

## “Lessons” in geometry

Vast spaces of Russia, dispersion of its natural potential, variety of cultural, historical traditions and conditions, geographical position between Europe and Asia, North and South, West and East – these and many other features define and shape the area of admissible and acceptable approaches to solution of social and economic tasks of country development for a long time.

Consideration of spatial specificity has always been their most important feature and will remain so in the future. As the tasks to be solved, including those related to the advancement of Russia to the North and to the East, became more complex, the understanding of the fact that it is very difficult to implement the plan on their own, has increased. For example, it was quite clearly manifested in the process of formation and development of the mining industry of the Urals in the XVIII – early XIX centuries. In order to develop the natural riches of the Urals and to obtain the necessary products for the state needs (primarily for the army), a system of mining management was created, including not only the national level, but also territorial – in those regions where mining enterprises were directly created and developed.

The principal feature of the Russian approach, which was then developed and implemented, was to consider the “bundle” of mining (mines, quarries) and mining-metallurgical (factories) enterprises as the object of management at the territorial level<sup>1</sup>. Those provided, speaking in modern language, a combination of national priorities at the level of the country as a whole with the opportunities and peculiarities of solving problems at the level of the territory.

Quite expectedly, this approach, in connection with the transition to the system of centralized planning and management, got a new impetus to its further development. For example, already in 1920. S.I. Gusev noted that “...the work of drawing up horizontal production programs is closely connected with both accounting and distribution, and with the comprehension of the experience

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<sup>1</sup> “The main subject of the regulation of our mining laws in general are “mining industries” and “mining plants”.see: Strukgov V.G. “Course of the mining law”. S. – Petersburg: Publishing house of I. N. Skorohodov, 1907. 310 p.[Pg 94].

of economic construction and management". The "geometrical interpretation" of this problem, also proposed by S. Gusev: "... The system of intersecting vertical and horizontal centralism and accordingly intersecting horizontal and vertical autonomy is the system of socialist centralism. Take away horizontal centralism from this system and you get a single state trust subordinating territorial production unions. Take away vertical centralism from this system, and you have a sum of unconnected production communes subordinating a single state trust in parts"<sup>2</sup>.

In other words, what combination of vertical and horizontal autonomy is most acceptable? If vertical centralism and autonomy unconditionally dominate, geometrically we are dealing with a rectangle standing on a narrow (and therefore unstable) base. On the contrary, in case of horizontal centrism and autonomy predominance we have a rectangle with a very wide base, but very insignificant in height. Such Siberian projects as the Ural-Kuznetsky Combine<sup>3</sup> and the Angaro-Yenisei problem<sup>4</sup> became striking examples of the adoption of different approaches to the search for a stable "geometry" for solving large-scale economic problems. Their active discussion began as early as the 1920s and 1930s.

Combines were chosen as the main organizational form for implementing these complex projects, based on production and economic ties and chains, reflecting successively replacing each other redistribution of products (as a rule, large-tonnage – mainly energy- and resource-intensive). This approach, however, has not stood the test of time. Thus, already in the 1950s it became clear that "... a significant disadvantage of the modern machine-building industry of the Angaro-Yenisei region is the mismatch between the range of products produced by machine-building plants and the

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<sup>2</sup> Gusev S. I. Unified Economic Plan and Unified Economic Apparatus. C. 31–94 (in the book: *On the Unified Economic Plan (works of 1920–1921)*/ S. I. Gusev, A. M. Kaktyn, G. M. Krzhizhanovsky, L. I. Kritsman; Editorial Board: A. I. Anchishkin (ed.) et al. Moscow: Ekonomika Publisher, 1989. 286 c. (Ekon. nedvizhenie) [P. 89, 90].

<sup>3</sup> Kuznetsky giant of metallurgy. A collection of technical descriptions. Novosibirsk: Gosizdat–ZapSibotdeleniya, 1932. 46 p. Kolosovsky N. N. The Future of the Ural-Kuznetsk Combine. M.-L.: State Socio-Economic Publishing House, 1932. 136 p.

<sup>4</sup> Angaro-Yenisei Problem. Proceedings of the First All-Union Conference on the Placement of Productive Forces of the Union of SSR. Volume XVI / Under the general ed. T. Smilga. Moscow: Sovetskaya Aziya Publisher, 1932. 418 c. Shegliaev F. M., Vozdvizhensky V. I., Arkhangelsky V. A., Ostroglazov G. I., Drobysheva G. N. Angaro-Yeniseistroy. Moscow: Sovetskaya Aziya, 1933. 81 p.

needs of the region. The vast majority of machine-building products produced in the district are exported outside the district, and at the same time, more than two-thirds of its needs for machinery are covered by imports from western regions. In particular, this applies to the provision of machinery and equipment for the coal industry, non-ferrous metallurgy, logging, construction and agriculture...<sup>5</sup>.

The development of horizontal interactions and flexible response to the emergence of new types of products has become much more difficult due to the growing momentum of the division of labor in the conditions of scientific and technological progress. Alas, huge combines and proliferated “sectoral headquarters” (specialized ministries and departments) were not able to keep up with these processes. The managerial “geometry” was increasingly associated with a rectangle, which had a narrow base and was thus highly unstable.

The formation of territorial governing bodies (sovnarkhozes) to intensify horizontal interactions, which followed the realization of this circumstance, had no effect. Equally unsuccessful was the subsequent attempt to “radically restructure economic management” through the creation of inter-branch concerns and associations<sup>6</sup>.

The economic model of the country’s development that replaced it only aggravated the existing contradictions. Nevertheless, “life takes its course” – socio-economic processes do not stop, and all this fully applies to the Angaro-Yenisei problem as well. Its importance and significance are increasing due to new domestic economic and geopolitical challenges facing the country. The macro-region is gradually becoming one of the key ones, acquiring the status of a stronghold of sustainability of its economy.

About those problems, which are connected with the development of the Angaro-Yenisei region in modern conditions, the thematic selection of this issue (see papers by A. V. Uss, V. A. Krukov, V. I. Nefedkin, A. K. Krivorotov; L. A. Bezrukov; A. V. Kotov). According to its authors, the “image” of not so much a rectangle as a pyramid, which implies the concentration of making

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<sup>5</sup> Shkolnikov M. G., Angaro-Yenisei Problem. V. S. Nemchinov. M.: Gosplanizdat, 1958. 144 c. [P. 90].

<sup>6</sup> On the radical restructuring of economic management. Collection of documents. Moscow: Politizdat, 1987. 255 p.

fundamental strategic decisions at its top, while the development and implementation of the main part of economic interactions takes place at its middle and lower levels – of territories and economic entities – meets the new challenges to the greatest extent. Such a structure has both a stable foundation and a balanced internal structure.

The process of searching for an acceptable “geometry” of combining vertical and horizontal interactions at different levels of economic life is ongoing, and we hope that our understanding and proposed approaches will make it possible to advance in solving this vitally important problem for Russia.

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