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DESIGN OF MATCHING MARKETS FOR THE CLUSTER INITIATIVE'S PROJECTS

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Cluster initiative, having gone through two waves of development at the end of the last century and the beginning present, has become the objectively existing phenomenon in the modern economy, the benefits of implementing industry or inter-industry value chain[1]. It was recognised, was the substantiation of the need for coordination (or the configuration[2]) in the formation of the effective innovative development projects of the territory and the industry. A clear predominance of focal solutions in cluster initiatives was initially based on the idea of M. Porter that the cluster itself is a challenge for competitive capabilities (this is widely confirmed by statistical data, for example, about the development of cluster initiatives in Europe[3]). However, more long-term functioning of the cluster or create a cluster based on infrastructure or resource potential (and not the market's advantages) leads to the task of communication and interordering (from lat. *coordinato*) among cluster participants, including potential. The specified task is in demand for Russian clusters (especially regional)[4] and, unfortunately, despite the popularity of the approach, this task is not solved by the cluster management system[5]. The solution of this problem requires organizational changes in the activities of the cluster in the form of a design office as an organizer of interaction, and new methodology, different from the traditional methodology of competition on the commodity markets.

Traditionally economic articles is devoted to the research of commodity markets, formation and functioning of which are determined by pricing and, as a rule, they do not address the issues of market matching formation. Research A. Roth[6] for the design of matching markets allowed to form not only the search algorithm of interaction in such markets, but also to implement a number of solutions for the design markets. In our opinion, it is appropriate to expand theoretical constructs, methodology and algorithms E. Roth[7] on the functioning of design offices to the level of the cluster initiatives to cre-

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[1] Solvell O. Clusters - Balancing Evolutionary and Constructive Forces. Ivory Tower Publishers. 2009. – 136 p.

[2] Портер М. Конкурентное преимущество; пер с англ. – М.: ООО «Альпина паблишер», 2016. – 716 с.

[3] European Cluster Trends. Final report. European cluster observatory. March 2015. – 76 p./Режим доступа: http://ec.europa.eu/growth/smes/cluster/observatory/about_en.

[4] О развитии инновационных территориальных кластеров в Российской Федерации. Инновации в России (электронный ресурс) http://innovation.gov.ru/ru/taxonomy/term/2335.

[5] Система менеджмента для управляющих компаний инновационных территориальных кластеров российской Федерации. Отчет Российской Венчурной компании, 2014. – 250 с.

[6] Рот Э. Кому что достанется – и почему. Книга о рынках, которые работают без денег/Элвин Рот; пер с англ. – М.: Манн, Иванов и Фербер, 2016. – 256 с.

[7] Vulkan, Nir, Alvin E. Roth and Zvika Neeman, eds. The Handbook of Market Design. Oxford University Press, 2013. – 317 p.

ate interested in the interaction between existing and potential members. The applicability of algorithms design of matching markets to the activities of the cluster object or cluster initiatives supported by the following findings and assumptions.

First of all, it should be noted, as economic theorists, managers and practitioners, summarizing the experience of the cluster initiatives are experiencing difficulties while trying to submit this processes in the framework of the commodity markets concepts. A successful startup, supported by the business incubator, which attracted venture capital funding and operating in the cluster, is an ideal model of an innovative economy and eventually goes to the market with profitable contracts. But, despite the abundance of works in this theme, containing more managerial and strategic recommendations based on experience, a holistic theoretical models or other methodology supporting the output on the commodity market is in terms of markets not represented (as a rule, the theoretical basis of most of the works in this area refer to J. Schumpeter research). Because of the uncertainty of the future, the researchers rely on two assumptions: startup will either die or will come to market, and perform evaluation activities to support startups based on these options. Such decisions are based primarily on the M. Porter research[1], which deals with the results of the market design, but it does not disclose the effects of decisions on the creation of markets.

The above-mentioned problems of theoretical constructs lead to the question about the need to use comprehensive planning for the functioning of the Russian cluster initiatives. But there is another approach. The idea of a centralized market in the framework of the theory of markets design offers a solution, different from the centralized planning of activities designed to create markets by finding interaction and coordination, while preserving the free choice of their participants.

In this regard, it is necessary to speak about the relevance of the methodology of the design of matching markets applicable to such objects of innovation economics as a cluster, business incubator or technology park where the future is described not as the result of the market (for example, the forecast of future cash flow), and structural prediction — pair interaction of individual market participants through the exchange, which significantly reduces the uncertainty of the current solutions.

Justification of the applicability of the market design theory requires an answer to the question: who (or what) is going to implement similar solutions? In our opinion, this role should be assigned a fairly new phenomenon in the modern Russian economy as the design offices, because E. Roth notes the importance of the institutional constraints in speaking about the market design[2]. A design office with a set of standardized technologies must not only deal with the management of investment projects in the classic sense of the term[3], exactly how many the design and implementation of the interaction of future participants. In practice nowadays, for example at the level of regional development corporations, the responsibilities of project management offices begin to dominate the bureaucratic and reporting functions, leading to the creation of clerical and reporting service.

This situation stems from the fact that in the practice of design offices there are no algorithms of their functioning, aimed at establishing new markets and is dominated by capturing the progress of ongoing activities. It should be noted that the greatest effect on the market design in terms of cluster initiatives will be achieved in case of availability of standardized procedures that will ensure the unification algorithms market design already proven organizational methods. Therefore, we can regard the design office of the cluster initiatives as a tool with such combined algorithms.

It is important that in today's reality only such design office is able to solve the problem of competition on the resources of the cluster of Federal companies in the region. In this case, the key task of the

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[1] Портер М. Конкуренция/Майкл Портер; пер с англ. – М.: Издательский дом «Вильямс», 2005. - 608 с.

[2] Рот Э. Кому что достанется – и почему. Книга о рынках, которые работают без денег/Элвин Рот; пер с англ. – М.: Манн, Иванов и Фербер, 2016. – 256 с.

[3] Персод Н. А. Проектный офис как центр управления коммуникациями.//Менеджмент сегодня, – № 4, 2014, С. 240–255.

design office of a regional cluster, for example, becomes the definition of a region specific in the cluster concept development, ensuring the confrontation of competition from Federal companies.

Activities of the design office of the cluster initiatives for the market design must contain two major areas of work. The first is the creation of a matching market through the search to the interaction (for example through the organizational platforms)[1] by the original simple bilateral agreements based on the market exchange, then building longer chains and institutionalize them, and then already asynchronous interaction. It should be noted again that this approach does not lead to the creation of central planning, but is a functioning that is a centralized market. The second direction consists of continuous monitoring of market evolution and behavior of its participants and the necessary modification of such markets. Moreover, despite the organized cooperation and exchange, the design office should not lose sight of the need to solve at least 4 problems[2]: the problem of ensuring a tight market, the problem of elimination of market oversaturation, the problem of the issue of cooperation security and the problem of interaction easy.

Interaction making and market design on the base of the design office should be implemented, ensuring that the at least two conditions. The first (most important): considering the cluster as a market and engineering market design, we must understand that there must be a clear and measurable object of the market exchange. Of course, the modern model of "homo economics" began to include not only criteria for absolute profit, but other criteria are often not of economic nature. However, currently known attempts to implement cluster initiative without finding the object of market exchange, and on the basis, say out of reach areas. The second thing: it is a rejection of the Directive-informational pressure on cluster members, and the organization of communication in order to develop a common ideology of the future cluster initiatives. And, drawing on two results (the subject of the exchange and communication) to start the actual design of the pair interaction, and are already, then continue if successful, the construction of the multi-link value chains.

A similar approach is applicable, for example, for the activities of the business incubator. Considering the applicability of the algorithms of the market design, should begin with the availability of ideas for startups. Business incubators, not being the carrier of real ideas, provide resources to startups[3]. Therefore, the design office of the business incubator should assess the demand for resources in emerging market and assess the likelihood of exchange (otherwise the business incubator is transformed into the landlord on the office market). Therefore, creating a business incubator, it is important to understand that the density of start-up market enough, and the number of such sentences constantly, if the market of business incubators is saturated, and the number of startups not grows, the real pair interaction is not happening because of the lack of object exchange. The same situation is possible inside a cluster if the density of companies working in the field of activity of the cluster is high, it is high probability of increase and density of interaction, and, more significantly, it becomes a high probability of relevance of cluster initiatives.

One of the known solutions, which is a practical confirmation of the effectiveness of the above proposals is getting the concept of the competences networks, when in the cluster becomes the administrative authority, designing pair interaction within the network and forming a value chain of competence of the enterprises located on the region[4]. However, in spite of this performance, it should be noted that

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[1] Ковальчук Ю. А. Стратегическое управление эффективностью модернизации: Монография. – М.: БИНОМ. Лаборатория знаний, 2010. – 144 с.

[2] Рот Э. Кому что достанется – и почему. Книга о рынках, которые работают без денег/Элвин Рот; пер с англ. – М.: Манн, Иванов и Фербер, 2016. – 256 с.

[3] Ковальчук Ю. А., Степнов И. М. Управление модернизационными процессами в высокотехнологичных отраслях в условиях реиндустриализации экономики//Вестник Рязанского государственного радиотехнического университета, № 2(44), 2013, С. 114–122.

[4] Демочкин С. В., Степнов И. М. Интеграционные процессы в промышленности региона. – М.: БИНОМ. Лаборатория знаний, 2010. – 163 с.

the regional authorities often dominate the members of the cluster, making it impossible to influence the results of activities[1]. This approach does not provide market design, and such a cluster will operate as long as the regional government will invest in it more attractive to participants resources (cheaper than in other markets), but nevertheless confirms the validity of the first condition, since resources will be the object f exchange in a certain period of time. For example, when the shortage of land for building, creating a cluster for the efficient use of land will lead to a possible object of exchange. However, this is a simple case of combining and applying the algorithms of market design in conditions of deficiency. The design of matching markets will be most effective for cluster initiatives in the context of multiple choice (for example, to the suppliers).

Thus, the development of the methodology of the design of matching markets in the cluster initiative will solve many accumulated problems, and in replacement dirigisme models of many regional clusters (requiring constant monitoring of performance indicators, both economic and socially significant) that this methodology can offer a mutually beneficial exchange and form a sustainable new market for the cluster members.

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3. European Cluster Trends. Final report. European cluster observatory. March 2015. – 76 p./Режим доступа: http://ec.europa.eu/growth/smes/cluster/observatory/about_en.
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