

FORMING OF CONDITIONS FOR DEVELOPMENT OF INNOVATIVE ACTIVITY OF ENTERPRISES IN HIGH-TECH INDUSTRIES OF ECONOMY: A CASE OF INDUSTRIAL PARKS

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ABSTRACT

The present study presents and discusses new understanding of social and economic cycle of industrial parks as well as argues in favour of necessity to implement comprehensive projects of industrial parks territory development. In this article the authors refer to the necessity to develop a modern, quality business environment which the authors understand as the integration of companies with different production bases based on one industrial park. The authors of the article point at the importance of defining the productive activities of the residents in the first stage of the social and economic cycle of industrial park development. The construction of a modern IT centre is promising for the industrial park. The authors indicate that the next step in the cycle is to determine the branching of the resident company, as the area of the industrial park depends on it. Regarding the importance of an integrated approach to industrial park development, the authors emphasize the necessity of focusing on scientific and technological developments. The procedure of creating the complex of infrastructure elements of industrial parks has been considered. This program will allow facilitating the work of anchor residents.

Keywords: Cycle, Industrial Park, Integration, Production, Innovation.

INTRODUCTION

The present century needs special tools to meet the ever increasing development of different aspects of human life. Efficient management approaches should be adapted to guarantee the progress in technological, environmental and health aspects of human life (Khorasani &

Almasifard, 2017). Building industrial parks plays important role in this regard. This article focuses on the issues of socio-economic cycle of industrial parks. In order to develop an innovative structure, industrial parks need to be created and developed to address the problem of completing the chain of science and technology developments implementation. The industrial park is a special type of contractual inter-firm production network of anchored residents that interact with venture funds and business angel communities, service companies located on specially designed and managed Industrial zone with a single engineering infrastructure and technologically linked to a large enterprise producing the development and manufacturing the final product (Garina, 2014).

The industrial park is a tool that can create the conditions for the development of innovative business. The social and economic cycle of industrial parks suggests the construction of a complex that includes all the types of infrastructure elements needed for commercialization: Laboratories, individual offices and open-space offices, conference rooms, business meeting facilities, business incubator and co-working centre, data processing centre, service companies and representative offices of large companies- potential customers for innovation (Eremin, 2008).

The present study aims to develop and discuss new understanding of social and economic cycle of industrial parks to determine the necessity to implement comprehensive projects of industrial parks development. In this regard, this paper presents and discusses the full description of the two stages of the socio-economic cycle of the industrial park development.

METHODOLOGICAL FRAMEWORK

Degree of Scientific Elaboration of the Problem

The problems of the social and economic transformation of industrial parks are reflected in the works of Porshnev, Rumantseva and Salomatin (2008) and other scientists (Porshnev, 2008).

The scientific works of the following authors give consideration to the management of the development of regional industrial parks: Eremin (2008), Pytkin (2009), Tatarkin (2008) and others (Eremin, 2008; Pytkin, 2009; Tatarkin, 2008).

A significant contribution to the development of the problem has been made by scientists: Efimychev (2011), Kuznetsov (2014), Yashin (2016) and others.

The work is of great theoretical as well as practical importance. Our main objective is to create an infrastructure for the development of innovation activity of industrial parks in high-tech priority sectors of the economy in order to accelerate the development of the innovative sector of the economy.

The article outlines the objectives of establishing the social and economic cycle of the industrial park:

1. To design the project and build industrial parks involving private investments;
2. To attract and place in the industrial park the anchor resident- innovations contractors;
3. To attract and deploy R and D units of large companies in the industrial park areas;
4. To provide full support within the framework of industrial park for the commercialization of R and D innovations results at each stage;

5. To organize the industrial park's activities based on economic expediency and efficiency.
6. To ensure a high commercial and budgetary efficiency of the project.

The studies were conducted using the elements of systemic and economic-mathematical approaches, with the application of systematization, analysis methods (Eremin, 2014).

Note that the expected effect of the industrial park is:

1. Increasing the investment in small innovative enterprises to 1.5 billion rubles by 2018;
2. Development of engineering competencies in the fields of specialization of the park within the engineering centre;
3. The share of the commercialized developments of the park will reach 70% of the total number of incubated projects in the technology park areas by 2018;
4. The share of innovative goods and services in the total volume of goods and services produced by residents will be 80 per cent by 2018;
5. Accelerating the innovations introduction in industrial plants of the region and the introduction of new products on the market;
6. Completion of the integrity of the system of the introduction and commercialization of innovative projects from the idea to serial production;
7. Attracting at least 2 high-tech international companies with innovative competencies (Efimychev, 2011).

The essence of the problem is that the social and economic cycle of industrial parks includes:

1. Industrial park design (competitive bidding, conclusion of the contract, state expertise);
2. Erection of an administrative building as well as a business centre with the reconstruction of a testing facilities, construction of an experimental laboratory building, infrastructure facilities;
3. Construction of Office and laboratory and Engineering buildings;
4. Putting into operation the objects of industrial parks and the parallel placement of anchor residents (Kuznetsov, 2014).

RESULTS AND DISCUSSION

In addition, the financial implementation of the industrial park is based on the principles of public-private partnership. It should be added that funding is provided through regional and federal budgets, as well as private investment. In particular, the first socio-economic cycle is financed through federal and regional budgets (909350 thousand rubles), as well as from private investment (246643 thousand rubles); the second cycle is financed only by private investments (1867333 thousand rubles) (Kuznetsova, 2012).

At the same time, the state as a venture investor plays the leading role of in the development of industrial parks, as well as participates in the work of innovative industrial park companies and stimulates the export of products. Furthermore, the state is developing legislative and fiscal measures to encourage companies to carry out R and D and implement innovations. It should be added that the main effect of industrial parks is to stimulate regional and local levels of development and increase their competitiveness (Porshnev, 2008).

Thus, the main function of the industrial park is to ensure that the innovative resident projects are accompaniment from the moment they occur prior to their introduction. In this regard, similarly, the important areas in the development of the industrial park are the availability

of experienced business advisers, proximity to universities, development of the technological base, creation of conditions for innovative companies to conduct R and D and reduction in financial and temporal costs (Potashnik, 2013).

It must be stressed that the territory of industrial park contains the most demanded, unique equipment that forms the integrated technology chains, thus an approach to the technological equipment of industrial park is implemented with specialized equipment for the R and D conduction and the production of prototypes as well as small series of products.

Note that it is planned to develop a system of network interaction of industrial park with the nearest science and education and production centres, which will allow eliminating the need for highly specialized technical equipment as well as increasing efficiency and reducing the cost of implementing the industrial park, to avoid the downtime of expensive plants (Pytkin, 2009).

At the same time, the availability of a well-developed scientific and technological environment in the industrial park shows that it is not necessary to have a significant cost to develop its own technological base. As a result, to integrate and achieve greater efficiency in the industrial park, it is necessary to focus the management of the equipment complex on one place, providing a single point of delivery of scientific and technical services in the immediate vicinity of future residents that will allow to make optimum use of the available technological capacity to meet the challenges of the residents (Romanovskaya, 2017).

In addition, the industrial park is creating a brand, with a high reputation among all the participants in the innovation system, which helps to attract a wide range of professionals and greatly expand the boundaries of the existing network of contacts and this facilitates the acquisition of an investor or a mutually beneficial partnership with other companies.

Consequently, efforts are being made to involve the key high-tech companies of global and Russian scale to cooperate with the industrial park; they may be its anchor residents, a key factor for success of Industrial Park.

Anchor residents:

1. Increase the attractiveness of the industrial park for potential investors;
2. Ensure the demand for scientific and engineering personnel;
3. Define the work standards;
4. Create solvent demand for small and medium-sized technology companies as well as become the base for the formation of "spin-off" companies, thus, production and cooperation chains will be formed around anchor residents, including small and medium-sized technology enterprises, which create the necessary conditions for the establishment of viable technology clusters on the basis of the industrial park (Tatarkin, 2008).

CONCLUSION

The main finding of this study is that the development of an industrial park as part of an innovative structure is carried out through the following functions:

1. Optimizing of the use of industrial park areas: Searching and attracting investors and residents, constant market monitoring, integration of counterpart communication.

2. Creating an attractive environment for the customers of Industrial park services: The high quality of services provided the provision of a wide range of additional services to residents and the provision of operation of the industrial park's life support systems.
3. Ensuring a stable income: The implementation of rent-collecting plans, the most efficient use of rental areas and the creation and optimization of additional sources of income.
4. Creation of a positive image of the industrial park: Realization of marketing and promotional activities, liaison with public authorities and administrative bodies (Kharitonovitch, 2015).

In conclusion, we should say that in view of the need for large investments in creation of industrial parks, such projects would be advisable to implement in a public-private partnership framework and involving long-term commercial credits. In this case, the regional authorities invest in the form of lands allocation, designing of project documents and the provision of engineering and transport infrastructure within the industrial park territory. Monitoring leads to the conclusion that industrial investment companies are useful to be considered as a private investor. It has been shown that the management of industrial parks infrastructure functions should be delegated to the governing company specially established by regional authorities (Mizikovsky, 2016; Yashin, 2016).

Subsequently, the social and economic performance of the industrial park:

1. The number of employees of industrial parks service companies will increase from 220 to 520 persons.
2. The number of employees of industrial parks will increase from 580 to 1480 persons.
3. The number of residents in the industrial park will increase from 40 to 75 people.
4. The total area of industrial parks will increase from 18 954 to 49035 m².
5. The annual proceeds from the sale of the products, works and services of the industrial park resident companies will increase from 0.5 to 3.6 billion rubbles.
6. The annual amount of additional tax contributions to all levels budgets will increase from 72 to 645.3 million rubbles
7. The amount of additional revenues in the budgets of all levels will increase from 72 to 1739.6 million rubbles.
8. The annual profits of the industrial park management company will be 27.7 million rubbles;
9. The payback period is 12 months.

According to the study, a pool of service companies, financial institutions and development institutions should be formed to achieve the objectives set for the development of industrial parks (Garina. Ekaterina P, 2017).

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