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INDICATORS AND CRITERIA FOR ASSESSING THE ATTRACTIVENESS OF THE INVESTMENT ENVIRONMENT IN SPECIAL ECONOMIC ZONES

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ABSTRACT

This article presents the results of our research on indicators and criteria for assessing the attractiveness of the investment environment in special economic zones. From the research we conducted, we found that when determining the attractiveness of the investment environment in special economic zones, it is advisable to first turn to indicators for determining the attractiveness of the investment environment.

KEYWORDS: special economic zone, cross-border trade and economic relations, integration, investment attractiveness, infrastructure, logistics, competitiveness, labor productivity, operational center, taxes, tax incentives, budget, state real estate, investment risk, economic risk, financial risk, crime risk, stationary sources, IPI index, GRP, ICOR coefficient, investment efficiency.

INTRODUCTION

Special economic zones, established not only to deepen the integration of cross-border trade and economic relations between the countries, have recently become one of the important tools for attracting investments, primarily foreign direct investment, to the regional economy. In this regard, it is urgent to increase the investment climate of special economic zones. At this point, we consider it appropriate to consider scientific and theoretical approaches to the category of "investment climate attractiveness" in this context.

Methods. According to the methodological approaches of the Ministry of Investments, Industry and Trade of the Republic of Uzbekistan, it is proposed to use the following important indicators to determine the attractiveness of the investment environment.

Table 1 The system of indicators for determining the attractiveness of the investment climate [1]

№	Indicator groups	Indicators and their functions
1. Indicators of investment potential		
Task: formation of static analytical information on the results of the assessment of the rating of the attractiveness of the investment environment of the regions		
1.1.	Labor resources	- Economically active population (growth rate,%); - unemployment rate (growth rate,%); - share of workers with higher education from the total number of employees in all types of economic activity, %; - average salary per month; - labor productivity by sectors.
1.2.	Land and natural resources	- distribution of irrigated agricultural land in the region;

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		- distribution of land for industry, transport, communication, defense and other purposes; - availability of mineral resources; - availability of fuel and energy resources.
1.3.	Financial resources and incentives through them	- volume of involved investments; - size of deposits; - volume of loans; - development of commercial banks; - The share of tax support (privileges) for small business entities in the total tax revenues of budget revenues (excluding personal taxes and Republic revenues).
1.4.	Technological and innovative resources	- the share of enterprises and organizations producing innovative products, providing work and services in the total number of enterprises operating in the region, %; - the volume of products, work and services of enterprises and organizations producing innovative products; - the share of workers engaged in research and development activities in the total number of the economically active population of the region, %; - the share of IT graduates in the total number of the economically active population, % - the share of research and development expenditures in the total volume of GRP, %.
1.5.	Infrastructure	- trade and logistics potential; - mobile communication - the number of subscribers of mobile cellular communication networks; - the number of subscribers connected to the Internet; - availability and quality of communal services; - state real estate and land plots; - existence and development of infrastructure networks in free and small economic zones; - the ratio of roads in need of repair to general roads and repaired roads.
1.6.	Competitiveness	- GDP per capita (growth rate, %); - the share of small entrepreneurship (business) in the economy, % of GDP; - the number of micro and small enterprises; - demographics of the enterprise; - Share of foreign trade in GDP, %; - the number of exporting enterprises and organizations per 1000 operating enterprises; - the number of importing enterprises and organizations per 1000 operating enterprises.
2. Performance management group indicators		

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2.1.	Regulatory environment	- efficiency of property rights registration procedures; - efficiency of cadastral registration procedures; - efficiency of construction permit procedures; - efficiency of licensing and certification procedures; - efficiency of procedures for connecting to utilities (electricity networks); - efficiency of procedures for connecting to utilities (gas supply); - efficiency of procedures for connecting to utilities (water supply); - efficiency of procedures for connecting to utilities (water drainage and sewage).
2.2.	Availability of institutions and organizations for doing business	- effectiveness of institutions providing business security; - administrative pressure on entrepreneurship; - effectiveness of coordination and organizational mechanisms of business support.
2.3.	Infrastructure and resources	- infrastructure quality; - adequacy and quality of financial support.

The methodology for calculating some of these indicators is implemented as follows:

1. The share of workers with higher education from the total number of employees in all types of economic activity is calculated by the following formula:

$$\boldsymbol{E_{sh}} = \frac{\mathbf{Ks.v}}{\mathbf{Ks.}} * 100$$

where: $K_{s.v}$ - number of employees with higher education, $K_{s.}$ - the number of employees in this field, $\boldsymbol{E_{sh}}$ - share of employees with higher education from the total number.

2. The labor productivity of networks is calculated by the following formula:

$$\mathbf{P}\boldsymbol{td} = \frac{\mathbf{OPc}}{\mathbf{Ks.s}} * 100$$

where: OP_c - production volume in industries, in soums, $K_{s.s}$ - the number of employees in a certain field, P_{td} - labor productivity by sector.

3. The development of commercial banks is calculated by the following formula:

$$\mathbf{B} = \frac{\mathbf{B}\boldsymbol{f}\mathbf{.m}}{10\ 000}$$

where: $B_{f.m}$ - number of commercial banks, including branches, mini-banks, operational centers, B - Commercial banks serving 1000 people, including the number of ATMs, operating centers, 10 000 - person.

4. The share of tax support (privileges) of small business entities in the total tax revenues of budget revenues (excluding personal taxes and Republic revenues) is calculated by the following formula:

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$$\mathbf{Dn.l.} = \frac{\mathbf{Nl.g}}{\mathrm{Os.np}} * 100$$

where: $D_{n.l.}$ - the share of tax support (privileges) of small business entities in the total tax revenues coming to the budget (excluding personal taxes and republican revenues), $N_{l.g}$ - the total amount of tax credits provided to small business entities, $O_{s.np}$ - the total amount of tax revenues to the budget (excluding personal and republican incomes).

5. Trade and logistics potential is calculated using the following formula:

$$\mathbf{Lc.dp} = \frac{\mathbf{L.c}}{\mathrm{Dp.r.}} * 1000$$

where: $L_{c.}$ – number of logistics centers, $D_{p.r.}$ – the total number of enterprises and organizations operating in the area, $L_{c.dp}$ - number of logistics centers per 1000 enterprises.

$$\mathbf{Dp.c} = \frac{\mathbf{Pc.}}{\mathrm{OPl.c}} * 100$$

where: $P_{c.}$ – general area intended for storage (storage), $Op_{l.c.}$ – The total area of logistics centers, $D_{p.c}$ - the share of the area allocated for storage/storage from the total area of logistics centers.

$$\mathbf{Dp.t} = \frac{\mathbf{Sk.}}{\mathrm{Dp.r.}} * 1000$$

where: $S_{к.}$ – number of warehouses of all types, $D_{p.r.}$ - the number of enterprises and organizations operating in the region, $D_{p.t}$ - 1000 number of warehouses per operating company.

6. The indicator for state real estate and land plots is calculated using the following formula:

$$\mathbf{Dp.ng} = \frac{\mathbf{Pn.o}}{\mathrm{O.g.n.}} * 1000$$

where: $P_{n.o}$ - vacant real estate space, $O_{g.n.}$ - total area of state real estate (excluding MIZ and KSZ), $D_{p.ng}$ - share of free space of real estate objects from the total area of state real estate objects.

$$\mathbf{Dg.zu.} = \frac{\mathbf{P\ s.zu}}{\mathrm{P\ g.zu}} * 1000$$

where: $P_{s.zu.}$ - area of vacant land plots, hectare, $P_{g.zu.}$ - total area of state land plots (excluding MIZ and KSZ), $D_{g.zu}$ - share of free land plots from the total area of state land plots, coefficient.

N.Yu.Trifonov and N.N.Murashkolar present the following approaches and methods for assessing the attractiveness of the investment environment:

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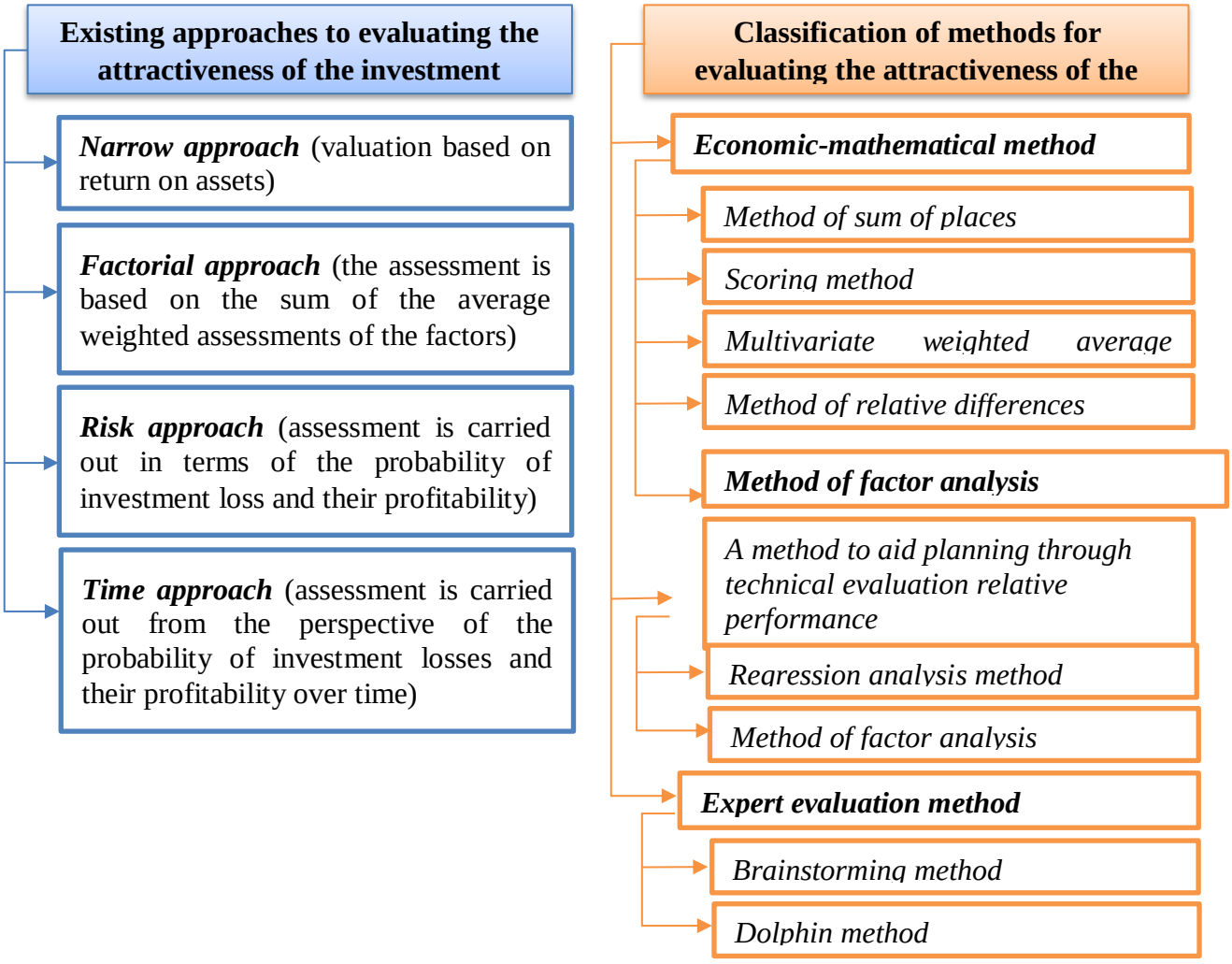

Figure 1. Approaches and methods for assessing the attractiveness of the investment environment [2]

Also, unlike others, the researchers proposed to include investment risk calculation indicators as indicators of attractiveness of the investment environment when evaluating the attractiveness of the investment environment.

Table 2 Indicators for evaluating the attractiveness of the investment climate [2]

№	Indicator grouping	Indicator name
1.	Economic risk	- consumer price index for goods (December compared to December of the previous year),%; - consumer price index for services (December compared to December of the previous year),%; - registered unemployment rate, as a percentage of the economically active population;

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		- accumulated depreciation share of the initial value of fixed assets (at the end of the year).
2.	Financial risk	- regional budget deficit, billion rubles; - share of overdue receivables in the total amount; - the share of overdue creditor debts in the total amount of creditor debts; - the share of loss-making organizations in the total number of studied organizations.
3.	Social risk	- the share of the population whose level of available resources is lower than the budget necessary for subsistence, as a percentage of the total population; - the demographic burden on the working-age population, as a percentage of the disabled population per 1,000 people of working age; - the ratio of the average level of disposable resources of the most deprived 20% of households to the least deprived 20% of households, times.
4.	Risk of crime	- the number of registered crimes per 100,000 inhabitants.
5.	Environmental risk	- release of pollutants into the atmosphere from stationary sources, thousand tons; - discharge of wastewater into surface water bodies, million m^3.

Results. We believe that it is important to use indices for assessing the effectiveness of attracting and using investments at the regional level in assessing the attractiveness of the investment environment in special economic zones. The indicators for these indices are as follows:

1. Foreign Investment Attraction Performance Index (IPI). The index is calculated by the ratio of the region's investment share in the total volume of investments to the republic to the region's GNI share in the country's GDP:

$$IPI_i = \frac{Inv_i / Inv_t}{GRP_i / GDP}$$

where: Inv_i – investment in area i , Inv_t - total investment made at the level of the republic, GRP_i - gross regional product of the region, GDP - country's gross domestic product.

"The index value of 1 is considered the most favorable and indicates that the investment attraction policy for the sustainable development of the region is well-established, and there are no destabilizing circumstances. An IPI index value above 1 means that the volume of investment attraction in the region exceeds its contribution to the formation of the country's gross domestic product. This can be explained by the presence of high income potential or technological advantages, locational features (in combination with other favorable factors), the end of a political or economic crisis, mass privatization or a sharp increase in investor interest in the region (discovery of new mineral deposits, etc.), and other factors. A value below 1 means that the share of investments in the region is lower than expected in terms of its contribution to the formation of the country's gross domestic product. This situation can be caused by a number of factors, such as unstable development, poorly developed or implemented investment policy, and low competitiveness of the region" [3].

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2. Index of investment efficiency (IEI). By calculating this index, it becomes possible to assess the positive impact of the attracted investments on the growth of the region's macroeconomic indicators. These index indicators are calculated using the following formula:

$$IEI_t = \frac{y_t}{d_{t-1}}$$

where: y_t - GRP growth rate in year t, d_{t-1} – Share of investments in GNP in year t-1.

Also, many economists consider the attractiveness of the investment environment in special economic zones and the efficiency of these industrial zones to be the following important indicators. These indicators include:

- the number of residents in special economic zones, including the number of foreign residents;

- the number of jobs, including the number of jobs created by residents in the territory of special industrial zones;

- the volume of investments made by participants in the special economic zone;

- the volume of production, including the volume of goods produced and services provided subject to VAT;

- the volume of taxes paid by participants in the special economic zone;

- the volume of customs duties paid, including the volume of customs privileges used;

- the development of infrastructure in the territory of the special economic zone;

- the share of the territorial entity in which the territory of the special economic zone is located in relation to the number of able-bodied population;

- the share of income from production by participants of the special economic zone in the volume of GRP.

In our opinion, all of the above indicators do not fully reflect the effectiveness of the activities of the special economic zone and the attractiveness of the investment environment in it.

Also, studies conducted by the republican economists-scientists: Kh. Juraev and O. Alirov, it was proposed to use the following indicators reflecting the attractiveness of the investment environment. It is separately noted that these indicators are not regulated:

Table 3 Indicators of investment climate attractiveness [5]

№	Index name	Unit of measurement
	The density of railways per thousand square kilometers of territory	kilometer
	Density of paved highways per thousand square kilometers	kilometer
	The population per 100 families is provided with a public access network or home telephone equipment with access to it.	piece
	The cost of fixed assets in transport	sum
	The cost of fixed assets in the industry	sum

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	The cost of fixed assets in construction	sum
	Presence of large transport networks (airports, river ports) of state importance in the region	Yes/No
	Retail turnover volume	sum
	Average monthly salary	sum
	Consumption expenditure per capita	sum
	Consumer goods index compared to last year	percentage
	The total volume of industrial production, soums.	sum
	The share of fuel industry products in the total volume of industrial products	percentage
	Total land area	km^2
	The share of agricultural land in the total land area	
	The share of forest fund lands in the total land area	
	Limit of water ditches	m^3
	Land use fees	sum
	Rent for use of forest land and forest fund	sum
	Payments related to the use of water bodies	sum
	GDP volume by region	sum
	Economically active population	person
	Capital investments in estimates	sum
	Percentage of population with higher education	
	The number of unemployed registered in the employment service offices	person
	Economically active population	person
	Total loans to the public economy	sum
	Long-term credit investments	sum
	The total amount of chartered funds of commercial banks	sum
	Deposits balances in commercial banks	sum
	Profits/losses received by enterprises from all types of economic activity	sum
	The volume of foreign investments	USD
	Capital investments at actual prices	sum
	Number of registered crimes per thousand people	person
	All available population	person
	The share of unemployed, job-seeking citizens in the total population	
	The weight of families in persistent poverty	
	Arrears for payment of wages	sum
	Number of loss-making enterprises	piece
	Index of the volume of money emission	in percentage compared to the previous year
	Total debt on bank loans	sum

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	Arrears on bank loans	sum
	Accounts Payable	sum
	Accounts Receivable	sum
	Polluted sewage discharges	For km^2 million m^3.
	Generation of toxic waste	t.
	Utilization of toxic waste	t.
	The actual volume of pollutants emitted into the atmosphere from stationary sources	t.
	The permitted emissions of pollutants into the atmosphere from stationary sources	t.
	Area of the region	km^2

It should be noted that the above system of indicators is somewhat complete. However, from the point of view of a special economic zone, it is not always convenient to calculate them, in our opinion. We also note that they do not fully reflect the specific characteristics of a special economic zone.

However, the "macroeconomic indicators of investment propensity in free economic zones" listed in the above criteria do not always reflect the attractiveness of the investment environment in special economic zones. We believe that analyzing regional indicators would also be effective in this regard.

We also emphasize that it is appropriate to include the investment efficiency indicator among the indicators of investment attractiveness in special economic zones. That is, we consider it appropriate to modify the ICOR (Incremental Capital-Output Ratio) index, which is widely used in world practice - an indicator of the efficiency of investments attracted to a certain region or an index expressing the capital intensity of GDP/GRP growth, as an indicator of the efficiency of investments made in special economic zones.

The basic formula of this index is expressed as follows:

$$ICOR = \frac{\frac{I}{GRP} * 100\%}{\Delta GRP\ \%}$$

where: I – the amount of investment in fixed capital; GRP – gross regional product; ΔGRP% – growth rate of the volume of gross regional product, in percent.

As a normative criterion, it can be said that the lower the ICOR index, the higher the efficiency of the attracted investments in economic growth on a regional scale. In this case, "the importance of investments in the economic growth of the region is high, each unit of investment absorbed allows creating a higher volume of output than the previous one. This implies that in the current situation, it is necessary to further strengthen the attraction of investments to the economy. The higher the ICOR index, the lower the efficiency of using investments in the economic growth of the region. This indicates the low importance of investments in the economic growth of the region, indicating that the absorbed foreign investments and economic growth are not coordinated" [6].

Discussion. Based on the above, we propose to express the formula for modifying the ICOR index as an indicator of the efficiency of investments attracted in special economic zones as follows:

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$$ICOR_{sez} = \frac{\frac{I}{GPV_{sez}} * 100\%}{\Delta GPV\ \%}$$

where:

I – investment volume in the special economic zone;

GPV – the volume of gross production in the special economic zone;

ΔGPV% – the rate of growth of gross production volume in the special economic zone, in percent.

This modified indicator is significant in that it allows you to measure the efficiency of investments made in a special economic zone. Based on the normative criterion of the classical formula, it can be said that the smaller the index, the higher the efficiency of investments attracted to the special economic zone. On the contrary, a relatively high index indicates efficiency.

Based on the scientific views considered in this paragraph of the dissertation, we propose the following as indicators for assessing the attractiveness of the investment environment in special economic zones. The assessment of these indicators allows not only to comprehensively express the attractiveness of the investment environment in these industrial zones, but also to assess the efficiency of the activities of the special economic zone.

Table 4 Indicators for assessing the attractiveness of the investment environment in a special economic zone (SEZ) [1,8]

EXTERNAL MACRO INDICATOR BLOCK		**INTERNAL MICRO INDICATOR BLOCK**	
№	**Index name**	**№**	**Index name**
1.	GDP volume and its (increase/decrease) trend,%	1.	Number of residents in SEZ, pcs
2.	Annual inflation rate, percent	2.	SEZ territory, and its convenient geographical location
3.	Exchange rate and exchange liberalization	3.	Availability of ready-made empty industrial buildings in the territory of the SEZ (in number)
4.	Number and territorial distribution of working age population	4.	Gross production volume in SEZ, billion soum
5.	Rule of law: the level of protection of investors' rights and interests	5.	The volume of gross capital investment in SEZ, million USD
6.	Business environment index indicator	6.	Export volume of SEZ, mln. wardrobe
7.	Regional GNI volume, mlpd. soum	7.	The number of work completed in SEZ
8.	The volume of gross capital investment in the region's economy, mln. USD	8.	The number of projects implemented in cooperation with private investment in SEZ
9.	Export volume of the province, mln. USD.	9.1.	Indicators of infrastructure provision:

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<table>
<tr><td>10.</td><td colspan="2">The work completed in the province is a total number</td><td rowspan="2">9.2.</td><td colspan="2" rowspan="2">Availability and continuity of electricity:
- connected to the industrial zone in general;
- provided for each business entity within the industrial zone;</td></tr>
<tr><td>11.</td><td colspan="2">The number of projects implemented in the province in cooperation with public investment</td></tr>
<tr><td rowspan="3">12.</td><td colspan="2" rowspan="3">Financial resources:
- activity and quality of service of commercial banks;
- availability of foreign credit lines;
- bank credit interest rates;
- availability and quality of alternative financing services;</td><td>9.3</td><td>Provision of roads and internal highways</td><td>- complete;</td></tr>
<tr><td>9.4.</td><td>Laying of gas pipelines and continuous supply</td><td>- partially;</td></tr>
<tr><td>9.5.</td><td>Level of Internet coverage and quality of service (good, average, poor)</td><td>- not provided.</td></tr>
<tr><td rowspan="2">13.</td><td rowspan="2">The level of intervention in the management of SEZ at the national and local levels</td><td>- active;</td><td>9.6.</td><td colspan="2">Availability of a railway network.</td></tr>
<tr><td>- inactive;</td><td>10.</td><td colspan="2">Implementation of preferential regime:</td></tr>
<tr><td rowspan="4">14.</td><td colspan="2" rowspan="4">The pace of change in the legislation on the field and the benefits granted</td><td>- In 1-3 years</td><td rowspan="2">10.1.</td><td rowspan="2">Existence and validity of tax and customs benefits</td><td>- time factor</td></tr>
<tr><td>- In 3-5 years</td><td>- area factor</td></tr>
<tr><td rowspan="2">- In 5-10 years</td><td>11.</td><td colspan="2">Simplified registration of participants.</td></tr>
<tr><td>12.</td><td colspan="2">Marketing in SEZs (website, marketing service)</td></tr>
<tr><td rowspan="3">13.</td><td rowspan="3">The procedure for allocating land and buildings to residents in SEZ</td><td>- centralized;</td></tr>
<tr><td>- at auction;</td></tr>
<tr><td>- directorates;</td></tr>
</table>

In conclusion, it can be said that indicators of the attractiveness of the investment environment in special economic zones are important as a measurement mechanism that allows to further increase the attractiveness of the investment environment. The reason is that through the systematic analysis of these indicators, it becomes possible to take urgent measures to actively attract investments.

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