basic conditions ratio (BC ratio)	C ratio)					,	
1 EGP	0.3750	0.5000	0.5000	0.5000	0.7500	0.5000	0.5000	0.2500	0.2500
2 Existence of oil fields	0.0053	0.0157	0.0017	0.0001	0.0000	0.1574	0.0570	0.6226	1.6126
3 Existence of natural gas	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0001	0.0033	0.0002
4 Existence of farmlands	0.1737	0.1110	0.0380	0.2460	0.1200	0.2140	0.2820	0.0578	0.0842
5 Existence of forest fund	0.0082	0.0077	0.0007	0.0189	0.0110	0.0190	0.0656	0.0000	0.0035
Basic conditions ratio	0.5622	0.6345	0.5404	0.7651	0.8810	0.8810 0.8904	0.9047	0.9338	1.9505
	ent clima	Investment climate ratio (IC ratio)	[C ratio]						
1 Expenses on research and development	0.5300	0.0010	0.0061	0.0425	0.0033	0.0004	0.0030	0.0051	0.0080
2 Gross indicator of coverage of the higher education	0.4300	0.4700	0.3400	0.6400	0.3600		0.6900	0.1500	0.3300
3 State budget expenditures on education	0.0450	0.0290	0.0440	0.0540	0.0340	0.0460	0.0360	0.0220	0.0320
4 Gross investments in fixed capital	0.2990	0.2590	0.1480	0.2030	0.2000	0.1740	0.2050		
5 Standard of living	1.8014			1.8861	-	-	2.0397		10.870
The level of development of the extracting and processing productions	0.2683	0.3363	0.2863	0.1562	7652.0	0.4377	0.3032	0.4085	0.4644
7 Privileges on taxes/rent for business	1.0	0.5	1.0	0.5	0.0	1.0	1.0	0.0	0.5
Index of covering import by export	0.6758	1.1159	0.5722	1.0608	0.6239	1.5116	1.0463	1.3690	1.0484
9 Index of attracted foreign direct investments	0.0070	0.0150	0.0310	0.0510	0.0510	-0.026	0.0110	0900'0	0.0010
Investment climate ratio	5.0564	2.7263	2.4276	4.5936	1.5319	3.1437	5.3342	1.9605	13.254
Invest	ment risk	Investment risk ratio (IR ratio)	ratio)						
Rate of the needy population with income of 3.10 US dollars									
l a day in terms of purchasing power parity in shares of total	0.0970	ı	0.4270		0.1200	0.3160	0.0110	0.0000	0.0010
2 Delet 1	0 6600	0000	0.000	0.0110	1,0000	0.000.0	0.775	1 1730	0000
Z Debt level	0.6680	0.9090	0.9900	0.8110	1.0830	0.08/0	0.7760	1.4720	0.9220
3 Unemployment rate	0.1000	0.0130	0.1210	0.0430	0.1490	0.0820	0.1310	0.0020	0.0210
4 Mortality per 1,000 live births	0.2160	1	0.1940	0.0290	0.1510	0.2590	0.1300	0.0730	0.0720

Indicators	Algeria	Bahrain	Egypt I	Israel J	Jordan	Irad	Iran	Qatar	Kuwait
5 Crime level	0.0015	0.0023		$0.0022 \mid 0$	0.0016	0.0012	0.0028	0.0004	0.0015
6 Potential/ongoing military conflicts	0	0	0	1	0	1	0	0	0
Investment risk ratio	1.0825	0.9243	1.7331	1.8852 1	1.5046	1.7452	1.0508	1.5474	1.0175
Index of investment attractiveness (Index of IA)	2.9298	1.5778	1.2180 2		0.7944	1.7153	3.1713	1.0536	8.1392
$\it Table~2.$ Index of investment attractiveness of MENA countries and its components (Part 2)	tiveness of	MENA co	untries an	d its com	ponent	s (Part 2	(		
Indicators	Lebanon	Malta	Morocco	D UAE		Oman	Saudi Arabia	Syria	Tunisia
Basic	Basic conditions ratio (BC	ratio (BC	ratio)						
1 EGP	0.2500	0.2500	0.5000	0.5000		0.3750	0.5000	0.5000	0.5000
2 Existence of oil fields	0.0000	0.0000	0.0000	0.4759		0.0193	1.1510	0.0059	0.0013
3 Existence of natural gas	0.0000	0.0000	0.0000	0.0002		0.0000	0.000.0	0.0000	0.0000
4 Existence of farmlands	0.6327	0.3291	0.6851	0.0465		0.0464	9208.0	0.7518	0.6157
5 Existence of forest fund	0.1321	0.0095	0.1259	0.0387		0.0001	0.0045	0.0265	0.0643
Basic conditions ratio	1.0148	0.5886	1.3110	1.0613		0.4408	2.4633	1.2841	1.1813
	Investment climate ratio (IC ratio)	te ratio (I	C ratio)						
1 Expenses on research and development	,	0.0060	0.0071	9600'0		0.0022	0.0082	0.0001	0900'0
2 Gross indicator of coverage of the higher education		0.4900	0.3200	1	0	0.4500	0.6700	0.3900	0.2700
3 State budget expenditures on education	0.0210	0.0470	0.0520	0.0000		0.0650	0.0720	0.0260	0.0590
4 Gross investments in fixed capital	0.2180	0.2320	0.3050	0.2300		0.3430	0.2270	ı	0.1960
5 Standard of living	2.3486	6.5603	3.3948	•	2.	2.2387	ı	ı	2.0649
Level of development of extracting and processing productions	0.1190	0.0919	0.2325	0.3486		0.4039	0.3903	0.2676	0.2035
7 Privileges on taxes/rent for business	1.0	1.0	1.0	0.5		1.0	1.0	0.0	1.0
8 Index of covering import by export	0.4903	1.1675	0.7960	1.3860		1.0667	1.1920	0.9907	0.7782
9 Index of attracted foreign direct investments	0.0480	0.2770	0.0240	0.0270		0.0410	0.0020	0.0310	0.0200
Investment climate ratio	4.2449	9.8717	6.1314	2.5012		5.6105	3.5615	1.7054	4.5976
Invest	Investment risk ratio (IR ratio)	ratio (IR	ratio						

Indicators	Lebanon	Malta	Malta Morocco	UAE	Oman	Saudi Arabia	Syria	Tunisia
Rate of the needy population with income of 3.10 US dollars a lay in terms of purchasing power parity in shares of total employment	0.0040	1	0.0820	0.0050	0.0050	0.0020 0.6250 0.0530	0.6250	0.0530
2 Debt level	2.0960	1.1730	1.0940	1.0080	0.6950	0.3910		0696.0
3 Unemployment rate	0.0630	0.0430	0.0930	0.0170	0.1600	0.0570	0.0570   0.1520   0.1520	0.1520
4 Mortality per 1,000 live births	0.0690	0.0690 0.0590		0.0660	0.0920	0.1110   0.1420   0.1170	0.1420	0.1170
5 Crime level	0.0010	0.0010 0.0013	0.0023	0.0010	0.0003	0.0019   0.0006   0.0018	9000'0	0.0018
6 Potential/ongoing military conflicts	1	0	0	0	0	0	0	0
Investment risk ratio	3.2330	1.2763	1.2713	1.0970	3.2330   1.2763   1.2713   1.0970   0.9523   0.5629   0.9196   1.2928	0.5629	0.9196	1.2928
Index of investment attractiveness (Index of IA)	2.1033	5.7855	3.6868	1.4936	2.1033   5.7855   3.6868   1.4936   3.2640   2.5170   1.0962   2.7362	2.5170	1.0962	2.7362
Source: Table 2 is made by the authors from open access materials (data belong to the last year of the period of 2014–2017 for which there is statis-	rials (data l	selong to t	he last year	of the peri	od of 2014–	2017 for w	hich there	is statis-
UCS).								

The investment attractiveness of the Islamic Republic of Iran is 3.1713, maximum level being 8.1392 (Figure 1). At the same time Iran has a rather low level of investment activity risks (1.0508) among the MENA countries under analysis.

Among the revealed negative factors of Iran, difficult climate, high children mortality rate and high level of criminality should be mentioned.

The Islamic Republic of Iran has the highest rate of people with higher education (69% of the population), high rates on oil-production, mining and processing businesses on the whole (a high proportion of land and wood funds, a favourable economic and geographical position due to the developed transportation system—railways and ports). Tax privileges for foreign investors presuppose the authorities' interest in the attraction of foreign capital into the country, which decreases unemployment and contributes to rising living standards on the whole.

#### Conclusions and Discussion

The analysis of the investment attraction of the MENA countries can be helpful in making decisions by investors and everyone concerned. The methodology of the assessment of the investment attractiveness of the territories elaborated by the authors and adapted for the MENA countries can be available due to the simplicity of its algorithm and transparency of the data basis, and it can be recommended for the assessment of the investment attractiveness of the territorial units of countries.

As a result of the research, the authors give their recommendations on the implementation and spread of innovative territorial clusters on the territories of the Islamic Republic of Iran, corresponding to the world trends of accelerating introduction and increase of economic influence of technological innovations on the world market.

### References

- 1. Porter, M.E. (2018) Clusters and the New Economics of Competition. *Harvard Business Review*. 76 (6). pp. 77–90.
  - 2. OECD. (2015) Policy Framework for Investment. Paris: OECD Publishing.
  - 3. Keynes, J.M. (1933) The Means to Prosperity. London: MacMillan and Co.
- 4. Trachenko, M.B., & Dzhioev, V.A. (2018) Express Analysis of Investment Appeal of Regions. *Finansy I Kredit Finance and Credit*. 24 (9). pp. 2151–2165. (In Russian).
- 5. Litvinova, V.V. (2013) *Investitsionnaya privlekatel'nost' i investitsionnyy klimat regiona* [Investment Attractiveness and Investment Climate of the Region]. Moscow: Financial University.
- 6. Podshivalenko, G.P. (2010) Investitsionnyy klimat i investitsionnaya privlekatel'nost' [Investment Climate and Investment Attractiveness]. *Finansovaya analitika: problemy I resheniya Financial Analytics: Problems and Solutions.* 15 (39). pp. 7–10.
- 7. Ayres, R. & Voudouris, V. (2014) The Economic Growth Enigma: Capital, Labour and Useful Energy? *Energy Policy*. 64. pp. 16–28.
- 8. Bassanini, A., & Scarpetta, S. (2001) The Driving Forces of Economic Growth: Panel Data Evidence for the OECD Countries. *OECD Economic Studies*. 33.
- 9. Boiko, P.S., Kazantseva D.A. (2016) Economic Growth and Its Factors, Parameters, Types of Economic Growth. *Aktual'nye problemy aviatsii i kosmonavtiki Actual Problems of Aviation and Cosmonautics*. 12. pp. 1134–1135. (In Russian).

- 10. OECD (2003) The Sources of Economic Growth in OECD Countries. Paris: OECD Publishing.
- 11. Vasiliev M. P. (2017) Analysis of the influence of external factors on efficiency of use of resource potential and economic growth of the region. *Vestnik VGUIT Proceedings of the Voronezh State University of Engineering Technologies*. 1 (71). pp. 422–425. (In Russian). DOI: 10.20914/2310-1202-2017-1-422-425
- 12. Yenchzhao, Lu, Pekna, T.V. & Sun Vei, (2012) Direct Investment of Chinese Enterprises in Regions of Ukraine. *Actual problems of economy.* 8. pp. 413–419.
- 13. Damborsky, M., & Rihova, G. (2009) Investment Attractiveness of the Czech Republic Regions in a Period of Economic Crisis. 3<sup>rd</sup> Central European Conference in Regional Science CERS. pp. 951–962.
- 14. Kharlamova, G. (2014). Investment Attractiveness of Ukrainian Regions: Rating Assessment and Marketing Promotion. *Journal of International Studies*. 7 (1). pp. 9–26.
- 15. Montalto, V. et al. (2017) *The Cultural and Creative Cities Monitor*. Publications Office of the European Union.
- 16. Nowicki, M. (2014) The Investment Attractiveness of the Regions and the Sub-regions of Poland. DOI: 10.13140/2.1.2752.0803
- 17. Razuvaev, V. V. (2011) Otsenka investitsionnoy privlekatel'nosti regionov Rossiyskoy Federatsii [Assessment of Investment Attractiveness of Russian Regions]. *Vestnik Permskogo universiteta. Seriya: Ekonomika Perm University Herald: Economy.* 3 (10). pp. 45–53.
- 18. Khymych, O. V. (2016) Mechanism of Planning and Regulation of Investment Operations at Meso Level. *Ekonomika: realii vremeni Economy: Realities of Time.* 4 (26). pp. 168–175.
- 19. Haletska, A.A. (2012) Scientific Approaches as for the Determination of Regulation Mechanism of Investment Operations. *Public Administration: Improvement and Development*. 2. pp. 168–175.
- 20. Bova, T.V. (2011) State Innovation and Investment Policy of Ukraine: Theory, Development Directions. Donetsk: Yuho-Vostok. (In Ukrainian)
- 21. Misikova, T. E. (2009) Gosudarstvennoe vozdeystvie na regional'nuyu investitsionnuyu deyatel'nost' [State Impact on Regional Investment Activities]. *Terra Economicus*. 2–3. pp. 248–250. (In Russian).
- 22. Gladkaya, S.V. (2013) Mekhanizmy povysheniya investitsionnoy privlekatel'nosti regiona [Mechanisms to Increase the Investment Attractiveness of the Region]. *Terra Economicus*. 4–3. pp. 226–230. (In Russian).
- 23. Pronyaeva, L. I. & Pavlova, A. V. (2016) Development of Integration Processes in the Modern Economy Based on the Creation of Clusters. *Srednerusskiy vestnik obshchestvennykh nauk Central Russian Journal of Social Sciences*. 3. pp. 137–149. (In Russian). DOI: 10.12737/20395
- 24. Etzkovitz, H., & Leydcsdorff, L. (2000) The Dynamic of Innovations: from National System and "Mode 2" to a Triple Helix of University-Industry-Government Relations Research Policy. *Research Policy*. 29. pp. 109–129.
- 25. Korableva, A.A., Karpov, V.V. & Kapoguzov, E.A. (2018) Correlation between territorial innovative clusters and sustainable development of a region. *Aktual'nye roblem ekonomiki i prava Actual Problems of Economics and Law.* 4 (48). pp. 800–815. (In Russian).
- 26. Voronov, A.S. & Leont'eva, L.S. (2016) About the Types of Regional Innovation Clusters. *Statistika i Ekonomika Statistics and Economics*. 3. pp. 8–12. (In Russian).
- 27. Brabec, E. (2001). An Evaluation of the Effectiveness of Cluster Development in the Town of Southampton, New York. *Urban Ecosystems*. 5(1). pp. 27–47.
- 28. Klepikova, N.I. (2013) The Assessment of Effectiveness of the Formation of an Industy-Based Cluster. *Fundamental'nye issledovaniya Fundamental Research.* 4. pp. 934–939. (In Russian).

- 29. Lisenko, I.V. (2012) Analysis of Clustering Processes in the Regions of Ukraine. Visnik Chernigivs'kogo derzhavnogo tekhnologichnogo universitetu Visnyk of Chernihiv State Technological University, series "Economic sciences". 4. pp. 209–217. (In Ukraimian)
- 30. Shkarlet, S.M. Ilchuk, V.P. & Lysenko, I.V. (2014) Methodological approaches to determination of economic efficiency of clusters' functioning. *Visnik Chernigivs'kogo Derzhavnogo Tekhnologichnogo Universitetu Seriya "Ekonomichni nauki" Visnyk of Chernihiv State Technological University, series "Economic sciences". 2. pp. 25–34.* (In Ukrainian)
- 31. Sölvell, Ö. (2009) Clusters. Balancing Evolutionary and Constructive Forces. Stockholm: Ivory Tower Publishers.
- 32. Sukhanova, P.A. (2017) Topical issues of research on the effectiveness of territorial development: new concepts of cluster development in Europe. *Ekonomika: vchera, segodnya, zavtra Economics: Yesterday, Today and Tomorrow.* 7 (7A). pp. 120–133. (In Russian).
- 33. Tyukavkin, N. M. (2013) Methods of estimate of effectiveness of functioning of clusters in industry. *Osnovy ekonomiki, upravleniia i prava Economy, Governance and Law Basis.* 3 (9). pp. 109–113. (In Russian).
- 34. Battalova, A.A. (2013). Assessment of the Clustering Potential of the Industry. *Vest-nik evraziyskoy nauki Bulletin of Eurasian Science*. 6 (19), pp. 1–8. (In Russian).
- 35. Belles, R. J., & Omitaomu O. A. (2014) Evaluation of Potential Locations for Siting Small Modular Reactors Near Federal Energy Clusters to Support Federal Clean Energy Goals. Tennessee: Oak Ridge National Laboratory.
- 36. Dyrdonova, A.N. (2016) Methodological Approach to Evaluation of Clustering Potential and Efficiency Improvement Management for Development of the Regional Industry Clusters. *International Journal of Economics and Financial Issues*. 6 (S1). pp. 243–248.
- 37. Shvakov, E.E. & Klepikova, N.I. (2012) Assessment of the economic entities in the creation of the cluster: A system of indicators and methodological approach to its implementation. *Mir Nauki, Kul'tury, Obrazovaniya World of Science, Culture, Education.* 6 (37). pp. 114–117. (In Russian).
- 38. Trachenko, M.B. & Gaisha, O.D. (2018) Control over Funding for Innovation Territorial Clusters in Russia. *Finansy i Kredit Finance and Credit.* 24 (8). pp. 1938–1952. (In Russian).
- 39. Organization of the Petroleum Exporting Countries. (2017) Annual Statistical Bulletin. 148.
- 40. Schwab, K. (2018) *The Global Competitiveness Report*. [Online] Available from: http://reports.weforum.org/global-competitiveness-report-2018/country-economy-profiles/#economy=IRN. (Accessed: 24.03.2020).
- 41. Embassies of the Islamic Republic of Iran in Moscow. (2019) *Constitution of the Islamic Republic of Iran*. [Online] Available from: http://www.ru.moscow.mfa.ir/index.aspx? fkeyid=&siteid=410&pageid=12686. (Accessed: 20.11.2019).
- 42. Directorate-General for Enterprise and Industry (European Commission) (2016) *Innovation Clusters in Europe: A Statistical Analysis and Overview of Current Policy Support*, 65. Publications Office of the EU.
- 43. Korchagina, I.V. (2017) Formirovanie i funktsionirovanie klasterov malykh i srednikh predpriyatiy regiona: metodika otsenki i klyuchevye tendentsii [Formation and Functioning of Clusters of Small and Medium-Sized Enterprises in the Region: Methods of Assessment and Key Trends]. *Regional'nye roblem preobrazovaniya ekonomiki*. 3 (77), pp. 53–59.
- 44. Mantaeva, E.I. & Mancaeva, A.A. (2017) Algorithm for Identifying the Prospects of Creating a Regional Economic Cluster. *Vestnik Volgogradskogo Gosudarstvennogo Universiteta. Seriya 3: Ekonomika, Ekologiya Bulletin of Volgograd State University. Series 3: Economics, Ecology.* 3 (40). pp. 109–118. (In Russian).

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# «КЛАСТЕРИЗАЦИЯ КАК ФАКТОР ПОВЫШЕНИЯ ИНВЕСТИЦИОННОЙ ПРИВЛЕКАТЕЛЬНОСТИ ИСЛАМСКОЙ РЕСПУБЛИКИ ИРАН»

Инвестиционная политика является прочной основой формирования и развития национальной экономики – она направлена на создание новых рабочих мест, осуществление структурных изменений в отраслях промышленности и иных сфер хозяйствования на основе внедрения новой техники и технологий, привлечения различных форм капитала. Целью настоящей работы является адаптация разработанной ранее авторской методики проведения экспресс-анализа инвестиционной привлекательности регионов для проведения анализа инвестиционной привлекательности стран Ближнего Востока и Северной Африки (БВСА), а также распространении международного опыта кластеризации в сфере инновационной деятельности. В рамках настоящего исследования был проведен анализ стран БВСА и выявлены преимущества и недостатки стран. Анализ инвестиционной привлекательности стран БВСА может быть полезен при принятии решений инвесторами, правительствами и всеми заинтересованными сторонами. Опыт таких развитых стран как США, Япония, Германия и Франция демонстрирует применение кластерной концепции как эффективного инструмента, способствующего повышению конкурентоспособности как отдельных регионов базирования кластеров, так и страны в целом, развитию предпринимательства и инноваций. В результате исследования авторами предложены мероприятия по внедрению и распространению инновационных кластеров на территории Исламской Республики Иран, соответствующие мировым тенденциям ускорения внедрения и усиления экономического влияния технологических инноваций на мировой рынок. В рамках настоящего исследования использовались методы библиографического и логического анализа, а также синтез и системный подход.

Ключевые слова: инвестиции, инвестиционная привлекательность, инвестиционный климат, индекс инвестиционной привлекательности, анализ инвестиционной привлекательности, кластер, промышленный кластер, инновационный кластер.