

Differential Approach to Assessing Investment Potential

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Abstract—The article outlines foreign and domestic approaches to the study of investments, as a result the authors define the investment potential, which implies a combination of resources and factors that, if properly ordered, will attract additional sources of financing for the development of the territory. The authors analyzed the investment potential of the Kurgan region, on the basis of which a differential approach to its assessment was proposed. The essence of the approach is to carry out gradations at the meso, macro and micro levels. A model for assessing investment potential is proposed for each level of a business entity. The model includes the influence of such indicators as: gross domestic and regional product, output, budget deficit, taxes, investments and subsidies. The proposed approach is of practical importance for the development strategy, both of a separate business entity, and for the region as a whole.

Keywords—investment potential, region, economy, capital, differentiation, model, indicators.

I. INTRODUCTION

At all times during the existence of the economy, a huge role is played by investments, which positively affect the development of both the regions and the country as a whole. Undoubtedly, the role of investments is high and requires a more careful approach, so it is necessary to highlight the main elements related to investments. The most significant economic component of the territory is considered to be investment potential. It should be noted that today the applied methodology for assessing the effectiveness of investments is quite outdated, the latest version was reviewed in 1999, which indicates the need to improve the approach to evaluating investment projects, and, consequently, the potential of the territory.

II. LITERATURE REVIEW

Investment potential is an integral part of the investment attractiveness of the territory, therefore, first of all, it is necessary to consider the opinions of the authors regarding this term.

Modern authors consider investment attractiveness to be an assessment of the efficiency of using their own and borrowed funds, as well as an analysis of the financial condition and financial stability, which to their greatest degree characterize the effectiveness of investment [1-3].

A significant impact on investment attractiveness is exerted by investment potential, which depends on internal

and external factors, which confirms the relevance of the selected study and investment risk, implying a combination of variable investment risk factors depending on operating conditions [4-6].

Kalugina N.K. interprets the region's investment potential (investment capacity) as the ability of all economic resources at the disposal of the region to ensure the maintenance of a favorable investment climate and the implementation of investment activities based on the socio-economic policy of the region [7]. This author suggests evaluating investment potential as a combination of consumer, financial, labor, resource and raw materials, innovation, infrastructure, tourism, production and institutional potentials. Methods of Kalugina N.K. have difficulties in calculations, and that reduces its use in practice.

Having studied the opinions of Russian and foreign scientific economists on the concept of "investment potential" [8-10], it can be noted that this term implies a combination of resources (financial, material, intellectual, etc.) and factors (natural, territorial, social and economic, demographic, ethnic and political), which, if properly ordered, will attract additional sources of financing for the development of the territory.

III. RESEARCH METHODOLOGY

The indicators characterizing the investment potential depend on factors that differ from each other in the level of impact on investment activity. Potential investors, choosing the investment object, apply ratings and techniques. When studying the subject of research, the analysis is reduced mainly to the basic indicators of the effectiveness of investment projects and programs (payback period, net present value, internal rate of return, profitability index).

Assessment of the investment potential of the region includes two main points:

- analysis of investments in the region itself. At this stage, the existing regulatory framework, legal aspects, the political situation, the degree of protection of investor rights, the level of taxation, etc. are analyzed.
- degree of investment in specific investment objects. At this stage, the economic condition of industries, enterprises and other business entities is analyzed.

For a more detailed assessment of investment potential, a vertical differentiation of the object of study should be carried out (Figure 1).

The concept of investment potential is inextricably linked with other general terms related to the field of investment activity, such as the economic component of the entity and investment risk. Based on this, the authors propose to evaluate the investment potential of the object of study in two main elements (Formula 1).

$$I_p = D_i \times R \quad (1)$$

where I_p is the level of investment potential, as a coefficient; D_i is the net result of the investee, in fractions of a unit; R is the investment risk level, as a coefficient.

The net result of the investee is the ratio of return on investment to invested funds.

Objects of research depending on the value of the indicator of investment potential are classified as follows:

- $I_p > 0.65$ – high level;
- $0.65 < I_p < 0.35$ – average level;
- $I_p < 0.35$ – low level.

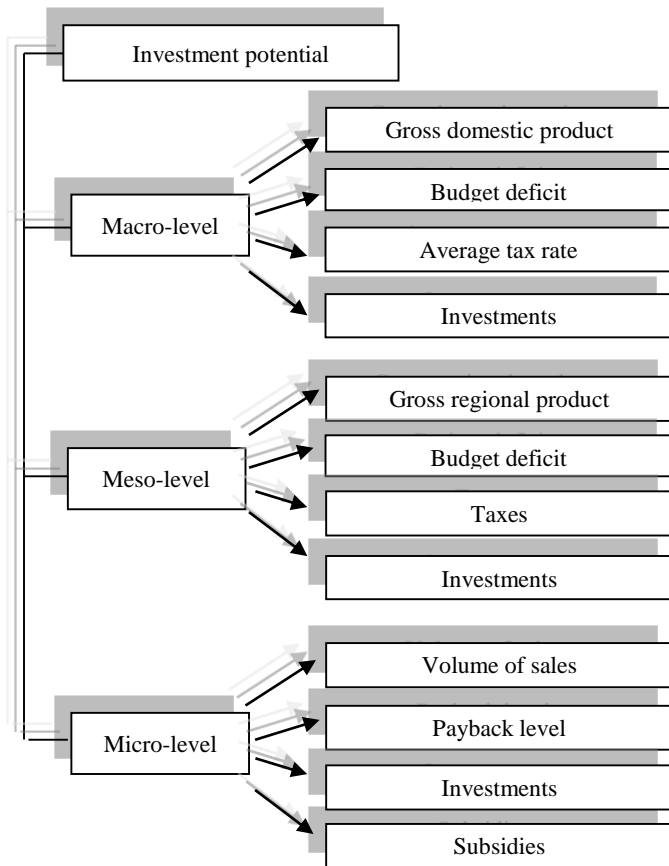


Fig. 1. Investment potential indicators

The essence of the proposed differential approach is in assessing the impact of investment potential indicators at each level.

The net result of the investment object at the macro level:

$$D_i = (VVP \times (1 - D) \times (1 - T) - I) \div I, \quad (2)$$

where VVP is the gross domestic product; D is the budget deficit, in fractions of a unit; T is the average tax rate; I is the volume of investment.

The net result of the investment object at the meso level:

$$D_i = (VRP \times (1 - D) \times (1 - T) - I) \div I, \quad (3)$$

where VRP is the gross regional product; D is the budget deficit, in fractions of a unit; T is the average tax rate; I is the volume of investment.

The net result of the investment object at the micro level:

$$D_i = (RP \times (1 - Y) \times (1 - T) - I) \div I, \quad (4)$$

where RP is the cost of sales; Y is the level of cost recovery; S is the level of subsidies; I is the volume of investment.

Table I conducts testing of the proposed methodology at the meso level on the example of the Kurgan region.

TABLE I. INDICATORS OF THE ECONOMIC COMPONENT OF THE INVESTMENT OBJECT OF THE REGION

Indicator	2016	2017	2018	Deviation of 2018 from 2016 (+;-)
Gross regional product, million rubles	168961.1	179711.8	193895.1	24934
Consolidated budget revenues, million rubles	37794.23	38115.4	39783.4	1989.17
Consolidated budget expenses, million rubles	40690.8	41536.1	42036	1345.2
Budget deficit, million rubles	2844	2562	2253	-591
Budget deficit, share	0.01	0.01	0.01	0
Average tax rate, coefficient	2.14	3.15	3.15	1.01
Volume of investments, billion rubles	27842	29254	22396	-5446
D_i	5.84	12.075	17.4	11.56

The favorable geographical position, together with the availability of developed industrial and agricultural infrastructure, as well as the created conditions for investment activity, are the main factors determining the investment potential of the region. It is also important to consider not only favorable conditions, but also the impact of risks.

Risk should be understood as the probability of non-fulfillment of tasks at the macro and meso level and the possibility of loss or loss of profit at the micro level. The risk component, allowing to evaluate the level of the aggregate indicator, is calculated by the following formula:

$$R = \frac{\sum_{i=1}^n P_i \times J_i}{\sum_{i=1}^n J_i} \quad (5)$$

where n is the number of indicators; P_i is the characteristic of the indicator; J_i is the burden of the indicator.

IV. RESULTS

In 2018, 22,396 billion rubles were invested in fixed assets of the Kurgan region, which amounted to 0.76% compared to 2017. In the period 2016-2017 there was a steady increase in the regional volume indicator. The average annual growth rate of investments in the region for 2016-2018 amounted to 1.05% (Table II).

TABLE II. INITIAL DATA FOR CALCULATING THE RISK COMPONENT OF THE INVESTMENT ATTRACTIVENESS OF THE REGION

Indicator	2016	2017	2018	Deviation of 2018 from 2016 (+;-)
Investments in fixed assets, billion rubles	27842	29254	22396	-5446
Investments in fixed assets of Russia, billion rubles	13897188	14748847	15966804	2069616
Growth rate of investments in fixed assets, coefficient	1.25	1.05	0.76	-0.49
Share of investments in fixed assets in the country's investments as a whole, coefficient	0.2	0.19	0.14	-0.06
Investments in fixed assets per capita, rubles	32156	34095	26354	-5802
Share of investment in fixed capital of country's enterprises-residents, coefficient	0.12	0.11	0.094	-0.026
Total enterprises and organizations, units	17683	16660	15167	0
Organizations' income in total, million rubles	164.1	178.9	183.4	-2516
Income per organization, thousand rubles	0.00928	0.010738	0.012092	19.3
Growth rate of income per organization, coefficient.	1.111454	1.157131	1.126067	0.002812
Commissioning of fixed assets, million rubles	23605	25421	17074	0.014613
Accounted for fixed assets launched per organization, million rubles	1.33	1.53	1.13	-6531
Growth rate of activated fixed assets, coefficient	0.94	1.08	0.67	-0.2

Weighting factors for risk factors of the investment potential are presented in Figure 2.

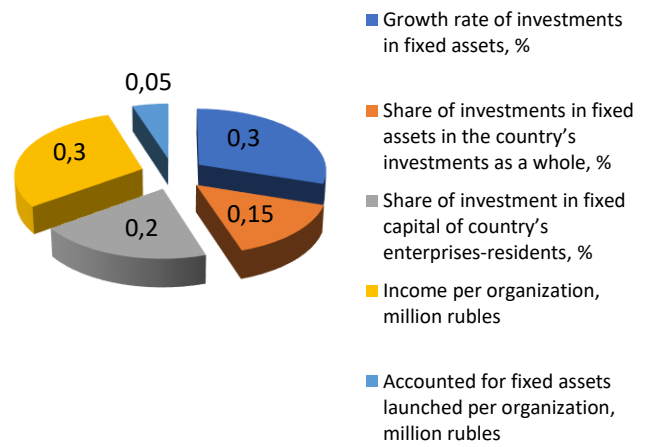


Fig. 2. Significance of ratios of the risk component of the investment potential, as coefficients

It should be noted that, according to the authors, the largest share falls on the growth rate of investments in fixed assets in the investments of the country as a whole (0.3) and income per organization (0.3). The least impact is exerted on fixed assets (0.05). The combination of coefficients gives a total of unity [11].

TABLE III. CALCULATION OF THE RISK COMPONENT OF THE REGIONAL INVESTMENT POTENTIAL

Indicator	P×J			Deviation of 2018 from 2016 (+;-)
	2016	2017	2018	
Growth rate of investments in fixed assets, coefficient	1.25	1.05	0.76	-0.49
Share of investments in fixed assets in the country's investments as a whole, coefficient	0.2	0.19	0.14	-0.06
Share of investment in fixed capital of country's enterprises-residents, coefficient	0.12	0.11	0.094	-0.026
Growth rate of income per organization, coefficient	1.111454	1.157131	1.126067	0.002812
Growth rate of activated fixed assets, coefficient	0.94	1.08	0.67	-0.2
In total	3.62	3.59	2.79	-0.83
R	0.06	0.02	0.02	-0.04

Consequently, the level of investment potential of the region amounted to (Table III):

- $I_{p\ 2018} = 5.84 \times 0.06 = 0.4$
- $I_{p\ 2017} = 12.075 \times 0.02 = 0.3$
- $I_{p\ 2016} = 17.4 \times 0.02 = 0.4$

V. CONCLUSION

According to the proposed methodology, the region had a low level of investment potential only in 2017; in 2018 the situation improved and this indicator increased to 0.4, which indicates an average level of investment. This was facilitated by the strengthening of the work of the Fund "Investment Agency of the Kurgan Region".

Fund Investment Agency of the Kurgan Region was established in November 2018. The agency performs the task of supporting investment projects, supporting and developing entrepreneurship in the Kurgan region. Over the past year, the Fund provided support to 15,000 entrepreneurs, and 171 projects were supported.

The Kurgan region has a level of investment potential, and this, in turn, will attract investors and increase the socio-economic development of the region. Based on the proposed approach, it is possible to determine the effectiveness of the implementation of existing programs, as well as make certain adjustments to their content by setting priority areas [12-15].

Hence, the proposed methodology provides an assessment of the investment potential of the research object based on indicators of the corresponding level. This approach is of practical importance both at the regional level and for business entities.

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