

## **SET OF INSTRUMENTS FOR MEASUREMENT OF INNOVATIVE CAPABILITIES OF ENTERPRISE INDUSTRIAL SYSTEM**

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Innovative development of the manufacturing is the main source of economic and social development of society. It can be expressed by targeted accumulation of qualitative changes in various elements of the economic system of the enterprise, allowing him at the bifurcation points to move to another position.

Today, continued operational improvement is a given, and companies in many countries are able to acquire and deploy the best current technology. In advanced nations with relatively high labor costs and equal access to global markets, producing standard products using standard methods will not sustain competitive advantage. Instead, advantage must come from the ability to create and then commercialize new products and processes, shifting the technology frontier as fast as their rivals can catch up.

Although Research and Development investments are undertaken in all countries, a small number of geographic locations tend to dominate the process of global innovation in technological areas. The scientific problem is the resolution of the contradiction between the possibility of the technological gap and the need for innovative development of enterprise industrial system.

The purpose of research is the development of a Mechanism of regulation effectiveness of innovative activities of enterprise and methodical guidance for its use. The research methodology includes methods of formalizing the description and analysis of the ways to achieve goals (structural analysis of industrial system, multicriteria measurement of innovative capabilities, functional simulation, morphological analysis, literature review, synthesis), and methods of conceptual design.

Measurement of innovative capabilities of enterprise industrial system is based on the developed Mechanism of regulation effectiveness of innovative activities of enterprise, which includes a methodical approach to valuation of innovative activities of enterprise and system of ensuring results of innovative activities of enterprise. This allows us to measure the ability and willingness of companies to implement effective innovative activities, videlicet an innovative capacity of industry enterprise.

The results, determining the scientific originality of the paper are including the following. The methodical approach was offered for economic valuation of innovation activities of the enterprise, which facilitates identification of factors and conditions of transformation of industrial enterprises in the manufacturing systems of innovative type.

System of indicators of performance innovative activities of enterprise was developed and proved, which is based on the manufacturing systems of innovative

type Based on the principles to managing innovative changes at the enterprise level and provided of radicalism innovations built a functional-level model of enterprise innovative system, which is defines a set of criteria of innovative development, and practical guidance for their use

The practical significance of the paper is in the fact that the basic theoretical development and methodical guidance are brought to the level of specific, practical recommendations, and may be used for further scientific and theoretical research and applied in practice for regulation effectiveness of innovative activities of industrial enterprise with intent of valuation the effectiveness of innovative activities, to determine the level of use of innovative capacity of enterprise, for substantiation trend and strategy of innovative development of industrial enterprise

### **Introduction**

At the present stage the Economy is characterized by increased development of social and economic systems of any complexity level, the dominant role of innovative activities, capable to provide the competitive advantages of higher order More than ever before, business innovation is a strategic imperative A critical driver of growth, competitiveness, and shareholder value, innovation is cited by senior executives around the world as integral to their companies' success And innovation benefits countries as well In those with thriving industries, people have higher incomes, a better quality of life, and a higher standard of living than in less robust nations

In this regard, there is an objective need of forming a fundamentally new economic relation, and consequently the transformation of the types of economic activities that constitute a new combination of sources of economic growth under conditions of becoming of the national economy of developed countries In summary, the place of Russia in the global technological environment is substantiated by two groups of indicators the Input, that is to say the level of research intensity, and the Exit namely indicators of performance and competitiveness

In the economic literature, the problem of managing innovative activities is considered in the papers of Russian and foreign Scientists The founders of the cyclic development of innovative activities are M Tugan-Baranovsky, N Kondratieff, J Schumpeter, P Sorokin The current stage of development of the theory of innovation and innovative activities represent the papers of S Kuznets, H Ansoff, A Anchishkin, C Juglar, F Braudel, F Valenta, P Drucker, R Nelson, A Marshall, M Porter, A Toynbee, A Toffler, J Tobin, H Chesbrough, and other scientists

In "Business cycles A Theoretical, Historical and Statistical Analysis of the Capitalist Process" Schumpeter argued that "We will now define innovation more rigorously by means of the production function previously introduced This function describes the way in which quantity of product varies if quantities of factors vary If, instead of quantities of factors, we vary the form of the function, we have an innovation But this not only limits us, at first blush at least, to the case in which the innovation consists in producing the same kind of product that had been produced before by the same kind of means of production that had been used before, but also raises more delicate questions

Therefore, we will simply define innovation as the setting up of a new production function. This covers the case of a new commodity, as well as those of a new form of organization such as a merger, of the opening up of new markets, and so on. Recalling that production in the economic sense is nothing but combining productive services, we may express the same thing by saying that innovation combines factors in a new way, or that it consists in carrying out New Combinations, although, taken literally, the latter phrases would also include what we do not now mean to include – namely, those current adaptations of the coefficients of production which are part and parcel of the most ordinary run of economic routine within given production functions” [Schumpeter 1939: 84]

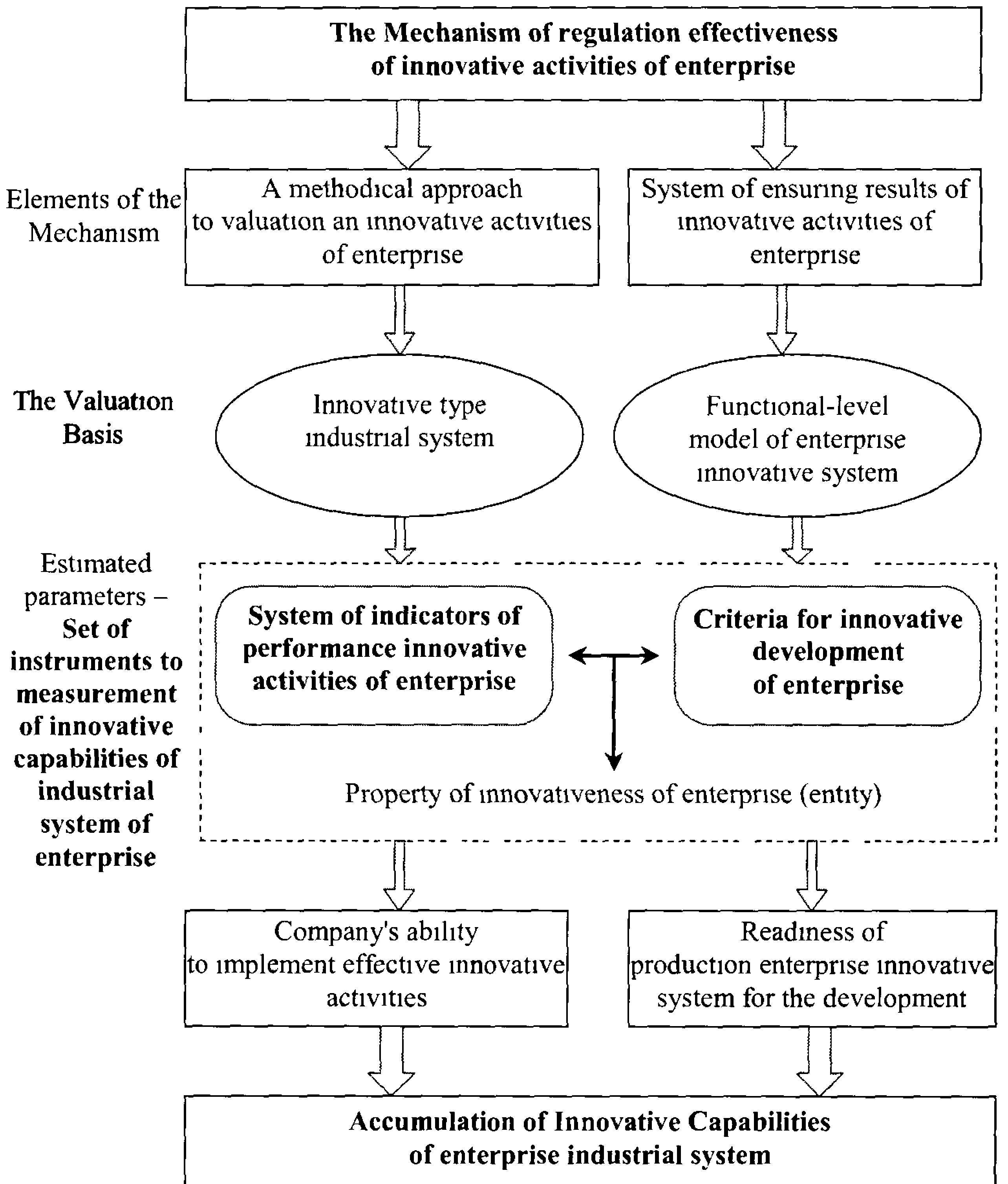


Figure 1 The content of economic set of instruments for measurement and regulation of innovative development of industrial enterprise

## Methodology of Research

Innovative activity is defines the technological limits of the enterprise, revealing qualitative and quantitative parameters for the development of its economic system, that is set at the bifurcation point the direction of subsequent movement This is based on the assertion of the existence and effect of innovative waves, the stages of scientific and technological progress, and technological modes

On this basis, author is believes that for measurement and regulation of the innovative development of industrial enterprise important is the fact that the manufacturing system will be open innovation only when their assimilation will become a condition of its development This is unconditionally requires the development of certain economic instruments (see Figure)

Functioning of the Mechanism of regulation effectiveness of innovative activities of enterprise is to achieve an equilibrium of conjugated objects, which is largely, depends on the mutual conformity of conjugate technological processes

## Results of Research

In this case, there is an objective necessity to study of the “unifying” aspect of the movement of innovation, based on integrity, unity and complexity of social production that is the basis of the developed system of indicators of performance innovative activities of enterprise (see Table 1)

Table 1

### Indicators of performance innovative activities of enterprise

System of indicators of performance innovative activities of enterprise	Indicators
Indicators of effectiveness of functioning innovative type industrial system	Coefficient of internal effectiveness of innovative type industrial system ( $C_{IE}$ ) is substantiates the share of independently developed by the company of innovative technologies ( $IT_{it}$ ) in total technology ( $T_{tl}$ ) and calculated as follows $C_{IE} = \frac{IT_{it}}{T_{tl}}$
	Coefficient of external effectiveness of innovative type industrial system ( $C_{EE}$ ) is determines the proportion used by the company outside of innovative technologies ( $IT_o$ ) in total technology ( $T_{tl}$ ) and has the form $C_{EE} = \frac{IT_o}{T_{tl}}$
Indicators of an effectiveness using innovative technologies	Effectiveness ratio of own an innovative technology ( $ER_{OIT}$ ) is the share of products produced by its innovative technologies ( $V_{oit}$ ) in total production volume ( $V_{tl}$ ) $ER_{OIT} = \frac{V_{oit}}{V_{tl}}$

	<p>Effectiveness ratio of third-party innovative technologies (<math>ER_{TPIT}</math>) is to determine the proportion of products manufactured by third-party innovative technologies (<math>V_{tpit}</math>)</p> $ER_{TPIT} = \frac{V_{tpit}}{V_{tl}}$
Indicators of an effectiveness innovative products	<p>Coefficient of complete effectiveness innovative products (<math>C_{CE}</math>) is characterizes the share produced by the enterprise of individual innovation (<math>I_1</math>) in the total volume of innovation (<math>I_{tl}</math>) <math>C_{CE} = \frac{I_1}{I_{tl}}</math></p>
	<p>Coefficient of the conjugate effectiveness innovative products (<math>C_{CoE}</math>) is substantiates the share produced by the enterprise of conjugate innovation (<math>I_c</math>) in the total volume of innovation</p> $C_{CoE} = \frac{I_c}{I_{tl}}$

Measurement of innovative capabilities of enterprise industrial system is based on the developed Mechanism of regulation effectiveness of innovative activities of enterprise, which includes a methodical approach to valuation an innovative activity of enterprise and system of ensuring results of innovative activities of enterprise. This allows us to measure the ability and willingness of companies to implement effective innovative activities, videlicet an innovative capacity of industry enterprise.

### Conclusions

The methodical approach was offered for economic valuation of innovation activities of the enterprise, which facilitates identification of factors and conditions of transformation of industrial enterprises in the manufacturing systems of innovative type. System of indicators of performance innovative activities of enterprise was developed and proved, which is based on the manufacturing systems of innovative type. Based on the principles to managing innovative changes at the enterprise level and provided of radicalism innovations built a functional-level model of enterprise innovative system, which is defines a set of criteria of innovative development, and practical guidance for their use.

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## **THE BASIC ATTRIBUTES OF SOCIOLEXICOGRAPHY AS AN AUTONOMOUS BRANCH OF LINGUISTICS**

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The article outlines and defines the following basic attributes of sociolexicography as an autonomous branch of linguistics its terminological designation, logical definition, interdisciplinary matrix, aims, object and subject material and problems of research, categories, notions, terminology and methods of investigation and its own intradisciplinary structure

In modern language sciences social lexicography, or, in short, sociolexicography, is still at the stage of acquisition the status of an autonomous branch of linguistics Its formation is being implemented on the basis of generalizing the results of the development of linguistics in the sphere of standard, or general, lexicography as well as in the adjacent fields of knowledge, that pertain to the study of language, lexis and society [See my works on these subjects Korovushkin 2004, 2005a, 2005b, 2008, 2009]

The basic attributes of sociolexicography, as a science receiving the status of an autonomous branch of linguistics, are as follows 1) its separate terminological designation, which is adequate in its notional content to the logical definition of this science, 2) its specific interdisciplinary matrix, forming its linguomethodological foundation, 3) its distinct purpose, 4) its special object and subject of research, corresponding to its aims and directions, 5) its own intradisciplinary structure, 6) its specific system of categories, notions, terms and methods of sociolexicographic investigation

Let us outline in short these six basic prolegomena of sociolexicography The term «social lexicography», or «sociolexicography», embraces «substandard»