

THE RAILWAY TRANSPORT SYSTEM OF POST-
REFORM RUSSIA: FEATURES OF DEVELOPMENT
DURING THE INDUSTRIAL REVOLUTION

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Abstract. *This article examines the evolution of Russia's railway network in the decades following the abolition of serfdom, drawing on concrete factual material and statistical evidence. The study analyzes the pace and character of railway construction as a key driver of industrial expansion and as an essential factor in the formation of a unified national market. The research highlights the pivotal role of rail transport in accelerating economic transformation and shaping the industrial landscape of post-reform Russia.*

Keywords: *railways, post-reform Russia, railway transport, industrial revolution, economic restructuring.*

Introduction. Following the abolition of serfdom, Russia's industrial development proceeded unevenly. Some regions and sectors advanced rapidly, while others lagged behind. The rise of large-scale machine production was most pronounced in major urban centers, where capital, labor, and new technologies tended to accumulate.

The trajectory of Russia's industrial revolution was shaped not only by domestic factors but also by the country's position within the global economy. International specialization, expanding trade relations, and the influence of

foreign markets all contributed to the restructuring of the economic system. Infrastructure—railways, steam-powered shipping, and the broader adoption of steam technology—became a crucial foundation for the creation of a unified national market. In this context, railway construction emerged as one of the most powerful drivers of industrial growth in the post-reform era.

Worldwide, the second half of the nineteenth century witnessed profound transformations triggered by the spread of machinery and rising labor productivity. These changes reshaped the geographical and sectoral distribution of industry. Railways played a central role in this global shift, stimulating the expansion of heavy industry and opening new markets.

Main part. The “transport revolution” became one of the defining phenomena of the period, as railway construction expanded on an unprecedented global scale. Between 1860 and 1880, the total length of railways worldwide increased from 108,000 to 373,000 kilometers—more than tripling within two decades. Railroads required vast investments and enormous quantities of metallurgical and mechanical products, becoming a critical sector of industrial demand.

Railway lines linked distant regions and countries, connecting remote cities and ports and ensuring stable economic relations. Britain and the United States remained the principal leaders in global railway expansion: British investors actively financed construction and supplied rails and locomotives, while the U.S. rail network grew from 49,000 to 150,000 kilometers between 1860 and 1880.

For Russia, railways became one of the central instruments of economic modernization. The end of serfdom intensified the need for efficient and affordable means of transport. Traditional horse-drawn transport was extremely

costly: moving grain 300–400 kilometers often equaled its local price, while transporting Donbas coal several hundred kilometers could increase its cost many times over. Under such conditions, the adoption of steam-powered transport became an economic necessity.

By the late 1860s, Russia was increasingly integrated into world trade. Exports of agricultural products nearly doubled within a decade, which strengthened the demands of landowners and merchants for a rapid expansion of the railway network. In 1865, Russia possessed only about 3,500 versts of railways—far fewer than any major Western nation.

To stimulate construction, the government introduced incentives for foreign investors. It established a Special Commission on Railway Policy and created a dedicated “railway fund” financed through bond issues on Western markets. This attracted substantial foreign capital. Between 1866 and 1880, authorities issued 53 concessions for private railway construction, and the number of joint-stock railway companies rose to 59.

Despite the apparent reliance on private enterprise, the state remained the main financier. By 1880, roughly 80 percent of the capital invested in private railways effectively came from the treasury, while the companies’ debts exceeded one billion rubles. Nevertheless, construction progressed rapidly: the length of the railway network increased fourteenfold in twenty years, reaching 21,000 versts. A large interconnected network took shape in European Russia, with Moscow as its central hub.

Particularly significant was the development of railway lines in the southern industrial region. The first route—the Grushevsk–Aksai Railway—opened in 1863 and enabled large-scale transportation of Donbas anthracite. Within only five years, coal shipments increased more than threefold. In the

1870s, the railways triggered an explosive boom in the Donbas coal industry: by 1880 the region contained 338 mines producing about 86 million poods of coal annually.

The Urals also experienced major changes with the opening of the Ural Mining Railway in 1878. It sharply reduced transportation costs for industrial goods and largely replaced river transport. This spurred rapid growth of coal mining in the Western Urals and supported the rise of new industrial centers.

By the early 1880s, railways served 59 administrative regions of the Russian Empire, linking the Southern Urals, the North Caucasus, Central Russia, and the western provinces. More than 45 percent of European Russia's territory was within the sphere of railway influence.

Conclusion. The rapid expansion of the railway network fundamentally reshaped Russia's economic landscape. Railways contributed to the emergence of a unified national market, altered the geographical distribution of labor, and accelerated the transformation of productive forces. New lines encouraged the growth of industrial and commercial centers and increased labor mobility across the country.

Rail transport made freight movement faster and cheaper, which had a direct impact on agriculture: commercial farming expanded, and grain became one of the principal categories of freight. By the 1870s, railways began to dominate national freight turnover, gradually relegating river transport to a secondary role.

Yet the swift development of the network also revealed serious deficiencies. The system remained fragmented among numerous private companies, lacked unified technical standards, and faced issues such as inconsistent track quality, incompatible equipment, and "tariff wars" that

disrupted commerce. By the late 1870s, it became clear that Russia's railway system required centralization and stronger state control.

Despite these challenges, the creation of the first national railway network marked a pivotal stage in Russia's modernization. It laid the groundwork for further industrial growth and shaped the economic development of the country for decades to come.

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