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INVESTMENT TOOLKIT DEVELOPMENT FOR ESTIMATION OF ENTERPRISES INNOVATIVE ACTIVITY EFFICIENCY

The article purpose is the development of the complex toolkit for investment estimation of enterprises' innovative activity efficiency. Methods of comparative analysis, a statistical method and also econometrical methods were used in the course of the research. The algorithm of the estimation of regions' investment and innovative attractiveness is developed. An algorithm of the efficiency estimation for budgetary investments is designed for the realization of innovative activity by enterprises, allowing to carry out the comparative analysis of federal districts, regions, municipal unions on their provision by the innovatively active enterprises, budgetary financial provision of enterprises' innovative activity and innovative production provision. The methodology of the credit rate updating for financing enterprises innovative activity is created, allowing tracking the dependence of credit interest rate from the adapted indicators of the analysis of the profit and the profitability from innovative activity.

Keywords: *innovative activity of enterprises; innovative and investment policy; investment toolkit.*
JEL: O30.

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РОЗРОБКА ІНВЕСТИЦІЙНОГО ІНСТРУМЕНТАРІЮ ДЛЯ ОЦІНЮВАННЯ ЕФЕКТИВНОСТІ ІННОВАЦІЙНОЇ ДІЯЛЬНОСТІ ПІДПРИЄМСТВ

У статті розроблено комплексний інструментарій для оцінювання ефективності інвестування інноваційної діяльності підприємств, а також представлено алгоритм оцінювання інвестиційно-інноваційної привабливості регіонів, що дозволяє класифікувати території за рівнем інвестиційного та інноваційного потенціалів з урахуванням виявлених інвестиційних та інноваційних ризиків, а в подальшому буде сприяти розробці інвестиційно-інноваційної політики на основі виявлених особливостей регіонів. Запропоновано алгоритм оцінювання ефективності бюджетних витрат на інноваційну діяльність підприємств, що дозволяє провести порівняльний аналіз федеральних округів, регіонів та муніципальних утворень за рівнем їх забезпеченості інноваційно активними підприємствами, за бюджетною фінансовою забезпеченістю інноваційної діяльності підприємств та забезпеченістю інноваційною продукцією. Розроблено методику корегування кредитної ставки для фінансування інноваційної діяльності підприємств, яка дозволяє простежити залежність процентної ставки за кредитом від адаптованих показників аналізу прибутків та рентабельності діяльності інноваційного підприємства.

Ключові слова: *інноваційна діяльність підприємств; інноваційно-інвестиційна політика; інвестиційний інструментарій.*
Форм. 17. Рис. 4. Табл. 3. Літ. 11.

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РАЗРАБОТКА ИНВЕСТИЦИОННОГО ИНСТРУМЕНТАРИЯ ДЛЯ ОЦЕНКИ ЭФФЕКТИВНОСТИ ИННОВАЦИОННОЙ ДЕЯТЕЛЬНОСТИ ПРЕДПРИЯТИЙ

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В статье разработан комплексный инструментарий для оценки эффективности инвестирования инновационной деятельности предприятий, а также алгоритм оценки инвестиционно-инновационной привлекательности регионов, позволяющий классифицировать территории по уровню инвестиционного и инновационного потенциалов с учетом выявленных инвестиционных и инновационных рисков и способствующий разработке инвестиционно-инновационной политики на основе выявленных особенностей регионов. Предложен алгоритм оценки эффективности бюджетных вложений для осуществления инновационной деятельности предприятиями, позволяющий проводить сравнительный анализ федеральных округов, регионов, муниципальных образований по их обеспеченности инновационно активными предприятиями, бюджетной финансовой обеспеченности инновационной деятельности предприятий и обеспеченности инновационной продукцией. Создана методика корректировки кредитной ставки для финансирования инновационной деятельности предприятий, позволяющая проследить зависимость процентной ставки по кредиту от адаптированных показателей анализа прибыли и рентабельности деятельности инновационного предприятия.
Ключевые слова: *инновационная деятельность предприятий; инновационно-инвестиционная политика; инвестиционный инструментарий.*

Introduction. In developed countries the public investment and innovative policy is realized as market mechanisms not always promote emergence and distribution of innovations. Thus, the realization of public investment and innovative policy is expedient for such reasons, as the presence of the noncommercial sector engaged in research, insufficient financial potential of private entities, the presence of various risks accompanying the realization of innovations, high costs of innovative products and services. Thus, the realization of the effective state investment and innovative policy is necessary, first of all, for the formation of the high-rank national innovative system in the country and strengthening its competitiveness.

The competitiveness of state should be provided at the 3 key levels: the microlevel, providing competitiveness of managing subjects, the mesolevel, assuming the achievement of the goals at the regional level, and the macrolevel, which is within the limits of state as a whole. Thus, the achievement of high competitive positions is probable at the activization of innovative processes in all sectors of the economy. For realization and ensurance of innovative transformations the activity of state authorities, first of all, should be directed at promoting and stimulating of the enterprises' innovative activity.

Activization of enterprises' innovative activity is possible only at joint participation of all interested parties. For example, managing subjects can raise the efficiency of innovative activity at the expense of the estimation and analysis of production processes and their restructuring. Federal and regional authorities, in their turn, should develop and realize the policy taking into account investment and innovative specificity of the participants.

Innovative orientation of production development is the basis for qualitative shifts occurring in today's economy. Certainly, investment resources are necessary for realization of innovative transformations. This assumes the development of complex estimation of enterprises' innovative activity efficiency as a whole and also estimation of the use efficiency of allocated investment resources by them, including federal, regional and municipal authorities. In this regard, the development of investment and

innovative toolkit is necessary for the estimation of enterprises' innovative activity efficiency.

Recent research and publications analysis. Various aspects of enterprises' innovative activity are considered in the works of such researchers as: D.I. Kokurin et al. (2011), A.S. Nechaev (2012), A.S. Nechaev and O.V. Antipina (2012), M.A. Osipov (2007), T.N. Savina (2011), S.P. Uvarova (2011), S. Raevskii (2006), O. Sokolova (2010), V. Spitcin (2009).

Estimation algorithm of investment and innovative regions' attractiveness. The world practice shows that the basis for economic growth is innovation, the realization of innovative activity. In this connection, it is necessary to pay special attention to investment policy concerning innovatively active managing subjects. We offer the following definition of state investment and innovative policy.

State investment and innovative policy is a complex of legal, economic, political and organizational measures directed at the activization of investing into innovatively active enterprises, carrying out the expenses on innovations and having complete innovations or experimental developments by means of financial resources' redistribution between federal, regional and municipal authorities on the basis of efficiency estimation of their use by means of such factors, as the factor of territory provision (a federal district, a region, a municipal union (a city district, a municipal area)) by innovatively active enterprises, the factor of budgetary financial provision of enterprises' innovative activity and the factor of innovative production provision and also subject to efficiency estimation of innovatively active enterprises financial assets use by means of calculating the indicators of profitability, namely: the factor of current expenses profitability of the innovative activity realization by innovatively active enterprise, the development indicator of one worker at an innovatively active enterprise, the factor of investments' profitability and the factor of the total innovatively active enterprise profit for the purpose of socioeconomic results achievement.

The above definition unlike the existing ones focuses attention to the necessity of complex efficiency estimation to be used, first, by authorities for the allocated financial resources by means of calculating special factors for further comparative analysis and to define a share of assets for the investment of enterprises' innovative activity and the efficiency of their use. Secondly, it can be directly used by innovatively active enterprises for the adapted indicators' calculation of profitability with the purpose to reveal those enterprises which, at the expense of the reached effective results, have an opportunity of preferential crediting under the lowered interest rate.

For regions' classification by the level of investment and innovative attractiveness we have developed the following algorithm (Figure 1).

The presented algorithm (Figure 1) allows classifying regions by the level of investment and innovative attractiveness for further development of investment and innovative regional policy taking into account the revealed features.

The first stage of the algorithm (Figure 2) assumes the choice of indicators to be used for the estimation of investment and innovative attractiveness of regions.

The second stage of the algorithm assumes grouping these indicators of investment and innovative attractiveness. Thus, for the estimation of investment and innovative regional attractiveness we use the quantity indicators. The method assumes the regions' rating based on the values of the indicators presented in Figure 2.

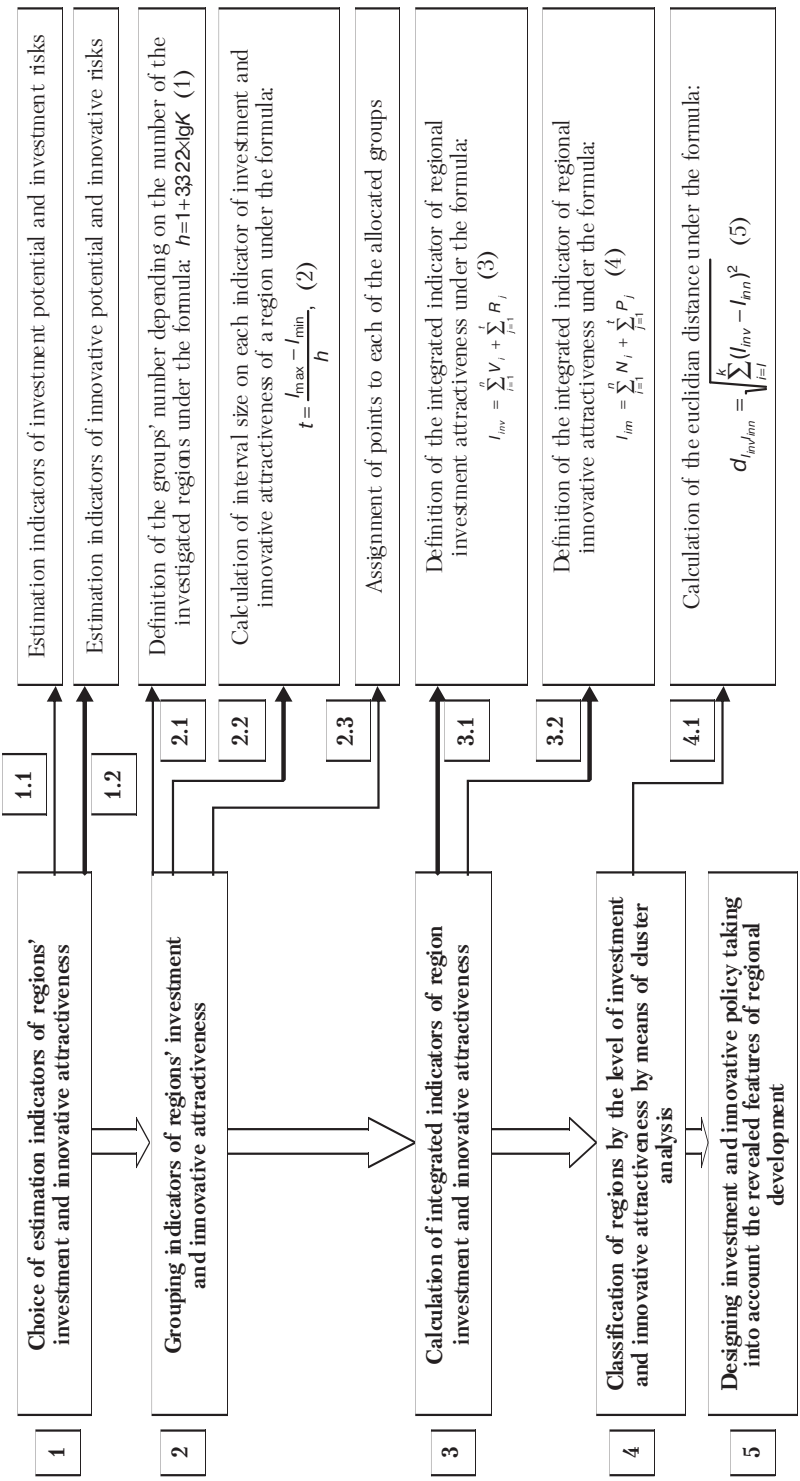


Figure 1. **Estimation algorithm for investment and innovative regions' attractiveness,** *compiled by the authors*

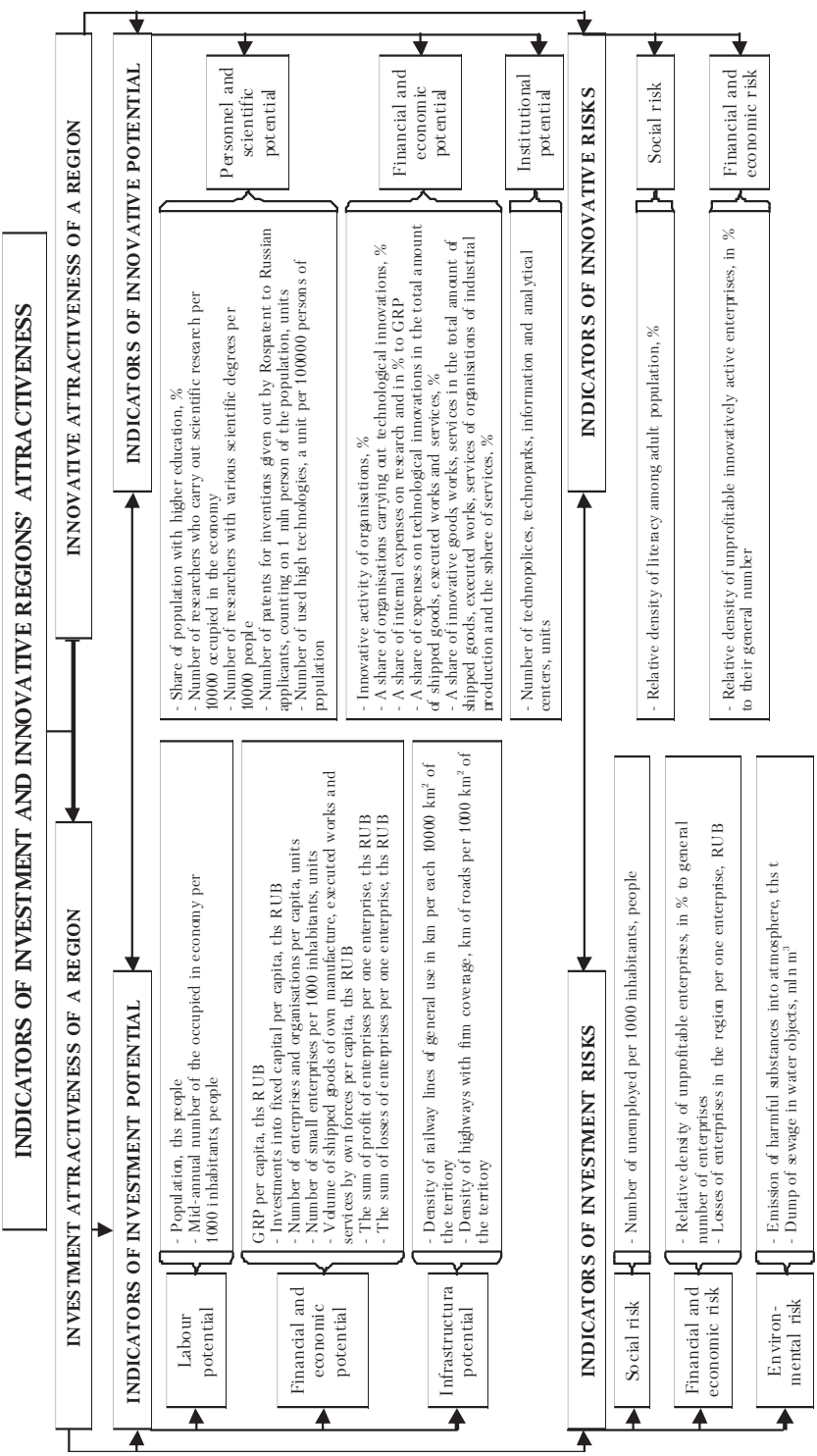


Figure 2. **Indicators of investment and innovative attractiveness of a region,** *compiled by the authors*

We define the number of the groups mathematically under the Sturgis's' formula:

$$h = 1 + 3{,}322 \times \lg K, \quad (1)$$

where h – the number of groups; K – the number of investigated regions. The formula (1) allows defining the number of groups depending on the number of investigated regions.

Further it is necessary to calculate the interval size on each indicator of investment and innovative attractiveness of a region under the formula:

$$t = \frac{I_{\max} - I_{\min}}{h}, \quad (2)$$

where t – the interval size; $I_{\max}$ – the maximum values on each indicator of investment and innovative appeal of the investigated regions; $I_{\min}$ – minimal values on each indicator of investment and innovative attractiveness of the investigated regions; h – the number of groups.

The formula (2) allows calculating the interval size on each indicator of investment and innovative potentials and also investment and innovative risks of the investigated regions for the formation of groups and subsequent assignment of points to each of them.

The following stage includes the assignment of points of each of the allocated groups. The minimum number of points for the first group is equal to 1. Each following group receives one point more than the previous. Thus, the maximum number of points is equal to the number of the allocated groups under the formula (1). Accordingly, higher numerical value of an indicator testifies the quantitative increment of a certain aspect characteristic of investment and innovative region's potential.

Estimating risks, the assignment of points to each group is carried out in the reverse order as these indicators have negative influence and, accordingly, the indicator having the least negative influence in comparison with others receives the highest point.

The third stage of the algorithm assumes the integrated indicators calculation for investment and innovative attractiveness of a region. First, we define the integrated indicator of investment region appeal under the formula:

$$I_{inv} = \sum_{i=1}^{n} V_i + \sum_{j=1}^{t} R_j, \quad (3)$$

where I_{inv} – the integrated indicator of the investment regional attractiveness; i – the indicators of investment potential; n – the number of investment potential indicators; V – the score of a certain kind of investment potential; V_1 – the quantity of points on labor potential; V_2 – the quantity of points on financial and economic potential; V_3 – the quantity of points on infrastructural potential; j – the indicators of investment risk; t – the number of indicators of investment risk; R – the score of a certain kind of investment risk; R_1 – the quantity of points on social risk; R_2 – the quantity of points on financial and economic risk; R_3 – the quantity of points on environmental risk.

The formula (3) allows calculating the integrated indicator of the investment attractiveness for each region, considering the level of its investment potential and investment risk.

Secondly, we define the integrated indicator of innovative regional attractiveness under the formula:

$$I_{inn} = \sum_{i=1}^{n} N_i + \sum_{j=1}^{t} P_j, \quad (4)$$

where I_{inn} – the integrated indicator of innovative regional attractiveness; i – the indicators of innovative potential; n – the number of innovative potential indicators; V – the score of a certain kind of innovative potential; V_1 – the quantity of points on the personnel and scientific potential; V_2 – the quantity of points on financial and economic potential; V_3 – the quantity of points on institutional potential; j – the indicators of innovative risk; t – the number of innovative risk indicators; P – the score of a certain kind of innovative risk; P_1 – the quantity of points on social risk; P_2 – the quantity of points on financial and economic risk.

The formula (4) allows calculating the integrated indicator of innovative attractiveness on each region, considering the level of its innovative potential and innovative risk.

The fourth stage of the algorithm includes the development of regions' classification by the level of investment and innovative attractiveness by means of cluster analysis. Our research we built on the basis of euclidean distances defined under the formula:

$$d_{I_{inv} I_{inn}} = \sqrt{\sum_{i=I}^{k} (I_{inv} - I_{inn})^2}, \quad (5)$$

where d – the distance; I_{inv} – the integrated indicator of investment regional attractiveness; I_{inn} – the integrated indicator of innovative regional appeal; k – the quantity of signs.

The formula (5) allows defining the distance between the investigated regions for allocation of clusters on the level of investment and innovative regions' attractiveness.

The novelty of the given algorithm is in considering not only investment but also innovative features of each region's development. Secondly, in carrying out the indicators' grouping depending on the number of the investigated regions. Thirdly, the method of cluster analysis for the classification of regions takes into account investment and innovative features of their development. Besides that, the carried out calculations allow ranging regions according to the integrated indicators of the investment and innovative attractiveness and also to provide the comparative estimation of regions and to develop actions directed at the improvement of the corresponding indicators based on the total values of labor, personnel, scientific, financial, economic, infrastructural and institutional potentials as well as social, financial, economic and environmental risks.

Estimation algorithm for budget investments efficiency at realization of innovative activity by innovatively active enterprises. Regions and municipal unions receive from the budgets the assets in various proportions for the realization of innovative activity. Thus, it is necessary to estimate the efficiency of these assets for the purpose of the

revealing those enterprises in which innovative activity efficiency is higher and accordingly it is necessary to increase the volumes of these enterprises financing.

For budgetary funds efficiency estimation we offer the following algorithm presented in Figure 3, as well as the calculation of the following factors.

First, we calculate the factor of the federal district provision (region, municipal union) by innovatively active enterprises under the formula:

$$K_c = \frac{C_i}{C}, \quad (6)$$

where C_i – the number of innovatively active enterprises of a federal district (region, municipal union); C – the general number of innovatively active enterprises in the country (federal district, region); K_c – the factor of provision of a federal district (region, municipal union) by innovatively active enterprises, thus $\sum K_c = 1$.

The formula (6) allows defining the share of innovatively active enterprises in a federal district (region, municipal union) in the general number of innovatively active enterprises of the country (federal district, region).

Then we calculated coefficient' of budget financial provision of enterprises' innovative activity in the federal region (municipal unions) by the formula:

$$K_f = \frac{F_i}{F}, \quad (7)$$

where F_i – the volume of budget financial resources allocated for realization of enterprises' innovative activity in a federal district (region, municipal union); F – the total amount of budget resources allocated for the realization of enterprises' innovative activity of the country (federal district, region); K_f – the coefficient of budget financial provision of enterprises' innovative activity in a federal district (region, municipal union), thus $\sum K_f = 1$.

The formula (7) allowed specifying a share of allocated budget financial resources for realization' of the enterprises innovative activity of a federal district (region, municipal union) in the total amount of allocated means in all federal districts (regions, municipal unions).

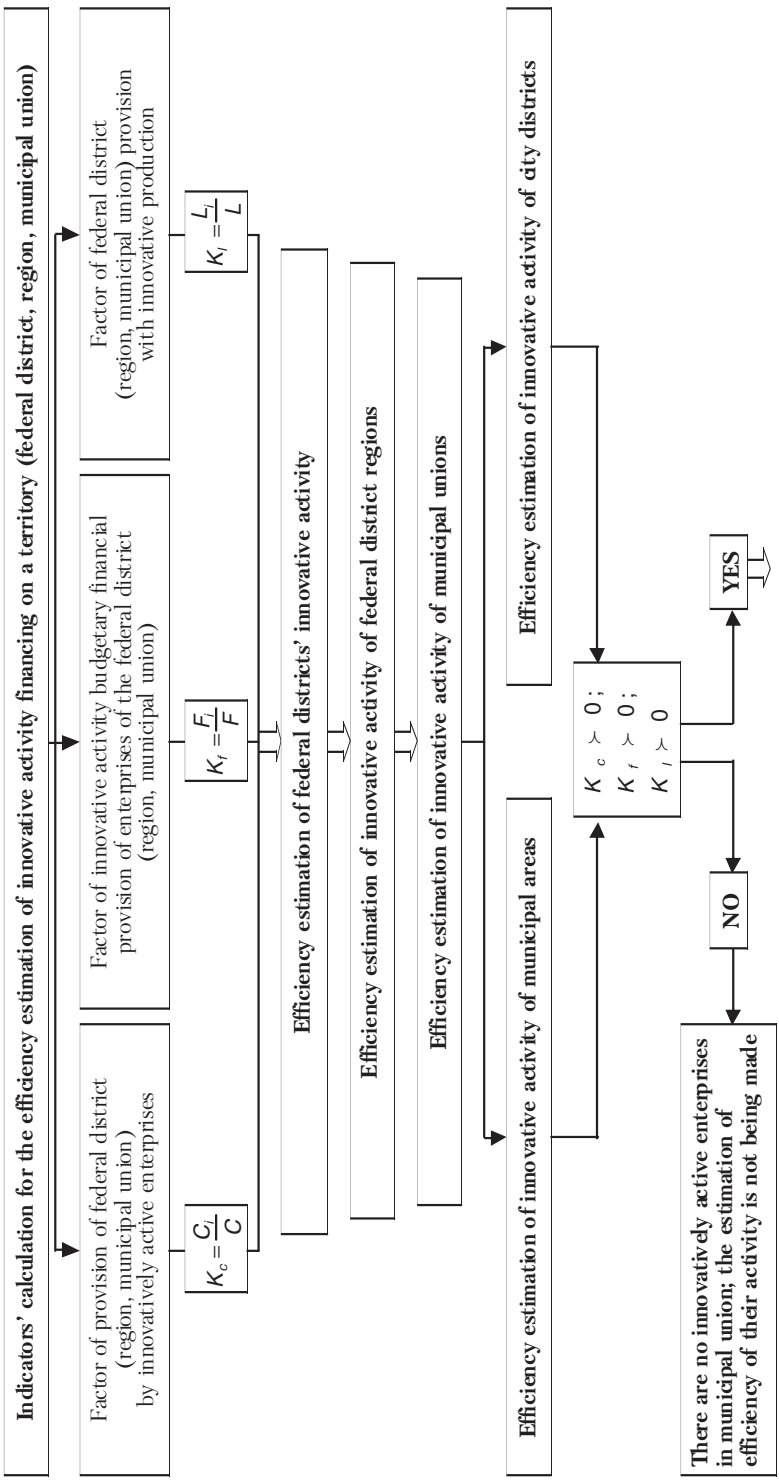
Thirdly, we calculate the coefficient of innovative goods provision in a federal district (region, municipal union) by the formula:

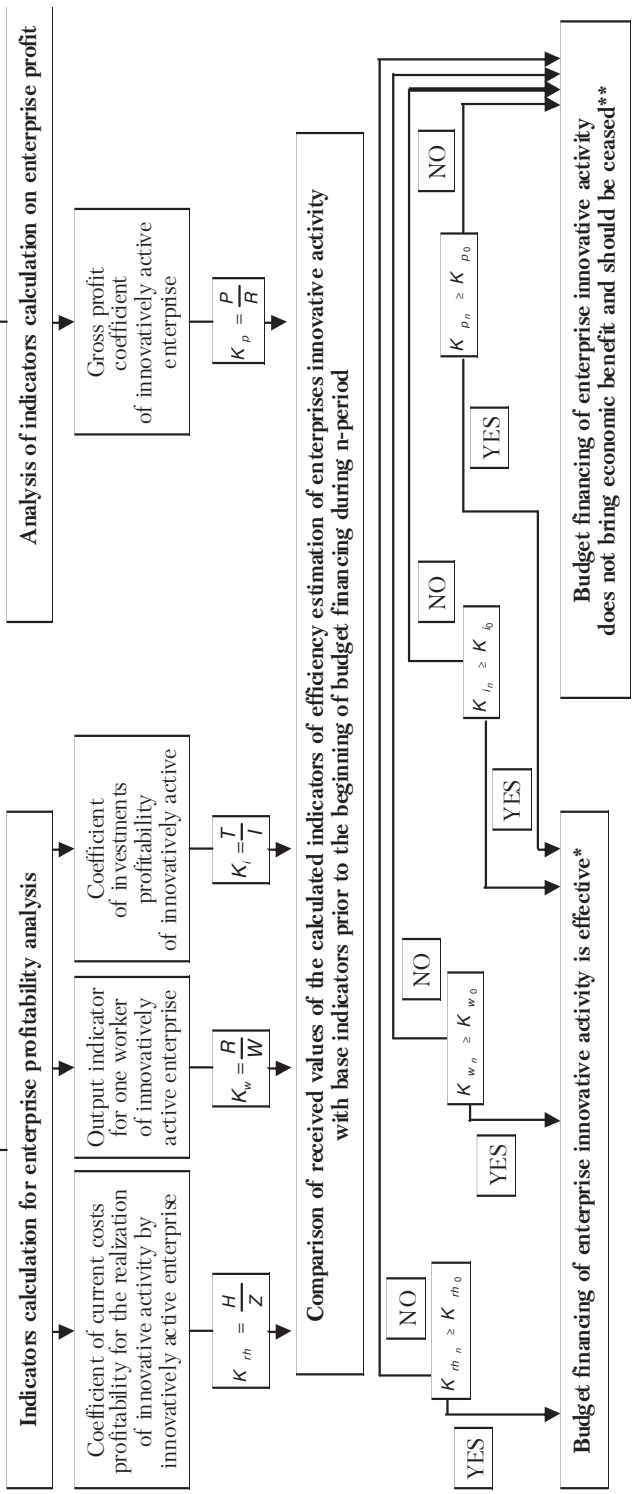
$$K_p = \frac{P_i}{P}, \quad (8)$$

where P_i – the volume of innovative products produced by innovatively active enterprises in a federal district (region, municipal union); P – the total amount of innovative goods produced by innovatively active enterprises of the country (federal district, region); K_p – the coefficient of innovative goods provision of the federal district (region, municipal union), thus $\sum K_p = 1$.

The formula (8) allowed specifying the volume of the innovative goods produced by innovatively active enterprises in a federal district, region or municipal union.

The coefficients were calculated for federal districts, regions and municipal unions. If in municipal unions the values of the coefficients are zero, the efficiency estimation of enterprises' activity is not performed; if the values are more than zero,


Indicators' calculation for the efficiency estimation of innovative activity financing on a territory (federal district, region, municipal union)
Factor of provision of federal district (region, municipal union) by innovatively active enterprises
Factor of innovative activity budgetary financial provision of enterprises of the federal district (region, municipal union)
Factor of federal district (region, municipal union) provision with innovative production
$K_c = \frac{C_i}{C}$
$K_f = \frac{F_i}{F}$
$K_l = \frac{L_i}{L}$
Efficiency estimation of federal districts' innovative activity
Efficiency estimation of innovative activity of federal district regions
Efficiency estimation of innovative activity of municipal unions
Efficiency estimation of innovative activity of municipal areas
Efficiency estimation of innovative activity of city districts
$K_c > 0;$
$K_f > 0;$
$K_l > 0$
NO
YES
There are no innovatively active enterprises in municipal union; the estimation of efficiency of their activity is not being made



Note: * budget financing of enterprise innovative activity is effective if no less than 3 coefficients have the values in the n-period exceeding the values of the basic period; ** budget financing of enterprises' innovative activity is inefficient if more than 2 coefficients have the values in the n-period below the values of the basic period.

Figure 3. **Algorithm for budget investments efficiency estimation in realization of innovative activity by innovatively active enterprises,** *compiled by the authors*

it is necessary to estimate the efficiency of the allocated budgetary funds use by means of the following indicators.

The coefficient of the current costs profitability for the realization of innovatively active enterprise innovative activity is calculated by the formula:

$$K_{rh} = \frac{H}{Z}, \tag{9}$$

where H – the profit from innovative goods realization by the innovatively active enterprise; Z – the cost value of implemented innovative goods; K_{rh} – the coefficient of profitability of the current costs for the realization of innovative activity by innovatively active enterprise of a municipal union.

The formula (9) allowed calculating the efficiency of enterprise costs spent on production and realization of an innovative product. The coefficient characterizes the profit level received per unit of costs for the realization of enterprise innovative activity.

The indicator of production per one worker of an innovatively active enterprise is calculated by the formula:

$$K_w = \frac{R}{W}, \tag{10}$$

where R – the proceeds from innovative goods realization by innovatively active enterprise; W – the average number of workers with higher education taking into account the annual refraining courses; K_w – the indicator of production per one worker of an innovatively active enterprise.

The formula (10) allowed specifying efficiency of manpower use at the enterprise and the labor productivity level. The indicator characterizes the volume of proceeds per one worker of innovatively active enterprises.

The coefficient of investments profitability is calculated by the formula:

$$K_i = \frac{T}{I}, \tag{11}$$

where T – net profit from investment activity of innovatively active enterprise; I – the sum of means invested in objects; K_i – the coefficient of investments profitability of innovatively active enterprise.

The formula (11) allowes specifying the volume of profit from investment activity per 1 RUB of investments.

The coefficient of the gross profit of innovatively active enterprise is calculated by the formula:

$$K_p = \frac{P}{R}, \tag{12}$$

where P – the gross profit of innovatively active enterprise; R – the proceeds from goods realization by innovatively active enterprise; K_p – the coefficient of gross profit of innovatively active enterprise.

The formula (12) allowed specifying the share of gross profit per unit of sales of innovative goods by innovatively active enterprise.

Thus, the developed algorithm shows the sequence of actions in evaluation of innovative activity efficiency in federal districts, regions, municipal unions by means of special coefficients' calculation.

Besides, by means of this algorithm the authorities could consistently estimate the efficiency of allocated budgetary funds use in innovative activity of enterprises and to make decisions on further budget financing of these enterprises through calculation for the adapted indicators to analysis of profitability and profitableness of enterprises.

The methodology of credit rate adjustment on enterprises' innovative activity financing. The developed algorithm for the estimation of budget investments efficiency for the realization of innovative activity of innovatively active enterprises reveals those of them which used the allocated assets most effectively. To increase the efficiency of budget investments for the purpose of innovative activity realization by innovatively active enterprises we offer the following methodology.

Table 1. **The basic indicators for credit rate calculating for the financing of enterprises' innovative activity subject to the efficiency of their activity,** *compiled by the authors*

#	Efficiency estimation indicator	Weight value of the indicator (f_{K_j})	Change of an indicator in n-period in comparison with the basic period, % (Δ_{K_j})	Change of the indicator in n-period in comparison with the base taking into account it weight value, % (β_{K_j})	The average value of adjustment indicator and credit rate of innovatively active enterprise
1	2	3	4	5	6
1	K_w – output indicator for one worker of innovatively active enterprise	0.1	$\Delta_{K_w}=\frac{K_{w_n}}{K_{w_0}}\times 100\,\%-100$	$\beta_{K_w}=\Delta_{K_w}\times f_{K_w}$	$\bar{\delta}=\frac{\sum \beta_{K_j}}{m}$
2	K_i – profitability coefficient of innovatively active enterprise investments	0.2	$\Delta_{K_i}=\frac{K_{i_n}}{K_{i_0}}\times 100\%-100$	$\beta_{K_i}=\Delta_{K_i}\times f_{K_i}$	
3	K_p – gross profit coefficient of innovatively active enterprise	0.3	$\Delta_{K_p}=\frac{K_{p_n}}{K_{p_0}}\times 100\%-100$	$\beta_{K_p}=\Delta_{K_p}\times f_{K_p}$	
4	K_{rh} – profitability coefficient of current costs for innovative activity realization by innovatively active enterprise	0.4	$\Delta_{K_{rh}}=\frac{K_{rh_n}}{K_{rh_0}}\times 100\%-100$	$\beta_{K_{rh}}=\Delta_{K_{rh}}\times f_{K_{rh}}$	

Weight values were assigned to each of the indicators (column 2 Table 1) selected in the course of the conducted research. Thus, the weight values of the indicators varied within the limits 0.1–0.4. The greatest weight belongs to the more significant indicator used for efficiency estimation of enterprise's innovative activity.

Then we define the values changes of the indicators in the n-period in comparison with their values in the basic period by the formula:

$$\Delta_{K_j}=\frac{K_{j_n}}{K_{j_0}}\times 100\%-100, \qquad (13)$$

where K_{jn} – the value of the estimation indicator of the efficiency of innovatively active enterprise's innovative activity in n-period; K_{i0} – the value of the estimation indicator of efficiency of innovatively active enterprise in the basic period; Δ_{Kj} – the change of this indicator in n-period in comparison with the basic period, %.

Further we determine the change of this indicator in n-period in comparison with the basic one taking into account its weight value under the formula:

$$\beta_{K_j} = \Delta_{K_j} \times f_{K_j}, \quad (14)$$

where β_{Kj} – the change of the indicator in n-period in comparison with the basic one taking into account its weight value; Δ_{Kj} – the change of the indicator in n-period in comparison with the basic period; f_{Kj} – the weight value of the indicator.

We determine the average value of the adjustment indicator of the credit rate of innovatively active enterprise by the formula:

$$\bar{\delta} = \frac{\sum \beta_{K_j}}{m} = \frac{\Delta_{K_w} \times f_{k_w} + \Delta_{K_i} \times f_{K_i} + \Delta_{K_p} \times f_{K_p} + \Delta_{K_{rh}} \times f_{K_{rh}}}{m}, \quad (15)$$

where β_{Kj} – the change of the indicator in *n*-period in comparison with the basic one taking into account its weight value; m – the quantity of efficiency estimation indicators of innovative activity of innovatively active enterprise; $\bar{\delta}$ – the average value of the indicator of the credit rate reduction of innovatively active enterprise.

The credit rate for innovatively active enterprises is calculated by the formula:

$$\eta = \varepsilon - \bar{\delta}, \quad (16)$$

where η – the crediting rate of innovative activity of innovatively active enterprises; ε – the base rate; $\bar{\delta}$ – the average value of the reduction indicator of the credit rate of innovatively active enterprise.

Thus, the crediting rate for innovative activity of innovatively active enterprises (η) could take the following values (Table 2).

Table 2. **Values of the summary rate for crediting the innovative activity of the innovatively active enterprises,** *compiled by the authors*

Values of the rate applied to crediting of innovative activity of innovatively active enterprises (η)	Summary rate for crediting innovative activity of innovatively active enterprises
$\eta \prec \varepsilon$	Summary interest rate is equal η
$\eta = \varepsilon$	Summary interest rate is equal to zero (interest-free credit)
$\eta \succ \varepsilon$	Summary interest rate is equal ε

The calculation of the interest rate crediting of innovative activity depending on the activity efficiency is determined by the formula:

$$\eta = \varepsilon - \left(\frac{\left(\frac{K_{w_n}}{K_{w_0}} \times 100\% - 100 \right) \times f_{K_w} + \left(\frac{K_{i_n}}{K_{i_0}} \times 100\% - 100 \right) \times f_{K_i} + \left(\frac{K_{p_n}}{K_{p_0}} \times 100\% - 100 \right) \times f_{K_p} + \left(\frac{K_{rh_n}}{K_{rh_0}} \times 100\% - 100 \right) \times f_{K_{rh}}}{m} \right). \quad (17)$$

This formula allows calculating the interest rate for crediting of innovative activity of enterprises taking into account the estimation of their activity efficiency.

The developed methodology allows proceeding from the estimation of enterprise innovative activity efficiency on the basis of calculating the adapted indicators of profitability, namely: the indicator of output per one worker of an innovatively active enterprise, the coefficient of investments profitability of innovatively active enterprise, the coefficient of gross profit of innovatively active enterprise, the coefficient of current costs profitability in realization of innovative activity by enterprises, corrected crediting rate for innovative activity of enterprises.

Application of the presented tools in the investment and innovation policy by authorities. For the activization of investment and innovative activities by managing bodies the effective use of these tools is necessary during the investment and innovation policy realization by federal, regional and municipal authorities. We developed the block diagramme of the application of these tools within investment and innovation policies (Figure 4).

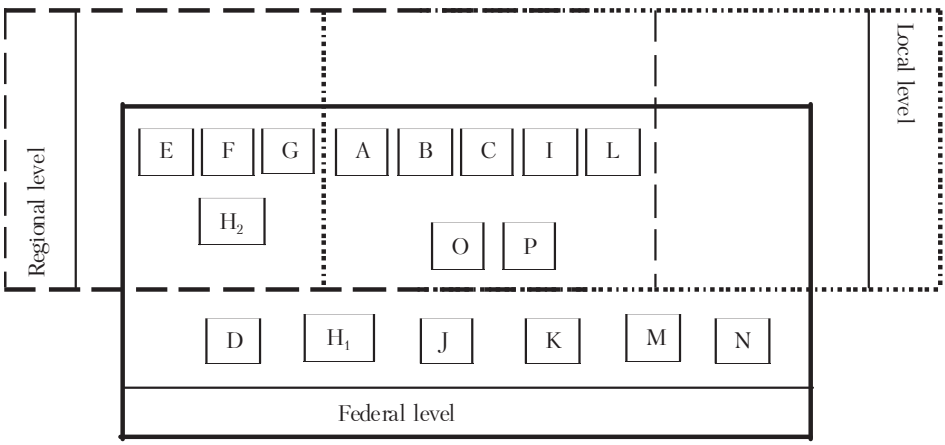


Figure 4. **Block diagramme of tools application within investment and innovation policy by federal, regional and municipal bodies,** *compiled by the authors*

The developed diagramme of tools application within the investment and innovation policy by authorities allows generalizing the most effective instruments which could be used for the realization of investment and innovation policy specifying also the possibility for their applications at federal, regional and municipal levels.

Conclusion. The conducted research on the problem of investment efficiency estimation for enterprises' innovative activity and its activization allows formulating the set of the generalizations, conclusions and proposals.

The analysis of sectoral and regional priorities in the field of innovative activity of public investing of managing subjects is carried out revealing the problems of innovative processes' financing in various industries and regions.

New definition of state investment and innovation policy is offered which unlike the existing ones focuses on the necessity of carrying out complex efficiency estimation of the allocated financial resources use by authorities as well as by innovatively active enterprises.

Table 3. **Tools in realization of the investment and innovation policy depending on the levels of power,** *compiled by the authors*

#	Indicators	Appling tools of investment policy realization		
		Federal level	**Regional level**	**Local level**
A	Fiscal regulation: granting tax concessions	Adjustment of tax rates, namely:		
	Restructuring of indebtedness on fiscal charges	VAT, profits tax for organizations	Property tax for organizations	Land tax
B	Use of tax credit and investment tax credit	Profit tax for organizations		
C	Establishment of special tax modes	Establishment of special determination order of taxation elements, and also exemption from separate taxes and tax collections, namely:		
		VAT, profits tax for organization	Property tax for organization	Land tax
D	Creation of special economic zones	Granting particular treatment of entrepreneurial activity realization and also application of procedure of bonded custom area	-	-
E	Granting subsidies	Granting subsidies from federal and regional budgets for realization of investment and innovative activity by managing subjects		-
F	Granting state guarantees	Granting property and legal guarantees at budgets expense and off-budget funds directed at protection of investors rights		-
G	Granting state credits	Granting budget credits to subjects of investment and innovative activity		-
H_1''	Monetary policy	Financing of state budget deficit at the expense of loans; use of budget proficiency for the sterilization of money offer; issues and repayments of government securities	-	-
H_2		Granting budget credits and credits of development institutes to enterprises; subsidizing interest rates		-
I	Creation of insurance and mortgage funds	Creation of insurance and mortgage funds at all levels of power for guarantees to Russian and foreign investors, participation in realization of investment and innovative projects		
J	Carrying out the revaluation of basic funds according to inflation rates	Increased revaluation coefficients for basic production assets	-	-
K	Development of investment export-import focused programs for basic funds renovation	Adjustment of export and import duties and increase in VAT rate for import operations	-	-
L	Using of infrastructure, land etc. on favorable terms	Granting investors preferential terms for lease of ground areas and infrastructure objects		
M	Application of mechanisms of depreciation charge and use amortization deductions	Increase in depreciation rates charges by entering additional coefficient of acceleration	-	-
N	Development of leasing schemes for basic means in financing of production	Entering the verified coefficient of acceleration depending on transaction terms	-	-
O	Development of factoring schemes for working capital financing	Application of various kinds of factoring, namely: internal, external, export (one-factorial, two-factorial, export factoring with the right of recourse, export factoring without the right of recourse), import, factoring «back-to-back», factoring open (conventional), closed factoring, reverse factoring (with the right of recourse and without such right), factoring on the schedule, factoring on demand, fractional factoring, agency factoring, urgent factoring, factoring with due payment		
P	Use of intellectual property via franchising	Application of various kinds of franchising, namely: direct, consecutive, subfranchising, affiliated, individual, regional, the franchising of separate enterprises, corporate, and also by kinds of franchises (standard, free, corporate, licence, retail, conditional, bank franchise) etc.		

The algorithm for estimation of regions' investment and innovation attractiveness is developed and approved allowing to consider investment and innovative features of each region, to conduct the ranging of territories according to the integrated indicators of investment and innovative attractiveness, to develop actions directed at the improvement of corresponding indicators on the basis of summary values of potentials and risks.

The algorithm for the estimation of budget investments efficiency is developed for innovative activity realization by enterprises allowing to carry out the comparative analysis of federal districts, regions and municipal unions on their provision by innovatively active enterprises, budget financial provision of enterprises' innovative activity and provision by innovative products, also allowing the estimation of allocated budget funds efficiency at realization of enterprises' innovative activity.

The methodology of credit rate adjustment for financing of enterprises' innovative activity is created and approved allowing on the basis calculations of the crediting rate which is less than the average value.

The diagramme of investment and innovation policy tools application by authorities is developed allowing to generalize the most effective instruments taking into account their subsequent application at federal, regional and municipal levels.

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