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Redistribution of Structural Positions of Stakeholders within The Framework of a Modern Industrial Park Structure

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***Abstract*— The purpose of this article is to develop and test the methodology to identify changes in the structural positions of stakeholders as the cooperative ties evolve in the production corporation. The titanium cluster of the Sverdlovsk region was selected as the object of research. The authors hypothesize the existence of a causal relationship between the complication of cooperative interaction in production and the reduction of the degree of influence of stakeholders on the activities of the industrial park structure. The proposed methodology is based on the identification of the interaction parameters of stakeholders in the resource and normative context. The conducted research made it possible to identify the main categories of dominant, neutral and dependent stakeholders at the stages of the evolution of production cooperation, and conduct an appropriate structural analysis. The result of the study was the mapping of stakeholders' mutual influence of an industrial park structure on the example of a titanium cluster in the Sverdlovsk Region.**

Keywords*— *Structural positions of stakeholders, Categories of stakeholders, Mapping of stakeholders' mutual influence

I. INTRODUCTION

The industrial park structure (IPS) is an orderly set of economic entities of production and / or innovation character located on the same territory, managed by a single operator and provided with necessary production, administrative, storage and other premises and facilities, as well as with energy, engineering, transport infrastructure and administrative and legal conditions for successful operation for economic devel-opment of the territory [13]. Industrial and technological parks, science cities, special economic zones, clusters, territories of outstripping socio-economic development, etc., can be referred to the category of industrial park structure [3].

The wide spread of industrial park structures, their inclusion in the development programs of territories makes the task of creating a special management tool that allows taking into account the peculiarities of the creation and functioning of such objects [5, 9, 12, 14].

The above concept of an industrial park structure presupposes, first of all, a multi-faceted nature of participants and, correspondingly, a wide range of stakeholders. The processes of managing these objects are based on indirect regulatory instru-ments, the integrated application of which relates to the stakeholder approach to management. This methodology makes it possible to take into account the specific features of the interests of groups of persons participating in activities and using their own criteria for assessing the functioning of the park structure from the point of view of its own interests. In the works of several authors, a step-by-step mechanism for analyzing relationships with stakeholders was proposed [2, 6, 7, 8].

The purpose of this study was the development and testing of a methodology for stakeholder mapping using the example of industrial park structures in the Urals region.

II. METHODICAL ASPECTS OF MAPPING THE STAKEHOLDERS OF THE INDUSTRIAL PARK STRUCTURE

Clarification of the methodological parameters of the stakeholder approach allows us to speak about the need to develop a methodology for mapping the stakeholders of the industrial park structure. Separate aspects of the construction of stakeholder maps are given in [4, 10, 11, [15]. Figure 1 shows the interrelated steps of this meth-odology.

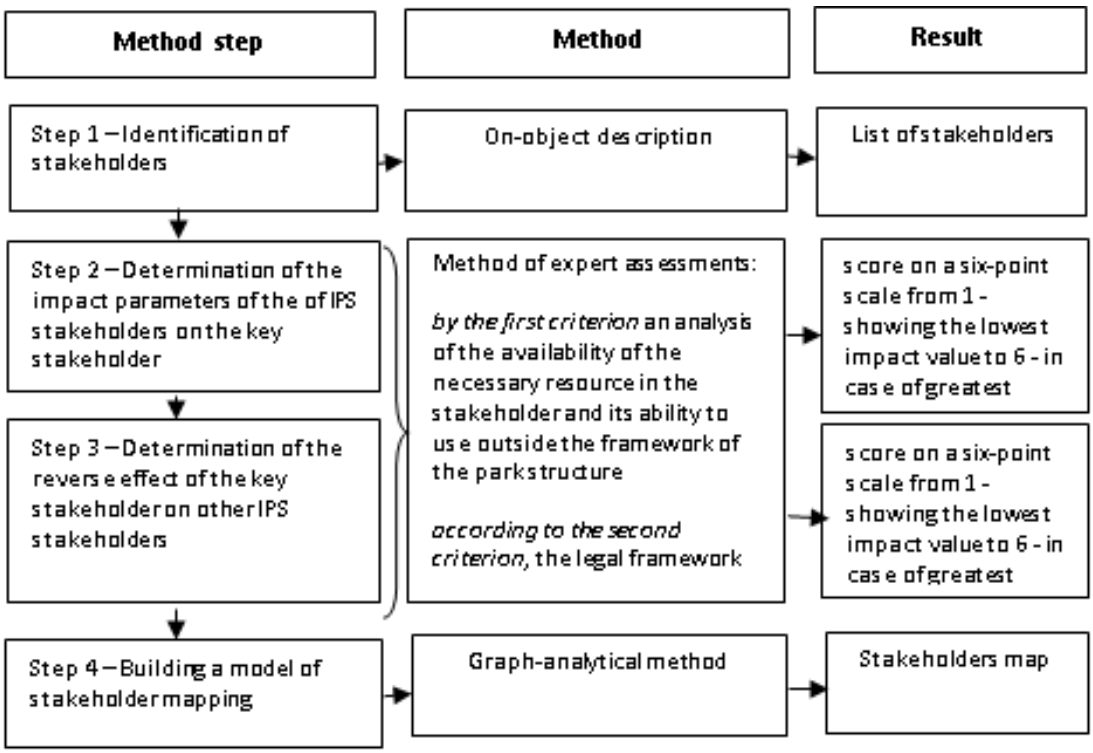

Fig. 1. Technique of mapping the stakeholders of the industrial park structure.

In the proposed methodology, at the first stage, the stakeholders of the industrial park structure are identified; to solve this task, it is recommended to use the method of stakeholder grouping with similar instruments of influence, which will allow using for the subsequent mapping procedure.

At the second stage, stakeholders are characterized by key stakeholders in the IPS. To determine the impact parameters, the two parameters of influence are described in detail: the first is the presence of the necessary resource for the stakeholder and the possibility of providing it or refusal to do so, the second parameter is the availability of regulatory levers of influence fixed by law either through a contract or agreement.

The assessment method is an expert opinion summarizing the following main sources of information: on the first criterion, an analysis of the resource holder's pres-ence in the stakeholder and its ability to use outside the park structure, according to the second criterion, the regulatory framework, the basis of treaties and agreements regulating relations with the stakeholder, on civil, arbitration cases.

For evaluation, a six-point scale is used from 1 indicating the lowest value of the influence to 6 indicating the greatest impact value.

At the third stage, the reverse effect of the key stakeholder on the stakeholders of the IPS is determined. The method of evaluation is similar to the previous step of the procedure. The assessment method is an expert opinion summarizing the following main sources of information: on the first criterion, the analysis of the availability of the necessary resource for the stakeholder and its ability to use outside the frame-work of the park structure, according to the second criterion, the regulatory frame-work, the base of treaties and agreements regulating relations with the stakeholder, on civil, arbitration cases.

For evaluation, a six-point scale is used from (-1), showing the lowest value of the influence to (-6), showing the greatest impact value.

At the fourth stage, the parameters of interaction between the park structure and stakeholder groups are determined by adding the estimates obtained at the two pre-vious stages of the methodology and identifying the stakeholder groups according to the following criteria (from -6 to 0) "dependent" (0 to 3) "neutral" (from 3 to 6) "dom-inant". Figure 2 shows the model of stakeholder industrial park structure mapping.

According to the results of the implementation of the fourth stage of the method-ology, the main vectors of the directions of interaction with stakeholders are deter-mined, which allow minimizing their unfavorable influence and laying the founda-tions for effective interaction. It should be borne in mind that the dominant stake-holders are aware of the possibility of influencing the activity of the park structure and will have a tendency in the distribution process to appropriate the generated ef-fects, the influence of neutral stakeholders is balanced by the interests of other stakeholders, and the characteristics of stakeholder dependence will lead them either to exit the park structure or to strengthen their integration interaction with groups of neutral or, more likely, dominant stakeholders.

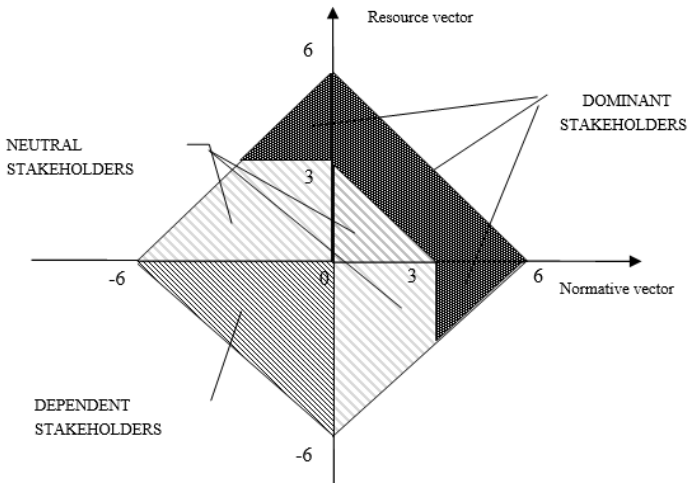

Fig. 2. Model for mapping the stakeholders of the industrial park structure.

III. RESULTS OF THE STUDY

During the research the approbation of the resulted technique on the basis of indus-trial park structures of the Ural federal district is spent. The first stage involves identi-fying the stakeholders of the industrial park structure. Since the research object is quite new for the Russian economy, the authors set the task not only to identify the main stakeholders, but also to characterize in detail the motives and models of their behavior and the interrelationships of predetermining strategies.

The first and the main group of stakeholders is the residents of the industrial park structure. The main parameters that determine the interaction of the park structure and residents are the ability to provide an effective scale of production. If the com-pany's industry specifics necessitates the creation of large enterprises with a large volume of investments, the possibility of locating such production in Russia will be limited to one or a small number of such plants. In this case, such a production, with a high degree of probability, will be localized in an area with a large market volume. In this regard, in relation to such industries, competition from industrial parks in the regions of Russia will be more pronounced.

The second group of primary stakeholders is the government authorities of the Russian Federation, who are the initiators of the creation and co-founders of indus-trial park structures. The structure of strategic management of development in the Russian Federation now includes such elements as: public authorities of different levels, state corporations and other development institutions. Undoubtedly, develop-ment institutions should act as catalysts for private investment in priority sectors and sectors of the economy and create the conditions for the formation of the necessary infrastructure that provides access to the necessary financial and information re-sources for enterprises operating in priority sectors of the economy.

The third group of primary stakeholders are management companies that carry out general management and maintenance of the territory of the industrial park structure.

It should be noted that the main instrument of influence of the management company is not based on the provision of office and production space, but on render-ing specific services aimed at reducing the costs of residents forming a set of external effects that has not yet been developed in the Russian economy. Business incubation services in most Russian parks are not available in full, which significantly distin-guishes them from foreign counterparts.

Next, we will present the results of approbation of the second and third stages of the methodology for primary stakeholders of industrial park structures in the Urals region, assessing the interaction of stakeholders of the industrial park structure (SIPS) on example of IPS residents are shown on figure 3.

List of stakeholders of industrial park structure	The impact of SIPS on residents		The reverse impact of residents on SIPS		Integrated assess-ment of the mutual impact of SIPS and residents	
	Resources	Normative regulation	Resources	Normative regulation	Resources	Normative regulation
Management company	6	5	-4	-5	2	0
The bodies of state power in the region in the person of development institutions	2	2	0	0	2	2
Personnel employed by residents and management company IPS	3	6	-3	-2	0	4
Suppliers and consumers of IPS products	3	3	-3	-3	0	0
State bodies in the person of recipients of tax revenues	0	6	0	0	0	6
The population of the territory of the placement of IPS in the person of public organizations	1	3	-2	0	-1	3

Fig 3. assessments of the interaction between stakeholders and residents of the industrial park structure

IV. CONCLUSION

The results of the assessment show that the resource impact on the residents of the IP is only apparent from the management company, other resources in the Urals Federal District are sufficiently accessible. Normative influence is shown by the personnel and state bodies in the person of the recipients of tax revenues from the activities of the IPS residents. Almost no influence is observed on residents on the part of the state authorities of the region in the person of development institutions, at the same time, the influence of the authorities in the person of the recipients of tax revenues is very significant. The evaluation of the reverse influence showed that the most significant effect is the impact of the residents of the IPS on the management company, since the effectiveness of the management company depends on the availability and ef-fectiveness of the work of the residents. Based on the data obtained, we will present a map of mutual influence of residents and other stakeholders of the industrial park structure.

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