Comparative Study of the Russian and French Innovation Policy Trajectories: The Changing Role of the State

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Having embraced the paradigm of innovation development merely at the turn of the 21st century after the colossal drastic social, political and economic reforms, Russia tried to implement the OECD recipes for innovation policies, which were initially tailored to the liberal laissez-faire and only later balanced model of university–industry–government relations. Meanwhile, it is worth mentioning that despite the transformation, Russia did not transcend the Soviet legacy of a vertically integrated state-led configuration of the national innovation system (NIS). The course of actions undertaken by the government to promote science and technology (S&T) failed to yield much awaited results. The main hypothesis of the paper is that the rather poor overall performance of the Russian NIS is conditioned by a mismatch between the goals of the innovation policy and measures applied to achieve them and is connected to the role of the state within the NIS.

The juxtaposition of Russia's innovation policy and that of France allows testing the hypothesis, as France represents an advanced economy which also used to be characterized by heavy state involvement in the second half of the 20th century, but have recently made progress in raising the efficiency of the functioning of its NIS. The compatibility of the Russian and French NISs derives from the similarities in the composition of their high-tech sectors, historic structure of linkages between the government, industry and academia and policy measures introduced to promote innovation. Therefore, the analysis of the two countries' innovation policy dynamics in late 1990-s-2010-s sheds light on the essence of their approaches to the regulation of the NIS and reveals whether they differ and, if they do, to which extent and in which way. The research thus shows whether the disparity in the outcome of Russia's and France's innovation policies can be attributed to the divergence of their trajectories in general and actions of the state in particular.

The methodological tools used to explore the role of the state within the Russian and French NISs include the combination of the NIS theory and conceptual framework of the Triple Helix model. The first one offers the general outlook of the basic elements of the NIS and their functions, while the other adds a more nuanced picture of interrelation between the three key groups of actors within the NIS, based on the scope of their responsibilities to one another and institutional formats of their interaction. The merger of the NIS and Triple Helix approaches applied in the research mirrors the analytical framework of Triple Helix Systems introduced by M. Ranga and H. Etzkowitz (Ranga, Etzkowitz, 2013), but serves to study the national rather than regional context. The evolutionary perspective in its turn allows capturing the key changes that took place in the course of the innovation development in both Russia and France over the period since 2000-s up to the second half of the 2010-s.

Besides, as at present national development is inseparable from the global context, the analysis should take into account the broader picture as well – first and foremost the position of the country

within the global innovation system. The available data demonstrates that the type and degree of the insertion of the economy into global value chains (GVCs) and global innovation networks (GINs) correlate with the level of its competitiveness in general and strength of the NIS in particular (Jurowetzki, Lema, Lundvall, 2018: 26). Therefore, the configuration of NIS and innovation policy should ideally contribute to the upgrading of the country's place within GVCs and GINs.

At different stages of development the completion of this task requires various sets of measures and steps, having specific implications for the role and functions of the state (Porter, 1990: 87) within the NIS (Golichenko, 2011: 552). For example, as the country's economy progresses the emphasis shifts from more direct forms of the government's involvement to indirect and horizontal ones (Porter, 1990: 87). Yet, catching up in the pursuit of the highest level of national competitiveness, "based on innovation, unique business strategies of domestic companies and on globally recognized products and brands" requires the passage through an investment-driven phase, where the role of public actors is prominent (Dudáš, 2014: 100). All in all, the innovation policy should hit the intricate balance between national and international considerations.

At the 1990-s both Russia and France faced serious economic challenges that had a profound impact on the functioning of their NISs. At the time both countries had pronounced etatist models of innovation development regulation, as their industrial and academic sectors were largely encompassed and directed by the state, leaving "too little room for "bottom up" initiatives" (Etzkowitz, Leydesdorff, 2000: 111). The authorities relied on vertical bilateral coordination mechanisms such as large-scale sector-specific targeted programs backed up by the instruments of industrial, S&T and procurement policies as well as direct control and ownership of key large high-tech players both in academia and industry.

In both Russia and France those "national champions" operated as ""autarkies"… integrating all stages of the production process" (Karacharovskij, 2012: 128). As a result they were far from being actively engaged into domestic innovation networks (OECD, 1998: 58-60), let alone international ones. The lack of interaction rendered the NISs of the two countries rigid and less adaptive, hindering free flow of knowledge among the actors and consequently negatively affecting the overall efficiency of innovation processes and decreasing the competitiveness of their economies. The dominance of rather isolated big public organizations in most high-tech segments of Russia's and France's national markets also limited the potential of the growth of innovative entrepreneurship.

To reverse the situation first the French and later Russian authorities resorted to the recipes and recommendations approved and propagated by the OECD. According to OECD analytical

documents devoted to the best practices in S&T development the main goal of the government within the NIS consists in enabling innovation through the creation of the environment conducive to generation and transfer of knowledge and technologies, acceleration of the commercialization and adoption of inventions (OECD, 1998: 78; OECD, 1999: 62-68; OECD, 2002: 55-70; OECD, 2005: 21-26). France and Russia embarked on the path toward introducing innovation-friendly institutional ecosystem and concentrated on strengthening existing and building new linkages between the pillars of the NIS via construction of supportive infrastructure, launch of public-private partnerships and provision of financial and organizational assistance to small and medium enterprises (SMEs) involved into innovation. Nevertheless, the results of the two countries' innovation policies differ substantially.

The conducted comparative study of the strategies and policies of innovation development of Russia and France in late 1990-s-2010s revealed that despite the similar objectives their content varied significantly in number of ways. First and foremost, while the French government coniderably decreased its direct involvement into the day-to-day operation of the national champions, having partially dismantled the vertical "state-industry" and having transformed the underlying principles of the management, Russia's authorities preserved full ownership and direct control over major enterprises.

Secondly, though both countries deployed efforts to revive existing and establish new forms of public-private partnership such as various innovation and technology transfer centers, business incubators, technological parks and platforms, clusters and special economic zones, France backed them up by a cohesive research tax credit (RTC) arrangements which became the "key instrument for the competitiveness and attractiveness of the French territory". Russia, in its turn, failed to shift from a system dominated by direct subsidies to a tax incentive one (Chabanel, Gouzènes, 2017). Besides, while the French government experimented with means of integration of all the above mentioned mechanisms into a single net of support, the Russian authorities opted for letting those institutions work on their own.

Thirdly, the discrepancy between the Russian and French approaches to promoting innovation is apparent in the very logic of adoption of recommended S&T policy measures, instruments and mechanisms. Russia's government followed the guidelines literally and implanted basic structures and institutions without alterations. The French authorities, on the contrary, were quite creative in tackling issues related to the import of other countries' experience, trying to merry it with the national context. They came up with few novel solutions to very complex problems the French NIS faced. For example, to smooth the process of denationalization of strategic assets and preserve some leverage over them in the aftermath the state initiated and supported creation of stable cores

of cross-shareholding (Tiberghien, 2007: 90). Such cases as the establishment of the Government Shareholding Agency designed to "to act as a shareholder for the French Government in order to develop its assets and maximize the value of its stakes" (Welcome to the French Ministry…, 2018) and the launch of competitiveness cluster policy (Les pôles de compétitivité), combining territorial (industrial districts) and innovation (Anglo-Saxon clusters) considerations (Boquet et al., 2009: 228-229), also fit the pattern.

Finally, the comparison of Russia's and France's innovation strategies indicates that unlike Russia the French government betted on raising the engagement of regions into the realization of the national programmes. This point is connected to the previous one about customization of approved practices, but is worth mentioning separately as in practice it implied a long-lasting and gradual process of redistribution of powers between the central and regional authorities, which resulted in the delegation of many regulatory competences to the French territories (Renou, 2017: 82-84). The idea lying behind this move was to match the comparative advantages and capacities of regions with the national priorities in the field of economic, social and S&T development and thus create synergy, coherence and specialization.

Interestingly, following this logic the elites of France abandoned the attempts to expand the variety of public institutions financing innovative enterprises. Instead, they centralized the management of public funds in the hands of a single organization - BPI France (Banque publique d'investissement). At the same time they reoriented all public research entities towards cooperation with the territories to deepen the specialization and expertise of the latter and empower them to become internationally renowned centers of excellence in the corresponding fields, attracting relevant businesses. Despite the fact that the fruits of this strategy are not evenly distributed among the French regions (DATAR, 2012: 7-37: Eurostat, 2017), some of territories have already gained international prominence (IAU Île-de-France, 2018: 5-6).

As far as Russia is concerned, its national innovation strategy became an umbrella under which the federal states followed their own agendas. The actions undertaken at these two levels are not aligned. In other words, the federal S&T development programs generally do not take into account regional features and do not translate into the introduction of territory-specific measures. The work of major funds and public institutions, charged with the task of promoting innovation, including research organizations, is sporadic and ad-hoc in the regions. As a result, the parameter of the quality of innovation policy varies massively in different federal subjects, reaching zero in one of them (Gokhberg, 2017: 46). While poor performance in this sphere can be attributed to the overall vastness of Russia's territory and incapacity to cover it at once given the limited resources, it is evident that the government does not consider it urgent to enable regions to pursue the path of

specialization in principle. Instead, it confines itself almost exclusively to the support of several key high-tech industries.

All in all, the above-mentioned characteristics of the Russian and French innovation policies show that the trajectories of the evolution of their once etatist NISs are diverging. The role of the state within the NIS transforms alongside. The French case represents an example of a gradual and smart passage from a state-led to state-enhanced mode of functioning, where the state demonstrates certain features of an entrepreneurial behavior. By doing so the French authorities created the conditions, which, on the one hand, allow the government to preserve the control over strategic assets and stay on top of managing the NIS's competitiveness at the catching-up stage, on the other, mitigate the rigidity of the NIS and flaws associated with it through the ingenious hybridization and customization of the internationally renowned S&T development practices inherent in the balanced Triple Helix model.

In contrast, the Russian authorities tried to inject fragmented horizontal measures into the vertically integrated NIS, characterized by the excessive dependence on the public sector and omnipresence of the state, without altering the underlying principles of its operation. In these conditions new mechanisms, which were not furthermore integrated into a single ecosystem, fall short of the target, making case for even greater direct involvement of the state to balance the NIS's functioning and fix its failures. While in the short term this type of policy can serve as a palliative, in the long run it cannot remedy decreasing competitiveness and growing vulnerability of the national high-tech sector and economy in general, as it does not contribute to the creation of the institutional environment inducive to a more active synergetic interaction of the NIS's actors, which results in endogenous innovation.

In many respects the French innovation development experience offers a viable alternative to the two equally devastating opposing extremes - namely, the total withdrawal of the state, at one end of the spectrum, and its overbearing dominance, at the other. Thus, it is worth examining to draw a number of valuable lessons on the subject of a smooth transition from a statist to a balanced Triple Helix system, which can be useful and applicable in the Russian context.

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