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The collaboration activities in the innovation system of Russia

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1. OBJECTIVES

Cross-border knowledge transfer is an essential mechanism that affects the overall performance of national innovation system. Contemporary understanding of the innovation phenomenon stands for impossibility of efficient creation of novel technological advances and radically new products/services relying solely on in-house development.

One step to better understanding the scale and intensity of Russia's involvement into global knowledge production chains is exploring collaborative practices that accompany innovation activities of Russian companies.

This paper focuses on revealing patterns of cross-border cooperation in the process of innovation development. As a background, we consider geographical heterogeneity resulting in unequal macroeconomic conditions as well as variation of innovation performance and potential of the regions and sectors.

2. SCIENTIFIC METHOD

This study employs an extended set of statistical indicators in order to characterize the heterogeneity of Russian innovation landscape at the regions adjacent to the EU, Special regard is given to the analysis of North-western Federal District, considering variations of gross regional product, share of employment in high-tech industries, gross domestic expenditure on R&D and other characteristics of R&D intensity and outcomes, human capital for innovation, intensity of technological innovations.

Patterns of cross-border collaboration of Russian enterprises are explored using the results of specialized survey Monitoring of Innovation activities of Russian enterprises, covering 760

manufacturing companies representative at national, sectoral and federal district level. The firm level data is used to construct complex indicators of cross-border collaboration, including availability of cooperation with particular types of organisations, key objectives for cooperation, main forms of technology transfer.

Empirical findings are illustrated using a set of cases of cross-border collaboration of the companies located in the North-west Federal District.

3. MAIN RESULTS

The character of economic interaction of the Northwestern Federal District of Russian Federation and the European Union is predominantly determined by traditional channels of export and import so the economies of the two aforementioned entities are still not as strongly integrated as it could be without this interaction being largely restricted in the past. Despite a certain improvements in terms of international trade and technology transfer since the beginning of transition to market economy in Russia, the overall domestic situation had much more significant impact on industry thus influencing science, technology and innovation activity within the District.

There are several factors, determining actual intensity of cooperative activities within this macro-region:

- 1) Geographical position of the Russian North-West enables it to benefit from neighboring with highly-innovative countries of Scandinavia and Germany, as well as high number of educated people and comprehensively advanced industrial base.
- 2) However, unequal distribution of human capital within that macro-region leads to concentration of innovation (and entrepreneurial) activity in a few centers, mostly in the Saint Petersburg.
- 3) At the same time, vast natural resources of the region are attracting foreign investments for their extracting and transportation, but mainly not for further refining. As a consequence, current economic structure of the Russian North-West has a little incentive to change in the nearest future.

Generally, empirical estimates characterize cross-border collaboration as a sophisticated but highly efficient innovation strategy targeted mainly at access to new markets (cooperation with clients) and technologies embodied into machinery and equipment (30% of cases) as well as outcontracting R&D and engineering services (another 30% of cases). Main specificity of international cooperation compared to the domestic networking is concentration on process and organizational innovations as the main objective of co-development. In the joint activities Russian companies tend to bring in human capital (in the shape of technological skills) as well as the capacities for production. They expect their partners to bring in technology capital (machinery and equipment) and knowledge of the international markets.

4. POLICY VALUE-ADDED

One of the main factors hampering development of cross-border cooperation is the limited scope of innovation activity in Russian economy accompanied with low role of innovation as the factor of competitiveness and short horizon of planning (more than 60% of firms consider the appropriate timespan of process innovation development to be one year). The study envisages the fragmentation of National Innovation System: only minor shares of collaboration cases concern cooperation with institutional knowledge providers and with the market actors not directly involved into interaction (e.g. cooperation with competitors, sub-contractors, service providers – beyond clients and suppliers).

Thus, the most efficient way to foster international collaboration is to improve the framework conditions for innovation attracting more resources and competences into this area of activity. This is a clearly recognized objective for Russian Government reflected in a number of recent strategic documents of different level, but still the challenge is far from accomplishing.

From the account of other actors, the success could be associated with wise integration accompanied by clear and feasible objectives as well as readiness to act as a risk-taker or at least efficient risk managers. At present, there remains high demand for the intermediary platforms of different kinds, aimed at informing potential partners on the allocation of the available skills (as well as technological expertise) and market capacities in both Russia and EU.