

A PROFESSIONAL TRAINING FOR THE SMALL INNOVATIVE ENTERPRISES

Marina Artamonova

Abstract

In the conditions of innovative development of Russian economy sharply actual there is a problem of creation of the new institutional environment and reproduction of the highly intellectual human capital. The article is devoted to the problems a professional training for the small innovative enterprises. In it results of the several researches are presented, allowing to reveal the basic problems and to offer measures of the state support of the small innovative enterprises, the new concept of a professional training is considered

Key words: the small innovative enterprises, training of personnel

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Introduction

In light of innovation-oriented development of the Russian economy the problem of creation and sustaining of high intellect potential labor capital becomes more and more urgent and essential.

Development of small innovation enterprises (SIE) is a natural process adequate for evolvement of new institutional environment for Russian economy innovation-oriented development.

1 Research

A number of studies has been devoted to this problem. For example, The Russian Academy of Sciences Institute of National Economy Forecasting team, leaded by prof. N.I.Komkova conducted in february 2004 a study to determine current condition of SIE active in different regions of Russia¹. Developed questionnaire and poll, conducted based on it

¹ The findings were included in the report on the program of the Presidium RAS «Forecast of technological development of economy of Russia with account of world integration processes (content, institutional and economic aspects), submitted by national authorities in as justification for the necessary measures of the state support of the SIE.

provided feedback and revealed opinions of existing SIE management about their companies current status, main challenges they were facing, most acute threats they had and gave enterprise leaders a way to convey their assessment of government role in innovation development of the economy².

To list measures and action items of government support of SIEs it is vital to understand difficulties and challenges these are facing. In addition to that, the poll process helped to gain knowledge of SIEs and investment funds (including government funds for small innovation business support) and banks relationship development.

The study conducted by The Russian Academy of Sciences Institute of National Economy Forecasting enabled structuring and characterization of privately-owned SIEs. Government stake and foreign investors of large companies share in them is insignificant. Number of SIE employees varies from 5 to 100 people. 62% of management believes their age structure nears an optimal one (employers younger than 45 years account for 60-80% of total labor force), while 20% targets to lower the employees ages and 14% strives to attract established people of higher age [1,171].

The fact of majority of SIEs employing in bulk people younger than 45 allows to draw a conclusion, these enterprises have a potential for development by growing up human capital of their employees. Indirectly, same conclusion can be proved by the fact, most of Russian market SIEs are relatively young, they emerged after completion of mass privatization of research and design institutes.

Russian SIEs management attributes highest value to intangible assets, not entirely reflected in balance sheet (personnel human capital is recognized and valued by 70%, company reputation - for 68%). That shows both high value of every single employee of SIEs and insufficient level of their intellectual property [1,172].

Obstacles in medium term development of high-technology, science-intensive complex (HTSIC) in post-crisis period are directly related with the acute challenge of finding and hiring highly qualified personnel capable to produce hi-tech products meeting strict

² Database of addresses for mailing questionnaires (partially mail, partly in an electronic form) served as a base of enterprises of participants of the Union of innovative-technological centers of Russia <http://www.unitc.ru> and the enterprises working in the market of security <http://www.sec.ru>. All were selected 250 enterprises. Sending a questionnaire was produced in March 2004. Received and processed 84 answer.

technological and operational criteria. Preparation and training of such labor force normally takes 5-7 years. And training is problematic due to low salaries in defense industrial complex (DIC) [8,5].

Labor shortage is one of the main hurdles for further development of both civil and defense sectors of the industrial complex. It is aggravated by the following:

- high professionals among both workers and engineers leave first;
- status of defense-oriented education suffered material decline, that is related to significant problems in engineering and technical high school;
- general level of tutoring and lecturing declines in absence of proven benchmarks of labor training/preparation for the defense industry.

2007-2010 showed first signs of improvement, linked to recognition of the problem both by government and enterprises management.

A Decree from the Russian Ministry of Industry and Trade #252 dated April 10, 2009 approved an industry-level special task program “On efficiency of industrial training systems and increase of qualification of managing officers and employees in hi-technology sectors of the industry” [5].

April 13, 2009, a Decree from the Russian Ministry of Industry and Trade #256 approved “A strategy to create in DIP multi-level continuous education system for a period through 2015” [6]. One of the Strategy goal indicators is preparation by 2010 up to 200 thousand employees under conditions of employment-oriented goal contract for defense industry.

A Decree by the President of the Russian Federation #518, dated April 2010 “On measures of government support for young employees of organizations of the defense-industrial complex of the Russian Federation” [7] was followed by the Russian Federation Government Resolution #393, signed June 3, 2010 and establishing procedures of its implementation [3].

On June 9, 2010 a Government Resolution #421 setting up a government plan of preparation of science workers and experts for DIC organizations provided to enterprises and opportunity to select young people and send them to study professions in demand [4].

A number of HTSIC companies conducts their own complex programs of selection

and support of employees during their education. For that goal in specialized high and technical schools they create target groups, provide scholarships, pay for apprenticeship during education, enter agreements to educate students with guaranteed employment. As a result, young labor inflow to HTSIC grew upwards comparing to competitors almost twofold.

In current conditions a goal of re-creation of mass high-qualified labor force for being modernized Russian economy moves to the top of the priorities list. And key direction of Russia's technological modernization shall be new industrialization to rebuild industrial and technological basis. Author shares an opinion, that shall be done emphasizing development of large industrial entities of DIC, which have been traditionally responsible for grooming highest-skilled labor. Based on these enterprises it is feasible to create active innovation structures (AIS), including SIEs. The goal of new level engineering industry rebuild as a "core" for processing industries is unrealistic without revitalization of national competitive R&D system, which financing shall match high standards of industrially and technologically developed nations. This activities, in my believe, shall be prioritized by government policy aimed at innovation development of Russia's economy providing for security of the nation.

An example of another survey is a polling of real sector of economy entities conducted by a laboratory of analysis and forecasting of the Russian Academy of Sciences Institute of National Economy Forecasting in August-September 2010³.

Answers to questions, related to labor market situation can serve as indirect confirmation of general economic improvement in Russia. Demand for labor grew up significantly in a course of 2010. For example, responses of access labor at the facility went down from 14.21% in September-October 2009 to 4.32% in August-September 2010. During the same time frame, a share of responses of general labor shortage went up from 14.75% to 28.85% [2, 146].

Labor force deficit structure remained the same. In August-September 2010, same as before, the facilities most often reported shortage of qualified workers - that accounted for 88.83% of all replies. Shortage of engineers and technical stuff was second - it was in 28.91

³ Just took part in the survey 217 enterprises of the real sector (ferrous and nonferrous metallurgy, chemistry, mechanical engineering, building materials industry, forest, woodworking and pulp and paper industry, light, food, pharmaceutical, perfumery, polygraphic and local industry; electric power industry; mining; oil refining; agriculture; construction; transport) from 58 regions of Russia.

of replies [2, 147].

Under the conditions of increasing qualified labor shortage it would be natural to expect the companies to increase labor training activities. Unfortunately the polling results does not allow to make a conclusion of such activity intensification in 2010.

By 2010 poll data , comparing to 2002, total number of responses admitting total absence of special personnel training systems at the company level even went up slightly - from 33.91% to 36.11%. And respondents reporting use of outside training organizations decreased from 50% to 44.91% [2, 149].

In our believe, long time absence of corporate professional training practices changes indicates existence within the Russian economy of two enclaves with defined borders. One of these is represented by companies with financial means to establish an adequate system of training for their personnel, the other one consists of companies with no such means.

Thus, lack of high-quality labor is one of the most acute macroeconomic problems revealed in 2010 polling. in addition, labor market in 2010 was quickly restoring to before-crisis level and had large scale labor deficit as one of its characteristics. Yet, total restoration of labor market deficit did not happen.

Innovation activities development shall bring fundamental change in attitude towards the main productive power - to high-intellectual high-efficient working individual. A role of high qualification personnel in innovation economy is high and will grow continuously. We are deeply convinced, preparation of labor force capable to manage innovation processes, develop and implement innovation projects is a top regional and federal priority. In this regard, it shall be emphasized, the need for innovation development, emerging of innovation economy requires **a new labor training concept** development. This nes concept shall include the following:

- emerging, development and self-realization of creative personality;
- continuous aim to generate perspective science and technological new developments as well as search for ways and means of their transformation in practical innovations;
- goal to groom high qualification, high intellect employees, system managers for innovation activities;
- training and education of labor being viewed as a part of production process, labor preparation costs being considered not as labor expenditures, but rather as long time

investments necessary for prosperity of companies, industries, regions;

- training in management of social and psychological aspects of science-intensive innovations, use of personnel creative potential for accelerated implementation of innovation projects;

- continuous training and education system establishment as an integral part of innovation product production;

- cooperation of universities and other regional high schools with the advanced regional companies involved in innovation projects, their joint activities in development of training courses, text and research book preparation in area of innovations, technologies, engineering systems, in preparation of highest qualification labor for new professions and perspective science and innovation areas.

Innovation practices (providing of science-intensive innovation goods and services in broad aspect) requires working capital. Such working capital nowadays virtually can not be obtained (for example, through credit) without special support. That is one of the reasons why home innovation producers and service providers stripped of such working capital loose best (most science-intensive) projects to foreign rivals, which are able to use balanced foreign markets to get working capital. Conducted studies alongside with analysis of best national and foreign experience show a need to combine innovation and investment activities under unified management to succeed in innovation economy. Such combination shall promote involved parties interest in successful fulfillment of all steps of same investment-and-innovation cycle, what is possible only when all participants aiming to achieve same final goal: production and transfer of “turn-key ready” innovation product and part-taking in realization and support of crated innovation goods and services.

Innovation-engineering-investment centers (companies, facilities) are an efficient way to carry on combined innovation and investment cycle. They are capable to demonstrate efficient production of science-intensive innovation and investment services implementing their own working capital with subsequent (build on the received results) investments into new projects, etc. So, **advanced creation of innovation economy is connected to accelerated development of national innovation-engineering-investment network infrastructure spreading into all regions.**

Conclusion

To sum up all stated above, the following conclusions can be made:

- strategic goal of innovation activities and development of innovation economy in our country for the next few years shall be complex development of national industries and regions to reach world competitiveness level;

- key resource of achieving the set goal shall be high school. High education system adequate to provide for key development power - labor,- shall be urgently complemented by innovation component. High school shall be and is capable to serve as a system coordinator to revitalize and develop both facilities and territories of our nation;

- to insure efficient fulfillment of the strategic goal Russian high school infrastructure shall be complemented by innovation-and-investment structures (centers, complexes, companies, institutes...) so, that high schools shall become educational-scientific-innovation conglomerates. **It is high school system which has has perspectives to serve as a basis to build Russian innovation-and-investment network aimed to connect science and production in all regions all over Russia.** That is due to the following features of national high school: it is dispersed in all regions of Russia; it has high science and technological potential; it has universal cross-industry essence: Russian universities science schools cover all areas of national economy; through its graduates and alumni it interacts with all regional and industrial management structures; it has relatively high information technology level, including global and local computer networks, combined into one system; it enjoys support of population; it is flexible.

In our view, the main advantage of proposed approach is, it will provide conditions for efficient integration of high school, academic and applied industry science in Russia, as well as world science achievements to create, fulfill and develop innovation projects, to unfold innovation activities as a precondition of development in our country an efficient innovation economy with adequate labor capacity.

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Contact

Marina Artamonova

The Lomonosov Moscow State University

Russian Federation, 119991, Moscow, Leninskie Gory, 1, building 46, Department of Economics.

mvaltamonova@gmail.com