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**Theme:** Overall performance of the Triple Helix Approach: From efficiency of factors of production to ‘modes of coordination’

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### **Triple Helix Concept and Problems of Innovation Development in Russia and Ukraine.**

The largest post-Soviet countries are suffering from low level of innovation activities widening gap between the industry and research institutions, both in government and higher education sectors.

This is reflected in declining (or stagnant) share of R&D financing from the side of industry, shrinking civilian R&D in business sector, declining share of graduates in natural sciences and engineering and some other indicators. On the other hand, there are examples of successful co-operation at the sectoral or regional levels in these countries.

The Triple Helix (TH) concept has found its interesting transformation in the publications of the Russian and Ukrainian authors recently. Analyzing the processes of creation and development of the national innovation systems in these countries such authors, as I. Dezhina, E. Kuznetsova, B. Saltykov, and some others propose to consider incomplete TH models, which describe the situation in these countries more adequately. Thus, TH model transforms into several different ‘double helix’ models of co-operation between different sectors of national economies. This approach reflects serious difficulties with innovation policy in the biggest post-Soviet states.

Orientation on development of traditional industries of the national economies, such as metallurgy and fuel production prevents these countries from focusing on knowledge production sectors. Lack on demand on R&D results widens the gap between the remaining R&D establishments and industrial enterprises.

Evaluation of the real level of innovation activities remains an important problem for both countries. Russia has introduced OECD standards, including elements of EIS, in its statistics in late 1990s – beginning of 2000s. Ukraine has started to conduct EIS-type surveys (on a limited scale- for five regions only) in 2007. At the same time, some forms for collection of statistical information at the state level have been preserved. This leads to the multiplicity of information sources on innovation activities. In addition, in both countries special surveys of innovation activities and its influence on competitiveness in different sectors were conducted in recent years (L. Gokhberg and others, 2011, B. Kuznetsov, 2007, M. Pugachova, 2008 and others).

Comparative analysis of information from different sources shows that levels of innovation activities differ substantially, depending on the source of data. At the same time, it is possible to find a number of common features in different sources. First of all, this is related to the main barriers for innovation activities, sources of financing, scope of R&D and so on.

The most important barrier to innovation activities in Russian and Ukrainian enterprises is the lack of financial resources. Enterprises rarely use bank loans to finance innovation activities as the interest rate is prohibitively high. It varied between 15 and 25% in 2006-2011, depending on the currency of the loan. Institutional barriers are also important, as well as a lack of demand in internal market. There are some important differences in innovation policies in both countries. In Russia, government has started several special long-term programs, aimed at support of education, R&D and innovation in recent years. Although it is difficult to make conclusion about the final results of these initiatives, it seems that they had positive effect on the level of innovation activities in the country.

In the contrast, Ukrainian state innovation policy has not changed substantially in recent years. Up to now, the main focus of government policy mix is on direct support of innovation in the form of (partial) financing of S&T programs and provision of direct financing to selected innovation projects. Till the 2005, techoparks had some tax incentives for stimulating innovation activities but the abolishment of these incentives in early 2005 has led to stagnation of technopark's development.

The gap between the higher education sector and the industry is substantial. Current legislation does not allow universities or research institutes to be founders of a spin-off company with non-state ownership in Ukraine, while in Russia legal regulations have been changed recently, that has opened the way for creation of start-ups, originated from R&D in university and government sectors.

Results of comparative analysis of different innovation surveys, including data from CIS-type innovation surveys and European Innovation Scoreboards for both countries, will be presented in the paper.

In addition, we used a number of different indicators, which describe the situation in innovation sphere and R&D. It is important to stress that for years innovation systems in both countries were 'internally-oriented', and not all internationally recognized indicators were used in the national statistics. This creates certain problems, and requires combination of different types of indicators (both internal and international) for correct reflection of the situation. For instance, number of published papers in international journals could not be considered as a relevant indicator, while the whole system of academic promotion was focused predominantly on domestic publications, which were important for obtaining academic degrees. Publications in foreign journals were not taken into account at all. This is especially true in the case of Ukraine, where new requirements, which include the need to have at least one foreign publication in a refereed journal to be promoted, were announced in mid-2012 only. In Russia the changes have been made earlier.

In some cases, statistics in both countries does not use data, which are comparable with corresponding data in other countries, even if they use the same names of indicators. For example, FTE (full-time equivalent) is calculated on different base, than in the most of OECD countries, that makes comparisons with other countries difficult (Yegorov, 2011, Fursov, 2012).

When it was not possible to analyse corresponding data, results of assessments have been used. It is evident the TH concept has a universal nature, and it could be used for the countries such specific countries, as the post-Soviet states, too.

At the end of the paper, conclusions about the prospects of innovation development of the largest post-Soviet countries are made.