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OIL AND GAS COMPLEXES AND CLUSTERS: IDENTIFICATION AND MONITORING

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The need to identify and to organize the regional monitoring of industrial complexes and clusters is based on their strategically important role in the regional development. Legal documents and scientific publications do not properly cover the methods for identifying cluster members as well as for assessing the effectiveness of cluster policy. The development of more accurate methods of assessing the role of the TPC and the clusters in the economic development of the region on the basis of accounting and statistical reporting is required to evaluate the effectiveness of fiscal support for complexes (Territorial-production complex, TPC) and clusters along with the application of econometric models. This article dwells upon the problems of this segment. The analysis of such concepts as cluster and territorial-production complex serve as a base for the examination of various forms of inter-economic interaction on the example of oil and gas industry in Perm Region. This analysis also justify the deduction about the absence of competition in the areas of oil and gas, as well as in the production of petroleum products, and the presence of oil and gas complex in the Perm region. The article contains the results of the analytical work on structuring of oil and gas complex in Perm region and the assessment of its impact on the value added in 2008-2013; also it provides the information about the generalization of limitations of the official statistics in the area of inter-firm linkages evaluation and gives the base for the necessity of using a model of analysis and evaluation of oil and gas complexes and clusters of generalizing indicator gross of value added. The article suggests to introduce additional fields in the Unified State Register of enterprises and organizations in order to form the results of the TPC and clusters quicker than previously. The article also validates the necessity of legal regulation of the access of municipal and regional authorities and management to statistical reporting of companies which significantly affect the indicators of socio-economic development of the territory.

Keywords: identification of industrial cluster, regional oil cluster, the oil complex, territorial-production complex, regional monitoring, statistics, management of the region, the added value.

1. Relevance of the topic and basic concepts

The relevance of the identification and monitoring of industrial complexes and clusters is based on the recent adoption of a number of Russian and international legal acts, aimed at the formation and economic support of the industrial cooperation. Creation of the industrial clusters is one of the tools of the industrial cooperation of the Eurasian Economic Union member states [8]. Forms of support of competitive territorial industrial clusters in the real sector of economy are considered in a number of regulatory legal acts of the federal and regional levels. Thus, extraction of fuel mineral resources and the formation of oil and gas clusters are defined as a prospective and long-term industry of the Far East and the Baikal region [15]. Creation of petrochemical clusters is provided in the south of the Astrakhan region [16], in the Nenets Autonomous District, [17] and other regions. The development of "cluster generating interregional and intraregional relations" is defined as the most important area of innovation activities in the North-West Federal District [17].

The analysis of numerous resolutions of the Government, as well as the federal and regional laws on industrial policy [19, 20] shows that they are mainly determined by the requirements of industrial clusters and cluster formation policy: the creation of inter-regional institutions and the development of long-term strategies and territorial programs, infrastructure development for cluster support, etc. Herewith the methods of identification of cluster members, the organization of current and periodic monitoring, information security evaluation of the effectiveness of the measures taken for the implementation of the cluster policy in the regions are not sufficiently attended to.

There is a considerable interest in clusters in the domestic scientific publications, but most of them dwell upon the objectives and methods of state regulation and forms of cluster support ([26 p.167-199], [11]); benefits, offered by the cooperative production and processing within the cluster [1, 2, 5], the principles of formation and support of regional clusters [9, 23], the description of the problems in the

functioning of vertically integrated companies as compared to clusters and other forms of inter-firm cooperation [3, 24]. Only few of them are devoted to the practical problems of identification of the TPC and the regional clusters [7, 29].

Methods of analysis of industrial clusters in the area of plans and forecasts of regional development receive more and more attention in the economic research lately. Herewith they focus mainly on the mathematical tools and the assessment of the econometric model of the impact of clusters on the regional economy (see [4], [27], and others), which is certainly of a great interest, but is not sufficient to assess the effectiveness of various forms of fiscal support, referred to in the regional and federal legislation. We need to develop more accurate methods of accounting and valuation of the "participants", composition and structure, the role of cluster in the *economic development of the region* based on accounting and statistical records.

The development of the processes of global integration and cooperation in all spheres of social production requires the formation of an effective system of regulatory impact of decisions of public authorities and management processes monitoring [18].

"*Regional monitoring of socio-economic processes* is a process of systematic, repeated observations, analysis and evaluation, conducted in accordance with a pre-designed program and based on the systematic collection and processing of information, additional surveys for rapid diagnosis of the status and trends, preparation of recommendations for management decisions, the improvement of policies, measures to ensure the objectives of social and economic processes taking place in the region (federal subject)" [10, p. 9].

In respect to the assessment of the regulatory impact on the regional development, the most important factor is the monitoring of processes in the following forms of inter-firm cooperation: cluster, territorial-production complex [26, p. 59]. This concepts are to be considered by the example of the oil and gas industry.

Oil and gas complex (OGC) is a set of organizations engaged in various stages of production process:

- prospecting and exploration of hydrocarbons (oil, associated petroleum gas);
- production of hydrocarbons;
- transportation of oil and gas and their products;
- processing of oil and gas;
- refined petroleum products and gas distribution and sale.

The specifics of the process of extraction and refining, the maintenance and service of which are provided by a large number of related and supporting activities, economically determine the concentration of oil refining companies, as well as drilling and transportation service companies in the same area.

The term "*cluster*" has entered into a scientific revolution rather recently. A detailed analysis of the various approaches to the definition and structure of

the cluster is given in a scientific work [12, p. 5-12]. We shall refer to the definition of "cluster", provided in this work: "a group of independent companies which are geographically proximate within a region and which compete, cooperate and interact with each other, being in a single value chain" [12, p. 9].

The basic properties of the cluster, which associate it with TPC are the following: localization of cluster members in a certain area, their co-operation and the presence of joint core competencies. The difference between the TPC and a cluster, according to the researchers, is the lack of competition in TPC, while the competition between the parties is one of the important features of the cluster [26, p. 59].

The term "cluster" is actively used in the legal acts (NLA) on the federal and regional level, mainly in connection with the formulation of the problem of expansion of inter-economic and inter-territorial cooperation (see [8, 19, 20, etc]). At the same time the concept of "industrial cluster" and the "production cluster" are widely interpreted as a "group of related industrial organizations, complementing each other and thereby enhancing their competitive advantages" [8], "set of entities of the industrial sector located in the territory of one or several constituent entities of the Russian Federation and interconnected due to the geographical proximity of their location and functional dependence" [19]. Such a feature of clusters, as the competition is not usually taken into account. If we rely on the above concept of the cluster and the TPC, then the Russian regulatory documents on clustering economy, consider the development of TPC. There is an indirect presence of competition in the cluster in the Treaty on the Eurasian Economic Union, where the following notion is given: industrial cluster is a group of related industrial organizations, complementing each other and thereby reinforcing their competitive advantages [8].

Based on the contents of the above terms, oil and gas business owing to its specificity, has all the objective preconditions for the formation of an industrial complex or cluster within the territory of the design and development of oil and gas fields. The limitation is the lack of competition between the oil companies in Russian regions, where the petroleum production is usually represented by one company. Thus, manufacturers of the main types of oil and gas final product are represented in the Perm region mainly by a vertically integrated company — "LUKOIL". Its subsidiaries provide more than 96% of crude oil and natural gas, and 100% of the petroleum products. This situation, in our opinion, does not enable the identification of the presence of oil cluster in the Perm region, and it would be more correct to speak of oil and gas complex with all its specific features.

2. Methods of identifying clusters and TPC

Methods of identification and implementation of continuous monitoring of the clusters and TPC operation are not widespread. Official statistics focuses mainly on are quantitative methods of identification, among which researchers single out the following: localization ratios, input/output tables (cross-sectoral balance sheets), the method of analysis of structural

changes, sinter indices [12, p. 38]. The most relevant complex method of analysis is the compilation of input/output balance. However, its use in Russia is limited at the present time, that is, the interbranch balance tables are not published neither at the level of the state nor in individual regions. One reason for the current situation in this area is a high degree of monopolization of the economy of Russia, as well as the incomplete statistics and the presence of regulatory restrictions on the use of large companies' (market leaders) statements, which prevents the usage of cluster

analysis methods, which are widespread abroad.

The researchers often use simpler methods: calculation of coefficients of localization, the method of structural changes based on the analysis of indicators of employment, the use of these methods is explained by the fact that statistical reports on other indicators (especially value added) are published with great delay and without explanation of the processing activities. The negative consequence to this situation is the use of employment and sales figures only for the cluster analysis [12, p. 40-46].

Table 1

The added value of enterprises of oil and gas complex (OGC) for the Perm region in 2008-2013

Indicator	2008	2009	2010	2011	2012	2013
<i>Total figures for Perm region</i>						
Goods and services issue, bln. rub.	848,71	713,59	870,26	1154,86	1212,82	1261,26
Intermediate consumption, bln. rub.	480,33	435,93	525,21	686,33	731,35	765,41
Added value, bln. rub.	368,38	277,65	345,05	468,53	481,48	495,85
<i>Total figures for oil and gas complex of Perm region</i>						
Goods and services issue, bln. rub.	344,21	299,09	367,88	530,67	583,47	609,34
Intermediate consumption, bln. rub.	198,48	188,66	222,06	309,17	345,31	352,40
Added value, bln. rub.	145,73	110,43	145,82	221,50	238,17	256,94
The share of value added in the regional OGC, %	39,56	39,77	42,26	47,28	49,47	51,82

* Compiled by the authors jointly with E. F. Selezneva and E.S. Ilyinykh and, on the basis of statistical reports for companies in 2008-2013. Small businesses are not taken into account.

Meanwhile, the use of index numbers of employment in the terms of identification and assessment of the oil cluster impact may significantly decrease its role in the economy of the region, as most of the main and auxiliary processes in the oil and gas complex (OGC) are automated, and thus the number of employees is relatively small. For example, the estimated proportion of oil cluster in the economy of the Perm region in 2010, based on the number of employees was equal to 5.7% [12, p. 147]. The average number of employees in organizations of the oil and gas industry in 2013 amounted to 38,107 persons (or 11.0% of the total number of employees in large and medium-sized regional enterprises). However, with such a small number, OGC have a significant share in the value added in the region – more than 50% in 2013 (table 1). The share of oil and gas, as well as the production of petroleum products, which form the core of the oil and gas complex in the Perm region exceeded 48% in the total profit of the enterprises of the Perm Region in 2012¹. During the 2010-2012, the mining and processing of oil in the Perm region received financial support from the regional budget, where income tax benefit alone resulted into an exemption of a total of about 7.6 billion rubles or 28.2% of the total amount of benefits for income tax for all enterprises of the Perm Region [22]. Thus, the decision-making on the budget and tax issues, related to OGC enterprises, could have serious consequences for the economy of the region.

The implementation of a continuous risk monitoring of OGC companies in the region is a relevant and important issue as well.

The rental resource model of the Russian economy [6] in conjunction with the monopolization and the predominance of vertically integrated companies (VICs) in the oil and gas industry creates substantial dependence of regional economies and their financial systems on the investment strategy and organizational and administrative decisions in respect of subsidiaries and affiliated companies of oil and gas in a particular region. The undercount of inter-firm linkages leads to an underestimation of the role of the OGC in certain regions and in Russia in general, and does not allow to take timely measures to reduce the negative impact of management decisions of large corporations, entering into the core of the cluster and TPC on the regional economy.

For example, in the early 2000s, oil company of CJSC "LUKOIL-PERM", in which 50% of the share capital was owned by the regional financial and industrial group (PFIG) came under the full control of OJSC "LUKOIL" as a wholly-owned subsidiary and full share of the authorized capital. This led to the fact that the volume of exports of fuel and energy complex (in the total exports of the Perm Region) has decreased dramatically by 2005 in comparison with 2000: from 849.7 to 352.8 million rubles or 2.4 times, while the share of fuel and energy complex in the export of the Perm Territory has fallen from 46.7% to 12.1%, or almost 4 times². Sales of crude oil on the internal transfer prices of OJSC "LUKOIL" have led to a significant drop in revenues of the oil and gas subsidiary of the reorganized company, based in the Perm region itself and in the regional budget as well.

The above examples show that the correct choice of a identification method and assessment of the cluster and TPC role in the economy of the region is of great practical importance.

¹ Compiled according to the Federal Tax Service of the Perm region (excluding small businesses). Official website of the Federal Tax Service for the Perm Region (address date 15.08.2013).

² Calculated by the authors based on data from [25].

3. The structure of the oil and gas complex of Perm Region

Reasoning from the above concepts of OGC and cluster, we consider it possible to use recommendations for the formation of the structure of the cluster to form the structure of the oil and gas complex in the Perm region. These recommendations are based on the study of sequence of the of the formation of the value chain for the consumer and they involve the following elements:

- price structure and cost of the final product for the buyer;
- structure of organizations at different stages of the value formation;
- main and supporting activities of the participants of the value chain, and others. [26, p. 46-

47].

In Perm region, the whole production chain of oil and gas complex is presented, from oil production to the sale of the recycled oil and gasoline (see table 2). It should be noted that without additional analytical work and research it is possible to obtain only about 80% of information on the OGC turnover for large and medium-sized enterprises and organizations (i.e. excluding small businesses). This refers to companies in which the oil production and refining is reflected in statistical reporting as a core activity. In the Perm region this refers to class 23 "Production of charred coal, refined petroleum and nuclear materials" and partly class 11 "Crude oil and natural gas; the provision of services in the mentioned areas".

Table 2

Characteristic patterns of the OGC of Perm Region

Activity name (class, subclass)	Number of enterprises and organizations	The share in the turnover of the OGC in 2013 (%)
Class 29 "Manufacture of machinery and equipment"	18	5,289
Class 31 "Manufacture of electrical machinery and apparatus"	2	0,046
Class 23 "Production of charred coal, refined petroleum and nuclear materials"	1	47.911
Class 11 "Crude oil and natural gas; the provision of services in these areas"	8	30,840
Subclass 45.21.3 "Production of building works for laying of pipelines, communication lines and power lines"	4	0,203
Subclass 51.51 "Fuel wholesale"	4	4,915
Subclass 60.30 "Transportation by pipeline"	2	10,144
Subclass 74.20.2 "Geological, geophysical and geochemical work in the field of mineral resources and the reproduction of the mineral resource base"	4	0,653
Total:	43	100,00

* Compiled by the authors jointly with E. F. Selezneva and E. S. Ilinykh; based on the results of the study on the statistical reporting of the enterprises.

Organizations which do not submit reports on output in real terms (transport and construction companies, trading enterprises and research organizations), have been verified throughout the form 1-enterprise report, "Basic information about the activities of the organization" in year 2013 in terms of "turnover of the organization" index. To enable to classify these organizations as OGC, the reports were to contain significant volumes of relevant activities.

As a result of the analytical work, a set of 43 companies operating on behalf of the oil and gas industry was formed. The core of OGC in the Perm region consists of two classes: the company, for which the activity in the interest of oil and gas is the main one: class 23 "Production of charred coal, refined petroleum and nuclear materials" (OOO "LUKOIL-PNAS") and part of class 11 "Crude oil and natural gas; the provision of services in mentioned areas"(primarily "LUKOIL-PERM Ltd.").

The current state of statistical accounting does not allow to use ready-made groups of economic activity for the formation of industrial clusters, including oil and gas cluster. During the compilation of the list of enterprises and organizations of the Perm region, whose activities may be related to the oil and gas cluster, the employees of Permstat conducted the screening work, related to the analysis of existing

primary enterprise reporting and confirmation of the actual presence of the said activities in years 2013 and 2014³. Also, when updating the list, the additional verification of data about the kinds of products and services was carried out, where the data declared by enterprises on their websites was compared to the real one. If the product reports appeared valid, the enterprise was included in the list.

The results of the analysis of the dynamics of the listed enterprises and organizations in 2008-2013, showed the growing importance of OGC in the economy of the Perm region: the volume of the value added, created by the enterprises and organizations rose from 145.73 billion. rubles in 2008 to 256.94 billion rubles in 2013, which makes a total an increase by 76.3%. The share of oil and gas complex in the value added of the Perm region grew from 39.56% in 2008 to

³ The classification of enterprises and organizations as OGC was confirmed by the presence of the product concerned the production, shipment of goods and the balance of production capacity in 2013 and production and shipment of goods and services for 2014. These forms of statistical reports show the output in real terms (oil and gas, production of petroleum products, the production of equipment for oil and petroleum industries) according to the smallest and, therefore, most accurate groups.

51.82% in 2013 (see table 1).

The analysis of the dynamics of the formation of value added in the OGC allows us to make a conclusion about the vital importance of oil and gas companies for the Perm region. It seems appropriate to monitor the main indicators of such oil and gas industry as drug companies, the investment in fixed assets, number of employees, some financial indicators.

4. Informational support of OGC monitoring

It follows from the foregoing that the monitoring of main indicators of oil and gas complex, including trafficking organizations, based on the data of official statistics is difficult, because the lack of identification of the organization to the oil and gas complex in the Unified state register of enterprises and organizations. Such identification would allow, without violating the confidentiality of statistical information, quickly shape the performance of enterprises of OGC in summary statistical reports and statistical publications without performing a substantial amount of additional processing of the primary forms of statistical statements of the individual entities and organizations.

The current situation is partly explained by the Federal law No. 282 on official statistical accounting and the system of state statistics of Russia, which contains a direct prohibition for statistical agencies (entities official statistics) "to provide Federal public authorities, public authorities of subjects of the Russian Federation, bodies of local self-government, state and municipal officials, officials, other individuals and legal entities with primary statistical data, which is information of limited access, and to use this data for any other purposes, not associated with the formation of official statistical information" [13]. Official financial statements and forms of statistical reporting of the enterprises are considered restricted information as well [28].

Meanwhile, official statistics does not fully provide the process of formation and implementation of strategic and current programs of development of regions and municipalities, and of monitoring the changes in a particular industry, which has the most serious implications for the development of the territory.

This problem is the most acute for those cities, regions and territories, the economic position of which depends on the activity of one or two companies, which is typical for most of the municipalities and cities of the Perm region and many other regions of Russia. In this case, the closing of statistical data on basic economic indicators at the appropriate FEA makes it impossible to prepare and adopt the decisions on fiscal and economic policy in their respective areas. The main purpose of the state statistics is "to meet the information needs of state and society with a comprehensive, accurate, scientifically based and timely official statistical information" [14]. If the huge results of statistical agencies in collecting and processing statistical data cannot be represented in state and municipal bodies for which the work is performed, because of the need to preserve "privacy",

then the purpose of maintaining statistical records in full is not achieved.

State and municipal authorities for the preparation and support of management decisions are forced to independently perform the collection and processing of necessary statistical and accounting information directly from the companies. This practice has been fairly widespread, though it leads to a number of negative consequences: additional burden on respondents for providing statistical and other reporting, risks of information distortion due to a conflict of interests among the respondents in receipt of subsidies and tax breaks, the growth of budget expenditures on the maintenance of employees of executive bodies in the regions and municipalities serving duplicate information flow, etc.

In the current environment, it seems quite justified to introduce special clauses in licensing agreements, the fiscal benefits from regional and local budgets for corporations exploiting the natural resources of the territory. This may be an additional condition on disclosure of the necessary information; a treaty with state and municipal authorities on significant changes in corporate control (mergers, acquisitions, formation of consolidated groups of taxpayers, etc.) that have a significant impact on the amount of the revenues of the territory (for example, more than 5% -10% of tax revenues). The authorities of the region in the case of adoption by corporations of inconsistent decisions would be able to recover the site caused damage, as well as to revoke a license, claim provided such taxpayers regional preferences.

The problem of providing access to public research organizations to the data of state statistics in order to conduct scientific research in various fields of knowledge, demands separate consideration.

A. Limitations of the classifier of types of economic activity

The current situation is largely due to the fact that the information pieces in the statistical publications are grouped on the basis of the classifier of economic activities, entered into statistical practice in 2003. Classification factor is the appointment of the products, the similarity of the technological processes, the nature of the processed raw material. All businesses and organizations undergo the process of registration, at which a specific activity is assigned to them, i.e. their group (class) is determined, and subsequently, in the preparation of statistical information, this group (class) will include the quantitative characteristics of this enterprise. As a rule, the type of activity characterizes the results of the business rather approximately, generally. In real life an enterprise is engaged in activities, other than the main registered. The duty of the statistics is the annual updating and verification of activities of the enterprise through all possible forms of statistical reporting, but the actualization of activities is carried out with some delay (one to two years). In addition, statistical publications are made according to the combined groups of activities by many indicators. In this case, businesses that serve the oil and gas industry can "dissolve" in larger groups.

Since without primary data reporting (financial and statistical) of individual enterprises, occupying a monopoly position in the territory, it is impossible to make informed management decisions, including the formation of income and expenditure of regional and local budgets, it would be advisable to provide the manner and procedures for use of state and municipal management and control of primary statistical data related to the restricted information. Working with this information can be organized on the same principles that are used for reporting of private enterprises of the military-industrial complex (the access restriction mode, a personal responsibility for storing and processing information, etc.), which is already foreseen in the current legislation [13, p. 9].

In addition, the problem of information support of the identification and monitoring of the functioning of industrial complexes, partly could be solved without violating the confidentiality of statistical information, the introduction of additional fields in the Unified state register of enterprises and organizations for the rapid formation of enterprises of OGC performance results on the readiness of the outcomes of the statistical reporting forms and the preparation of statistical publications. Information on TPC and the industrial clusters could serve as an indicator of the economy of the region.

B. Limitations of continuous monitoring of small business

Information about TPC, industrial clusters is distorted due to a lack of statistical accounting and reporting. To obtain data on the turnover or the number of small businesses, including micro businesses operating in OGC or any other regional industrial complex or cluster on the basis of official statistical publications on current reporting is not possible.

Federal law 209-FZ on the development of small and medium enterprises (hereinafter – SMEs) in the Russian Federation regulate the timing of statistical

observations: in a continuous manner – once in five years, the rest of the time annually, quarterly, monthly (selectively, depending on the type of organization [21]). Exhaustive survey of small businesses was conducted in Russia in 2011. The next examination according to law No. 209-FZ will be held in 2016 (on 2015 results). Between these surveys only selected observations are conducted on order to identify trends of small business development and facilitate the work of the respondents.

Main statistical indicators such as the "turnover of the organizations" or "average number of employees" are collected from small businesses on a selective basis. Information on turnover, number of organizations, number of employees in the sphere of *extraction of crude petroleum and natural gas and the provision of services in these areas*, although represented, is obtained on the basis of sample observations. Consequently, it does not fully correspond to the true values of the indicators.

For other activities of the organization which are related to OGC, – "Manufacture of charred coal, refined petroleum products and nuclear materials", "Machinery and equipment", "Manufacture of electrical machinery and apparatus" and others, there is no information, since the data are published only for large groups: mainly in sections and subsections, the organisation of the above activities they are allocated.

The results of the continuous survey of the activities of small and medium enterprises for the year 2010 are presented in dozens of tables on a large number of indicators. The resulting rate of the survey was the indicator "Revenue organizations". In the Perm territory the revenue of SMEs was at the level of 450979,9 million roubles. The enterprises of OGC are presented by the "manufacture of charred coal and refined petroleum products" activity with revenue rate of 811.5 million roubles (0.2% in total) (see table 3).

Table 3

Selected indicators according to the survey, conducted among small and medium enterprises of the Perm region in 2010

Indicators	Revenue from sales of goods (works, services), mln rub.*	Average number of employees	The total number of legal entities
Total	450979,9	265040	27766
Including by type of activity "Production of charred coal and oil products"	811,5	292	24
Total volume share, %	0,2	0,1	0,1

* data is given without taxes or similar compulsory payments.

For the effective functioning of the OGC, which is of great importance for the region, it is necessary to organize not only the work of the enterprises themselves, but also of all branches of government and local self-government in the regions in such a way that substantial changes and negative trends would be compensated in time. To do so, it is advisable to create and use a regional monitoring system of OGC, allowing to quickly diagnose the condition and trends, to prepare recommendations for management decisions. A significant drawback of monitoring by public authorities, in our opinion, is the lack of a developed methodology and normative-methodical

base its holding. Including:

- the lack of coordination for the ongoing monitoring of various structural divisions of regional bodies of power and administration, as well as Federal Executive bodies operating in the territory of the region;
- the lack of interaction between the bodies of state monitoring of the management bodies of corporate entities of OGC in the exchange of information and experience in the field of identification, assessment and development of control actions, which reduce the most significant threats to the livelihoods of people in areas of oil and gas companies.

Conclusions

1. Considering the obtained data about the dynamics of the formation of value added, we can claim the essential role of oil and gas companies for the Perm region.

2. Analysis of the structure and dynamics of the main indicators of the oil and gas industry, primarily produced by the participants of added value, allows to conduct more objective assessment of his contribution to the development of the regional economy, including the following:

- to identify trends of the economic growth in the region, based on an analysis of the key enterprises /core of the cluster/ of the regional production complex;

- to identify the potential risks of changes in the major indicators of regional development (tax capacity, investment resources, competitiveness) based on the detection, identification and estimation of the dynamics of development and changes in the structure of the cluster, TPC.

3. To monitor the main indicators of the oil and gas sector, such as the organizations' turnover, investments in fixed capital, number of employees, some financial indicators, without violating the confidentiality of statistical information, it is important to introduce additional fields in the Unified state register of enterprises and organizations⁴, allowing to quickly generate results of enterprises OGC on the basis of statistical reporting forms.

4. It is required to combine the efforts of specialists of the state and corporate management sectors of TPC in the field of forming technology of monitoring of its functioning, optimization of the risk management system. At the state level it is necessary to revise the manner and procedures for the confidential statistical information usage for the governmental and municipal administration and control needs, including those on the basis of a formal agreement of respondents (legal entities).

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НЕФТЕГАЗОВЫЕ КОМПЛЕКСЫ И КЛАСТЕРЫ: ИДЕНТИФИКАЦИЯ И МОНИТОРИНГ В ЭКОНОМИКЕ РЕГИОНА

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Необходимость идентификации и организации регионального мониторинга производственных

комплексов и кластеров обосновывается тем, что их роль стратегически важна в развитии регионов. В нормативных документах, научных публикациях недостаточно раскрываются методы идентификации участников кластера, оценки эффективности реализации кластерной политики. Для целей оценки эффективности бюджетно-налоговой поддержки территориально-производственных комплексов (ТПК) и кластеров наряду с использованием эконометрических моделей требуется разработка более точных методов оценки роли ТПК и кластеров в экономическом развитии региона на основе данных бухгалтерского и статистического учета. Рассмотрению существующих проблем в этой области и посвящена настоящая статья. На основе анализа понятий *кластер*, *территориально-производственный комплекс* рассматриваются формы межхозяйственного взаимодействия на примере *нефтегазовой отрасли* Пермского края, обосновывается вывод об отсутствии конкуренции в сферах добычи нефти и газа, а также производства нефтепродуктов, наличие в Пермском крае нефтегазового комплекса. Приведены результаты аналитической работы по структурированию *нефтегазового комплекса* в Пермском крае и оценке его влияния на объем *добавленной стоимости* в 2008–2013 гг., обобщению ограничений официальной статистики в части оценки межфирменных связей, обосновывается необходимость использования в модели анализа и оценки нефтегазовых комплексов и кластеров обобщающего показателя валовой добавленной стоимости. Предлагается также ввести дополнительные поля в Единый государственный регистр предприятий и организаций, позволяющие оперативно формировать результаты деятельности ТПК и кластеров. Обоснована необходимость нормативного регулирования доступа муниципальных и региональных органов власти и управления к статистической отчетности предприятий, существенно влияющих на показатели социально-экономического развития соответствующей территории.

Ключевые слова: идентификация производственного кластера, региональный нефтяной кластер, нефтяной комплекс, территориально-производственный комплекс, региональный мониторинг, статистические данные, управление регионом, добавленная стоимость.

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