Preparation of the Highly Qualified Personnel for Creation, Support and Implementation of the Innovative Projects

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Abstract

Knowledge, skills and competence in the field of innovative entrepreneurship received during training are not always applicable in real life. The lack of demand from Russian businesses for innovative products, does not allow the direct copying of the Western models of formation and promotion of innovative projects. This is caused by the number of reasons. One of them is personnel, including highly qualified personnel capable of creation, support and implementation of innovative projects. We offer several strategies that could increase the effectiveness of the university when partnering with stakeholders in sustainability co-creation. We also highlight several factors effecting the university's capacity to move beyond knowledge production towards implementation measures to transform society with external stakeholders.

Today, a lot have been done in the field of development of innovation infrastructure, the development and improvement of educational programs for innovative entrepreneurship. Including the programs of corporate universities and other corporate educational structures.

Key words: Innovative projects, Highly qualified personnel

INTRODUCTION

According to data from Bloomberg, in 2017 Russia was on the 26th place of the countries with innovative economies [1], although in 2015 it was 14th, and in 2016 – 12th. The rating base considered the following basic criteria:

- amount of funds as a percentage of GDP that the government spends on research and development;
- value-added production as a percentage of GDP;
- GDP per hour of working time;
- the percentage of public high-tech companies among all public companies in the state (including companies from the aerospace industry, defence companies, biotech companies, etc.);
- attendance factor in universities;

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Month of Submission: 04-2017Month of Peer Review: 05-2017Month of Acceptance: 06-2017Month of Publishing: 09-2017

- the percentage of graduates from the overall number of students enrolled;
- the share of University graduates among the working population, the number of researchers per 1 million inhabitants, and the number of patents filed by companies per 1 million residents.

Of course, the decrease can be linked with unstable oil prices and sanctions. But a drop of more than 2 times can hardly be explained only by external negative factors. The rating also considers the significant amount of statistical information in the field of innovation, among which a special role is assigned to government support and the human factor.

Currently, there is an acceleration of changes in all spheres of activity. Knowledge becomes quickly outdated and the volume of its production is rapidly growing. Expectations and the demands of society in relation to higher education have changed. Universities today are in need of becoming more dynamic, flexible and sensitive to social, scientific and technological challenges. They are also required to work more productively and efficiently, to be ready for

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innovation and international competition. Today, relations between the state and universities can not be considered as being thoroughly established. The transformation of these relations is targeting the encouraging of universities to react quickly and flexibly to changing priorities and emerging opportunities in the field of higher education and science, as well as the increasing importance of the quality of educational and management processes and reporting.

MATERIALS AND METHODS

In most countries, the state funding of the higher education is reduced or does not meet modern requirements (Fig. 1). Only in a few countries, it covers the cost of running the University with its mission for teaching and research [2]. With the increasing need for higher education on the demand side and the pressures regarding the allocation of the government expenditure from the supply side, the financing of education, in a highly globalized region, has become a topic of concern for all European governments [3]

In Russia, as in the Soviet Union, the training of highly qualified personnel has always been a strong element in the formation of human capital. This is recognized by foreign experts as well. However, before 2006, fundamental and applied orientation in the training of highly qualified personnel took the major share of budget financing. With the appearance of the first national projects, including in the innovation sector, the situation began to look different. In the spring of 2006 the first competition of innovative educational programs took place. It was attended by 200 universities [4], 17 of which became winners. Later, the program was extended until 2008. Thus, in 2006-2008, 57 higher education enterprises have received state funding in the amount of 30 billion rubles in order to implement their educational programs.

Later, in 2010 the state support was regulated by several decrees of the Government of Russian Federation as of 9^{th} of April 2010: Government decree 218 [5] in 2010 to 6 billion rubles, in 2011 - 6 billion, 2012 - 7 billion roubles; the Russian Federation Government decree 219 [6] in 2011 in the amount of 2 billion rubles and in 2012 - 3 billion roubles; the Russian Federation Government decree 220 [7] in 2010 - 3 billion rubles; in 2011 - 5 billion rubles; in 2012 - 4 billion.

Under the program of the Russian Federation: "Economic development and innovative economy" [8] for the period 2013-2020, 930799209 thousand rubles will be allocated, including by years (Fig.2):

Today, a lot have been done in the field of development of innovation infrastructure, the development and improvement of educational programs for innovative entrepreneurship. Including the programs of corporate universities and other corporate educational structures. However, knowledge and competences acquired during training are frequently not applicable in real life practice. This applies even to a fairly advanced and well-known training programs. This happens due to the lack of innovative products market in Russia. In fact, there is no proper demand from consumers, there is no niche of "ideas-projects-personnel" type created. This is caused by a number of reasons. One of them is personnel, including highly qualified personnel which is capable of creation, support and implementation of innovative projects.

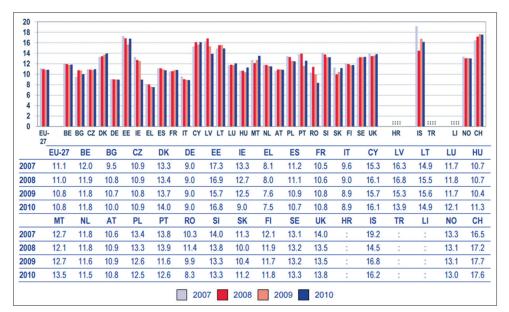


Figure 1: Education expenditure as a share of total public expenditure, 2007-2010

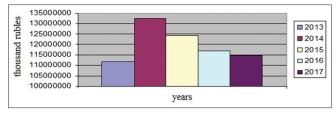


Figure 2: Overall volume of the budget funds allocated to implement the state program of Russian Federation: «Economic development and innovative economy» for the years 2013-2017

The creation of such a new niche is an independent and a long-term project. The relevance of the state and business "ideas-projects-personnel" will not arise by itself. Similar to the situation 10 years ago, when the state program was launched to create points of initiation and growth of innovation infrastructure, and later a number of joint business projects have been financed on a parity basis with the business, today it is necessary to pay attention to the formation of the target programs for the simultaneous training of personnel and innovative projects.

RESULT AND DISCUSSION

Universities are under mounting pressure to partner with societal stakeholders and organizations to collaboratively create and implement sustainability-advancing knowledge, tools, and societal transformations. Simultaneously, an increasing number of societal organizations are reaching out to partner with universities to achieve organizational objectives and increase the effectiveness of strategies to further societal sustainability [9].

Modern universities are large educational-scientificproduction complexes. They combine educational and scientific research institutes, colleges, faculties, departments (branches, departments), industrial centers, problem laboratories, design and technological bureaus, schoollabs. Today you can observe a trend throughout the world: not only governments but also numerous community organizations and groups, called stakeholders, want the universities to contribute directly to the creation of a unique know-how for their country. Higher education institutions have to meet these wishes in the context of declining support from the state. Therefore, it becomes increasingly clear that they find themselves in a situation resembling the situation of the private companies. To survive, universities have to adapt to the rapid changes taking place around them. They have to use market methods, especially in applied research, to increase the number of programs of additional education, to adjust programs of undergraduate and graduate studies. Such terms as "competition," "income," "economic efficiency", "productivity", "marketing", begin to appear in the literature on the management of the University more and more often.

This task can be partially resolved through the already established corporate universities conducting targeted training for business companies. However, such training is not associated with the creation and promotion of startups. This is a classic educational process, including the specifics of the particular corporation.

Another possibility is coming from the target growth points of the "ideas-projects-personnel." Such growth points include Moscow University and SKOLKOVO and a number of other universities as well as those universities, where particular attention is paid to the creation of the innovative environment. However, in the presence of seemingly all the ingredients for success, there is no "mass demand effect". Rather, it is just "a few" success stories.

But these two possibilities should not be underestimated. The tools used for the preparation of highly qualified personnel capable of creation, support and implementation of innovation are present in both of those areas. There is an absence of an own "Silicon valley". And what is this "valley"? In fact, this is the concentration of world brands on one site, where there are ample opportunities to evaluate, refine, fund and promote innovative products - a kind of a so called "trap" for start-ups.

So, may be it is worth thinking about attraction of foreign "branded companies" to the own territory. Then, the domestic business will start paying attention to this innovative resource. But the fact is that there is no "mass of start-ups" in Russia. Therefore it is impossible to talk about the transition of quantity into quality. Consequently, invitation of businesses to invest in the existing situation is definitely not an option.

It would seem that techno-parks as a growth point, could be a good mediator between business and innovative companies. This is true, but only to certain extent. Such structures hold contests for the selection of interesting and innovative projects, a number of start-ups is born inside the companies within the techno-parks. Even the cooperation with various structures of a University reveals a search for new ideas, but not their generation. Therefore, corresponding request coming from the techno-parks, which are aware of the needs of the business, could be quite justified.

For educational structures it is not a problem to open a number of programs, including master and additional education programs (e.g. retraining programs, the equivalent of the MBA). It is technically feasible. But who pays for education? It is quite difficult to imagine a situation where a person is investing simultaneously in the innovative project and his (her) education, because such processes appear as being quite consistent.

It turns out that there are possibilities, but the interest is missing. In this case, if the innovative development is a priority for the state, then the pilot funding for such educational programs where the output will result in creation of start-ups, is also the task of the state.

The universities, in order to resolve this problem, can perform the following:

- Master thesis and final MBA works may be the "point of launch" of start-up companies.
- This requires preliminary selection of practically relevant/innovation-oriented projects of the future masters.
- During admission tests, form groups of students for undergoing programs of professional training (MBA) taking into account already existing practices in the field of innovative entrepreneurship.
- A number of faculties (preliminary natural-scientific faculties) are able to organize interaction with their units where such projects can emerge and perform an external selection of potential listeners.

CONCLUSION

In Russia the training of highly qualified personnel has always been a strong element in the formation of human capital. This is recognized by foreign experts as well. However, before 2006, fundamental and applied orientation in the training of highly qualified personnel took the major share of budget financing. With the appearance of the first national projects, including in the innovation sector, the situation began to look different.

Currently, one of the sources of public funding can be a state program of the Russian Federation "Development of education" for the years 2013-2020 [10], due to the fact that organization and execution of educational programs that are offered correlates well with its goals and objectives.

Business needs in relation to funding coming from the state can also be realized under special programs of mutual interest related to the training of highly qualified personnel capable of creation, support and implementation of innovative projects.

This target training will allow to specifically form "ideasprojects-personnel" in the field of innovation, using both existing tools and innovative forms and methods of education.

ACKNOWLEDGEMENTS

The work is performed according to the Russian Government Program of Competitive Growth of Kazan Federal University.

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How to cite this article: Ziganshina ZR, Mishakin TS, Karev SA. Preparation of the Highly Qualified Personnel for Creation, Support and Implementation of the Innovative Projects. Int J Sci Stud 2017;5(6):71-74.

Source of Support: Nil, Conflict of Interest: None declared.