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THE EFFECTIVE GOVERNANCE IN HIGHER EDUCATION: ANALYSES, OBSERVATIONS AND FACTORS (CASE STUDY: JAPANESE PROGRAM “INNOVATION – 25”)

Abstract: higher education requires highly qualified specialists with new competencies as active and responsible participants. As a result of the Bologna Process’s institutionalization in accordance with the Bologna Declaration’s provisions, the intensity of international integration and modernization is taking place all over the world, in particular, Japan. An international study in reforming the educational system according to new challenges and the globalized world conditions, studying the world trends in educational changes is necessary for the successful educational reform in Russia.

Keywords: higher educational policy, modernization, integration, national and regional management, professional studies

1. Introduction

The education of the 21st century is the intensity in transformation affecting the organizational structures, as well as the content, methods and technologies, the conditions and forms of international cooperation; what is more it is the result of the internationalization and globalization between countries with common historical /civilizational roots and comparable levels of socio-economic development and similar problems. Participating in regional and international integration processes differ in the initial assumptions and specific mechanisms, nevertheless they have many common basic features. International integration processes recognize the importance of creating a single educational space (comparability of educational standards and qualifications), maintaining high quality education, expanding mobility and simplifying recognition procedures.

The Japanese experience in state support of the innovation process is rather contradictory and can’t be considered uniquely successful. Nevertheless, as a prerequisite, we can designate the intensification, which became the basis for innovative development. In the 1960-1990’s Japan’s national innovation system was focused more on imitating and improving products and processes already developed in other countries.

During this period, the inter-firm innovative relations were formed, contributing to the growth of intellectual potential, and the workforce’s high professionalism in innovative firms. Basically, Japan’s research system was mainly built on the isolation and business self-sufficiency, a clear system of lifelong recruitment and promotion, as well as training of personnel within the firm. Self-sufficiency was also supported by a closed-loop financing system, which included a separate bank for each large company. The same closed system for the research implementation in the public sector: a low level of research work was due to inadequate training of personnel.

It should be emphasized that Japan didn’t participate in the process of global integration of innovation activities and was on the last places according to OECD. Japan has put the development of technology parks on the track of state planning and the Japanese experts’ attention has drawn from the American experience in cooperation between scientific and production structures.

In developing the national strategy for innovation, the Government of Japan is actively using the experience of other countries:

1. American Competitiveness Initiative (ACI) – principles and management of innovative development;
2. European Program of Competitiveness and Innovation Program (CIP);
3. Innovation Support Program for Small and Medium-sized Enterprises (SME);
4. Science and Innovation Investment Framework;
5. OECD Innovation Strategy.

The Committee of the Intergovernmental Organization for Economic Cooperation and Development has prepared the education development visions on the basis of national reports on the priorities of Japan’s educational policy for the period up to 2010: the analysis of the educational institution’s indicators based on the results of their activities under the PISA program, using research under the OECD and other International organizations.

“Strategy of Japan’s technological revival”, accepted in 2013 at the governmental level is one of the main tasks in stimulating and creating favourable conditions for the country’s economic and social progress¹. In the changing situation and the priority of tasks, this strategy is regulated annually; it was adopted and approved by the Cabinet of Ministers of Japan in 2015 under the subtitle “Investing in the future. The productivity revolution².”

In reality, the technological development stimulation isn't the basis of Japan's government policy, and the priority is modernization and structural changes in the country's higher education, mainly at the national level. With the transformation of government policy in Japan in late 2012, there have been significant changes in higher technological education, requiring careful consideration and evaluation.

The government policy in Japan is called "the fundamental plans for scientific and technological development" (*kagaku gijutsu kihon keikaku*) where the most important elements of the science and technology policy should be reflected. The plan foresees the document describing the priority areas for the progress in science and technology. At present, the fifth "fundamental plan" is in strength, which was approved before the beginning of the 2016 financial year; the fourth "fundamental plan", designed for the period 2011-2015: through state scientific centers and research institutes with allocation of funding from the budgets of relevant ministries; through public and professional scientific and technical societies and associations; through private research organizations and industrial companies.

2. Essential characteristics for technological motivation

Sooner or later, the most useful ideas from the west and the integration components accompanied by the number of specific features become productive. The Japanese government, taking into account foreign and its own experience, developed a set of documents regulating the country's innovative activity up to 2025 by the forces of the three Councils of the Cabinet of Ministers of Japan:

- *The Council for Science and Technology Policy (CSTP)* was established in 2001 to improve coordination in science, technology and innovation. The CSTP has seven expert groups that develop policy proposals in priority areas, in the reform of the scientific and technological sector, in the field of biotechnology, the use of space achievements, intellectual property management, etc.

- *The Strategic Council on Intellectual Property* develops policies and strategies in creating and protecting the intellectual property as the essential part of innovation, which is reflected in the strategic document "Innovation creation and global information dissemination until 2025".

- *The Council on Innovation Strategy* contributed for the development of the most strategic document "Innovations 25" as the integrated strategy for the country's innovative economy until 2025. It should be noted that the main emphasis is placed on interdisciplinary and interdepartmental coordination of the most important innovation projects. The scheme for coordi-

nating "Innovations 25" and ways to achieve them has direct and inverse relations with the possibilities and objectives of innovation and investment activity, as the reform of higher education. For example, innovative projects that have the greatest social impact are included in the "road map" of technological innovation.

In addition to the above-mentioned councils, there is *Scientific Coordinating Council* to coordinate scientific research, make recommendations to the government in the field of scientific policy, create scientific information networks, inform the public about scientific activities in the country, as well as to promote international scientific cooperation. The Council has three sections (humanitarian and social sciences, life sciences, physical and engineering sciences), 30 permanent committees in various fields of activity and provisional committees on specific scientific, technological and innovative issues. In 2007 the Council had prepared such strategic documents as "Perspectives of Japan and the role of scientific information in society" and "Principles of strategic science and technology policy until 2020" which guide in their practical work the relevant executive bodies authorities.

The "Innovation 25" strategy foresees various scenarios of innovation development until 2025. As part of the strategy, more than 60 innovative technologies are planned in the following areas: medicine and health; ecology, water resources, and energy; advanced technology and industrial development; safety and comfortable life for the population.

In the context of science globalization, technology and innovation, as well as increasing global competition in the innovative products and services, the Japanese government assigns a significant role to Japanese diplomats in international innovation cooperation, especially in the field of environmentally friendly technologies "The Beautiful Planet 50", according to which the application of environmentally friendly technologies should lead to a drastic reduction in greenhouse gas emissions by 2050. Japanese analysts engaged in innovative development, believe that the next 20 years will be characterized by three fundamental trends: the rapid aging of society and the decline in the population, which will have an impact on the country's innovative development; the explosive nature in the global information society; growth of the threat in the social and ecological balance, which can affect not only individual countries, but also civilization as a whole. The main areas in the scientific and technological sphere are:

- a. strengthening in scientific and technological cooperation with developing countries;

b. demonstration of Japanese scientific-technological and innovative leadership at the global level;

c. promoting the environmental ideas and clean technologies to the markets for other countries;

d. international cooperation in the perspective fields of science.

Educational institutions are too conservative and are many obstacles to provide the independent research and external consultations. The cooperation of universities and industry was hindered by numerous bureaucratic obstacles. University scientists worked in firms, bypassing the Ministry of Education in various ways. At the same time, the legislation was violated, since the university employees are civil servants, and they were not allowed to work in private firms without proper authorization.

The improvement of higher education is characterized by the modernization in professional education consequently it's essential to study the social background (the demographic factors' impact), balance between market and government initiatives, balance between university autonomy and state regulation, balance concerning collaboration, business and academies.

Higher education's decentralization is characterized by the adequacy of allocating funds for education, improving the management process and allocating funds to obtain an effective investment.

Learning environment as the encouragement to enriching the intellect: PISA results demonstrate the environmental influence and the psychological atmosphere in learning, including negative manifestations, which are associated with the education's rejections and obtaining work skills. It is required to look for techniques to strengthen the community's connection with the family and the education sector within the process of decentralization.

3. Government measures for improvement the education framework

The Cabinet of Prime Minister has taken a number of measures to improve government activities within the framework defined by the basic plan:

1. "Comprehensive Strategy for the Development of Science, Technology and Innovation" (*Kagaku gidzyutsu inobesen sogo senryaku*) was approved, which serves as the direct guidance for agencies related to scientific, technical and innovation policies.

2. Council for Science and Technology was reorganized and renamed the General Council for Science, Technology and Innovation (*Sogo kagaku gidzyutsu foreign kaigi*) with the status of the main interdepartmental body for discussion and analysis of state policy in the field of science and innovation.

3. "State priority programs" – Strategic Innovation Development Program (SIP) and the Program for Support of Advance Research and Development (ImPACT) have been adopted: the direct manager and the controller of funds, the Agency for Science and Technology is appointed - an independent legal entity created by the state.

4. The legal provisions and working conditions of researchers / research institutions are revised; inter-departmental barriers were removed to facilitate joint work on projects from academic institutions and universities.

5. The General Council renewal towards the formation and enhancement in the flexibility of the financing system and other measures of scientific and innovation policy.

Thus, the five-year fundamental plans will be accompanied with annual clarifying documents, primarily revised by the "integrated strategy", which will set priorities for the current year, based on the basic five-year plan of the main directions.

4. Major factors for effective governance

The urgency of creating effective governance in the sphere of higher education in Japan at the present stage is determined by the following factors:

1. *The universities' activities in the combination with the government activities:* the government is interested in the effective management system allocating budgetary funds for the correct and rational use of them. Thus, the creation of the innovative system with an effective and transparent quality assurance system, necessitates the development of a knowledge economy, an education economics and management of these areas of activity.

2. *The universities' activities are being restructured to meet the citizens' and employers' needs:* in the context of the increasing need for vocational training in various categories, the education programs are expanding; there is a growing demand for training programs with the study of specific disciplines in different universities, etc. The implementation of programs for advanced training and retraining requires new organizational and economic solutions, providing new management decisions that ensure the appropriate educational programs availability.

3. *Decrease in the public expenditures' share and extra-budgetary funds attraction in meeting the needs of higher educational institutions:* the transition to mass education and the demand for higher education, is due to the fact that the government is trying to shift costs to potential employers. Therefore, the characteristic feature of recent decades is that "investments have fallen below the level necessary to maintain sustainability." The budget financing schemes are built according to the formulas recognized by the educational community that stimulate effective educa-

tional, scientific, innovative and other activities of the higher educational institution.

4. The off-budget funds' competitions in the educational market: in the globalization and internationalization of education, the development of cross-border education, the diversification of educational programs, the increase of the educational services' export using the information and communication technologies, only under these conditions the competition between universities on the educational market is constantly growing.

5. *Changes in the university management's structure and functions*: in the autonomy of higher educational institutions in the extra-budgetary expansion sources, keeping the status of a budget institution contradicts the legal understanding of this status and obstructs the development of higher educational institutions. The formation of universities in a new status, with greater autonomy and responsibility, entails

changes in the structure and functions of university management.

6. Focused activity in the higher educational organization on the quality management systems' creation in accordance with world trends and organization of educational process in the conditions of intensive development of information and communication technologies (ICT). In modern conditions, the quality in higher education accreditation based on the part of professional communities, international professional associations, and the creation of effective intra-university quality management systems in accordance with certain educational and / or professional community requirements.

7. As a reflection of the globalization processes are the tendencies associated with the higher education integration, the international programs' creation, the formation of regional and international educational alliances.

¹ Nihon saikou senryaku. URL: http://www.kantei.go.jp/jp/singi/keizaisaisei/pdf/saikou_jpn.pdf. (Accessed on Sept. 27, 2015).

² Nihon saikou senryaku. Kaitei 2015 URL: <http://www.kantei.go.jp/jp/singi/keizaisaisei/pdf/dai1jp.pdf> (Accessed on Sept. 27, 2015).

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