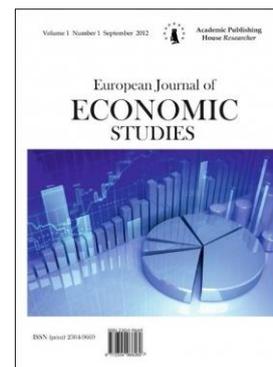


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Fostering the Sustainable Development of the Economy of the Russian Federation via the Creation of Small Innovation Enterprises at Institutions of Higher Learning

Mikhail N. Dudin ^{a, *}, Natalia P. Ivashchenko ^b

^a Russian Presidential Academy of National Economics and Public Administration, Russian Federation

^b Lomonosov Moscow State University (Department of Economics), Russian Federation

Abstract

This paper's relevance resides in the fact that, under present-day conditions, when the national economy is going through a stage of turbulence, there is a need to seek out new solutions that could help ensure the sustainability of national social-economic development in keeping with global trends. The paper explores the issue of ensuring Russia's sustainable economic development via boosts in the innovation activity of entrepreneurship, which it is sought to achieve via a number of ways, including the creation of small enterprises at institutions of higher learning. The authors examine the experience of Russian and foreign educational institutions as to the creation of small innovation enterprises, look into the major forms of partnership between business and college, and describe a possible mechanism for implementing innovation projects at institutions of higher learning.

Keywords: small innovation enterprise, interaction, college, institution of higher learning, support for small innovation enterprises.

1. Introduction

There are several potential solutions that may help ensure the sustainable and innovation-oriented development of the national economy. These, specifically, include:

1. The government's furthering the development of the nation's high-tech industrial and service sectors;
2. Creating an optimal institutional environment for activating science-driven production and service activity;
3. Stimulating the innovation activity of small entrepreneurship.

The last aspect (i.e., stimulating innovation activity amongst small enterprises) is one of the key conditions for ensuring well-balanced economic growth, as well as facilitating the technology-oriented development of the national economy. Issues related to creating the right incentives and conditions to boost innovation activity within the small entrepreneurship segment are currently of particular relevance to the Russian Federation, whose economy has lately been characterized by transformative changes and a shift from the industrial way of life to neo-industrialization.

* Corresponding author

E-mail addresses: dudinmn@mail.ru (M.N. Dudin), nivashenko@mail.ru (N.P. Ivashchenko)

2. Materials and methods

This paper utilizes as its primary sources of information some data from a number of scholarly publications by Russian and foreign researchers and draws upon a body of legal information on the activity of small innovation enterprises set up at Russian institutions of higher learning. In addition, to better get across the paper's main points, the authors make use of information from the websites of some of Russia's top colleges (e.g., Lomonosov Moscow State University, Moscow Engineering Physics Institute, Bauman Moscow State Technical University, etc.).

3. Discussion

It is obvious that an essential condition for the nation to achieve sound and well-balanced economic growth is robust innovation activity within the small entrepreneurship segment. It, however, will be hardly possible to achieve tangible boosts in innovation activity without the proper interaction of the entrepreneurial segment itself with the research-and-education sector (specifically, institutions of higher learning), which is what provides a rationale for the need to explore theoretical and methodological approaches to boosting the efficiency of institutions of higher learning in this respect.

Small innovation enterprises set up at colleges serve as a sort of connecting link between science and the real sector of the economy, and there are data indicating that nearly one in two state-run colleges in Russia is engaged in innovation activity. This substantiates the significance of issues related to enhancing and boosting the efficiency of innovation activity and commercializing scientific-technical solutions developed by Russian institutions of higher learning, as well as developing relevant criteria and indicators for evaluating the operating efficiency of small innovation enterprises at these colleges.

Russia has yet to fully develop its system of government support for the production and implementation of innovations. Yet, at the same time, it is worth noting that in 2009 the government passed a special legislative act that established relevant regulations and priorities for the operation of small innovation enterprises set up at institutions of higher learning*. Subsequently, via the passage of the Federal Law 'On Education in the Russian Federation', the government did some fine-tuning as to objectives in the activity of small innovation enterprises set up at colleges†. Pursuant to Article 103 of the above law, small innovation enterprises are expected to not only create innovation-technological solutions but also commercialize them, as well as provide jobs to students graduating from the colleges (Loginova, Lizina, 2014).

The small innovation enterprise segment has been highly popular with the nation's national research universities and has played a significant role in the country's development, which may explain the fact that the last few years have seen increases in funding for research and development at these institutions. Among the major Russian institutions of higher learning involved in the process are Lomonosov Moscow State University, Moscow Engineering Physics Institute, Bauman Moscow State Technical University, Moscow Institute of Physics and Technology, and some others.

However, the situation with fostering small innovation entrepreneurship and scientific-research activity in the overwhelming majority of Russia's colleges can hardly be called OK and, actually, leaves a lot to be desired, as in many of the nation's colleges innovation enterprises have been created just on paper (Mashegov, Lebedev, 2016).

At present, the nation's colleges are facing the urgent task of implementing innovations under the conditions of a knowledge economy, which is expected to facilitate boosts in the competitiveness of those institutions of learning (Dadayan, Storozheva, Shlyagina, 2015).

Government participation plays a significant role in providing funding to help small enterprises within the education system to master innovations, which signals the need to enhance the process further.

* Federal Law No. 217-FZ on Amendments to Certain Legislative Acts of the Russian Federation on Issues Related to the Creation by Budgetary Scientific and Educational Institutions of Economic Societies with a View to the Practical Application (Implementation) of the Results of Intellectual Activity of August 2, 2009 (as amended by Federal Law No. 273-FZ of December 29, 2012)

† Federal Law No. 273-FZ on Education in the Russian Federation of December 29, 2012 (as amended by Federal Law No. 359-FZ on July 3, 2016)

An optimal variant of the mechanism for government regulation and support of small innovation enterprises within the national economy is illustrated in Fig. 1.

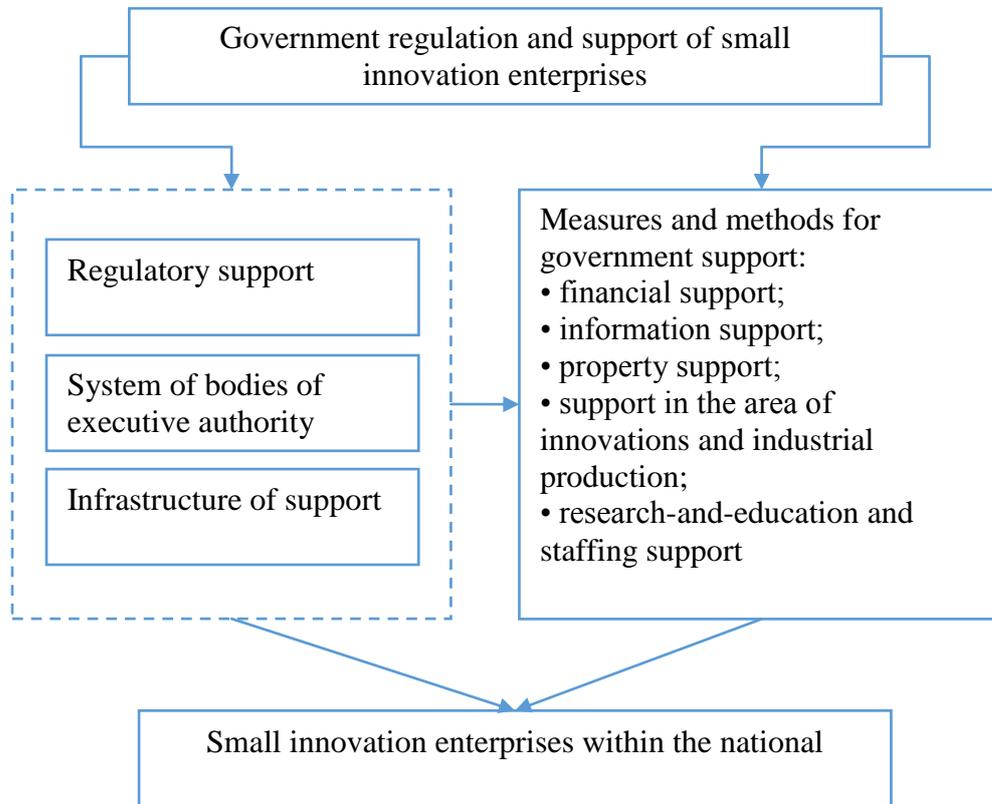


Fig. 1. Mechanism for government regulation and support of small innovation enterprises within the national economy (Levchenko, 2015)

The organizational-economic approach to creating and managing small innovation enterprises at institutions of higher learning is virtually unified. More specifically, the executive staff of an educational institution, in keeping with the specialization of and regional resource support potential for the college, determines the terms for investing in, and specific types of, innovation entrepreneurial activity that the state-run college is expected to engage in (Zhevor, 2015). The most sought-after area, which normally attracts the more significant amounts of state funding, is the one associated with creating and developing innovation infrastructure – above all, engineering centers.

It is worth noting that clusters, which have enjoyed support from the government, have demonstrated outperforming growth rates in the way of creating highly productive jobs, boosting investment activity, and conducting research and development activities. Thus, for instance, the use of the potential of cluster interaction between the system of secondary vocational education of the city of Moscow, employer organizations, and adjacent and supporting organizations for the purpose of facilitating the innovation development of Moscow’s economy has been determined as the primary area of focus in the Concept of the Long-Term Social-Economic Development of the Russian Federation through to 2020*.

Russia’s current state policy is clearly indicative of an orientation toward augmenting the scientific component in organizations of higher learning and shifting the focus of scientific activity from core scientific-research institutes to large colleges (Obukhova, 2015).

* Decree of the Government of the Russian Federation No. 1662-r on the Concept of the Long-Term Social-Economic Development of the Russian Federation through to 2020 of November 17, 2008 (as amended on August 8, 2009)

The trend toward increases in the number of small innovation enterprises set up at institutions of higher learning is characteristic of many developed countries. In European countries, small college-based innovation enterprises have been around since the mid-20th century. Among the countries where this process has been most successful are Germany, Sweden, and the US (Kuznetsova, Ioda, 2015). This fact reflects the significance and role of universities occupying a central position in the mechanism of interaction between science, education, and innovation business and acting as a connecting link in it. In European countries, by definition, a university is a scientific-technological center operating in a standalone fashion, both in terms of budget and its own development (Khalova, Aleksandrova, 2013).

The Massachusetts Institute of Technology and its activity, which has seen a great amount of technological research, could set a good example for Russian colleges seeking to develop innovation business that will be based at them. It is worth noting that among the chief stimulators of the innovation activity of entrepreneurs at the above college are freedom of research; local venture capital; large funding for projects and scientific research, as well as a state-of-the-art business center (Popova, 2013).

Sweden utilizes a special model for the innovation activity of educational institutions that combines the independence of institutions of higher learning in terms of commercializing the results of innovation activity produced by them with instruments directed at deriving a payoff from specific solutions that have been created.

The major forms of partnership between business and college in Sweden are:

- setting up special units in colleges that handle the commercialization of scientific results;
- creating special consulting organizations and forums on partnership with external market participants;
- creating holding companies that own and manage the company's shares and commercially distributing the results of scientific activity conducted at the university.

Wide use in Sweden has been made of evaluation centers, which serve as a connecting link between the university's research group and entrepreneurs from the industrial sphere. These centers specialize in conducting problem-oriented interdisciplinary research and transforming new knowledge into new products, processes, and services. A good example for Russian colleges is set by Halmstad University with its IE programme. The programme aims to ensure that students apply their knowledge as part of a real project in order to develop a new product, create a production prototype, and get their work registered.

Having gained an insight into the activity of small innovation enterprises at colleges in foreign countries, one can then consider all the pros and cons before implementing this experience in Russian colleges.

A significant impetus to the development of innovation activity at state-run institutions of higher learning in the Russian Federation has been the implementation of innovation programmes as part of a high-priority national project known as 'Education'*

Notwithstanding that the project's major objective is boosting the quality of education, many Russian institutions of higher learning have managed, thanks to state funding, to augment the innovation component dealing with the development and commercialization of scientific-technical novelties (Ioda, Kuznetsova, 2015). There are at least two organizations taking part in the innovation project – a college (represented by its representative – a small enterprise) and an external partner. All the work within the college is divided into two stages:

- 1) scientific-research work of an applied nature;
- 2) developing the technology of product output (Kukota, 2016).

The major sources of funding for the entrepreneurial activity of small innovation enterprises at colleges are the educational institution's own funds, funds obtained via state contracts and grants, as well as funds from the commercial activity of small innovation enterprises and educational institutions themselves.

Thus, the optimal formation and efficient operation of small innovation enterprises at Russian colleges provides the founder with such benefits as additional extra-budgetary funding for

* Resolution of the Government of the Russian Federation No. 715 on Amendments to the Federal Target Programme for the Development of Education for the Period 2011–2015 of July 16, 2015

the educational institution, the possibility of getting college innovations commercialized, students gaining hands-on knowledge, boosts in the competitiveness of future specialists in the labor market, and, on the whole, higher ratings for the innovation university.

Considering that at the macro-level the innovation system incorporates legislation, education, science, science-driven production, and the market, it can be stated that institutions of higher learning are an indispensable part of the structure of Russia's national and regional innovation system (Ruban, 2015).

The creation of a small innovation enterprise at a college facilitates the development of both the college itself and the entire system of higher vocational learning. This, in turn, creates impetuses for the national economy's fastest transition possible to an innovation-driven development model, benefiting the whole of society.

4. Conclusion

The data and conclusions derived in this work help establish that creating small innovation enterprises at colleges helps, first of all, to reduce the length of processes related to creating, testing, and implementing science-driven solutions. Second of all, the participation of Russian colleges in setting up small enterprises provides access to new sources of funding that can be used to stimulate research-and-development activity. Third of all, the practice of creating small innovation enterprises creates a positive synergetic effect from the interaction between science and the real sector of the economy, which perfectly agrees with the scientific paradigm describing the specificity of macroeconomic sustainability under present-day conditions.

Applying these inferences in practice should help provide new impetuses for Russian colleges to boost their efficiency and research-and-development activity, which will definitely facilitate smooth and sustainable national social-economic development.

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