



3rd GLOBAL CONFERENCE on BUSINESS, ECONOMICS, MANAGEMENT and TOURISM  
26-28 November 2015, Rome, Italy

## Identification of clustered points of growth by analyzing the innovation development of industry

Yulia Vertakova<sup>a</sup>, Olga Grechenyuk<sup>b\*</sup>, Anton Grechenyuk<sup>c</sup>

<sup>a</sup>PhD, Professor, South-West State University; 50 let Oktyabrya st., 94, Kursk city, 305040, Russia

<sup>b</sup>PhD, Associate Professor, South-West State University; 50 let Oktyabrya st., 94, Kursk city, 305040, Russia

<sup>c</sup>PhD, Associate Professor, Kursk Academy of state and municipal service, Stacionnaja st., 9, Kursk, 305044, Russia,

---

### Abstract

The efficient clustering processes in the state provide sustainable development of the economy in general. The basis for the creation of effective clusters is the high level of development of the innovation system. In this article, the authors proposed a new approach to identifying point cluster growth through analysis of innovative development of the industry. This article contains the analysis of innovative development of manufacturing industries and assesses the impact of their innovation development at the GDP. A result of the research authors identified industries that are the points of cluster growth in the state economy.

© 2016 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of the Organizing Committee of BEMTUR- 2015

**Keywords:** innovation; innovative development; clusters; industries; manufacturing industry; processes clusterization.

---

### 1. Introduction

Prospects for the social and economic development of the state is significantly depend on the cluster development. The most effective clustering process is carried out in the innovative developed industries. The effective cluster policy of the state enhances competitiveness and innovative capacity. Therefore, the cluster state policy should be based on the industries that are the most innovative developed and have high growth potential.

The purpose of the study is to develop a method of taxonomic evaluation of innovative development of industries in order to identify the points of cluster growth. We will use this method to investigate the industries of Russian

---

\* Olga Grechenyuk. Tel.: +7-910-277-5956; fax: +7 (4712) 22-26-46.  
E-mail address: [og1016s@yandex.ru](mailto:og1016s@yandex.ru)

economy and to identify the most innovative developed ones. We will also evaluate the impact of innovative development of industries at the GDP.

We used the variety of theoretical and empirical research methods, including the literature review, the author's taxonomic method of estimation of innovative development industries, as well as methods of stochastic analysis.

## 2. Body

The first description of the innovation processes were presented at the beginning of the XX century by Austrian economist Schumpeter, who analyzed the "new combinations" of changes in the development of economic systems (1912). Issues of innovation development of economic systems are widely covered in the works of such well-known foreign scientists as Ansoff (1979), Drucker (1985), Vodachek (1989), Bruce (2010), Wahren (2004) et al. Among domestic scientists involved in the study issues of evaluation of innovative development, we can highlight the work of Zavlin (1998), Vasilenko (2003), Yakovets, (2003), Prigojin (1989), Molchanov (1994), Lapin (2008), Baburin (2010), Kiselev (2010), Vertakova, Plotnikov (2013), Grechenyuk, Grechenyuk (2014) et al.

A result of study different approaches to assessing the effectiveness of innovation, we found that most of the authors focus on the assessment of the innovative potential of the region. However, this is not enough. We need to use an integrated system of indicators, including also the assessment of innovative activity and effectiveness of innovation processes in the Russian economy. With regard to the industry analysis of innovative development of the necessary methodological framework is not currently developed. Therefore, we have developed a system of indicators characterizing the degree of innovation development of the Russian economy.

For this purpose, we selected indicators that can be calculated according to official statistics. We have grouped our proposed indicators in two main blocks. The first block of indicators characterizes the industry innovation activity. The second block reflects the effectiveness of innovation processes in the industries. The system of indicators characterizing the level of industry innovation activity (the first block), includes three indicators:

1. The coefficient of the total innovation activity of organizations in the industry. It is calculated as the ratio of the number of organizations implementing technological, organizational and marketing innovations in the industry to the total number of organizations in the industry. It characterizes the level of innovative activity in the industry in general, by all kinds of implemented innovation.

2. The coefficient of technological innovation activity of organizations in the industry. It is calculated as the ratio of the number of organizations implementing technological innovation in general in the industry to the total number of organizations in the industry. It characterizes the level of technological innovation activity of industry.

3. The coefficient of the intensity use of innovations. It is calculated as the ratio of the number newly acquired advanced production technologies (APT) in the industry to the number of used in the industry. It shows how much the industry has to newly acquired APT to the number already used APT. The higher this ratio, the more intense the flow update process used innovations.

To assess the effectiveness of innovation across industries, we have developed the following system indicators (the second block):

1. The coefficient intensity of creation new advanced production technologies (APT). It is calculated as the ratio of the number of fundamentally new APT, has no analogues either in Russia or abroad, to the total number of APT developed in the industry. Accordingly, if the value of this coefficient is high, the industry and the economy as a whole are more competitive.

2. The share of innovative goods, works and services in the total volume of shipped goods, works and services. It is calculated as the ratio of innovative goods, works and services sector to the total volume of goods sold, works and services in the industry. This indicator shows the amount of production and sales of innovative products in the total volume of produced and sold products industry.

3. The coefficient of innovation effectiveness of the industry. It is defined as the ratio of innovative goods, works and services, re-introduced or exposed to significant technological changes over the last three years to the total volume of innovative products in the industry.

However, we understand that due to heterogeneity of economic and innovative development of Russian industries results of developed indicators can be very different. The resulting values of these coefficients may vary greatly: leaders in one direction of the study may be underdogs in others (Vertakova, Grechenyuk, 2015a). So we have come

Download English Version:

<https://daneshyari.com/en/article/980502>

Download Persian Version:

<https://daneshyari.com/article/980502>

[Daneshyari.com](https://daneshyari.com)