
Dmitri I. Mendeleev, 1891

Scientist-statesman fought British 'free trade' in Russia

by Barbara Frazier

The chemist Dmitri I. Mendeleev emerged as a leader of Russia's industrialization. In 1865, under the influence of the German chemist Justus Liebig, Mendeleev founded Russian agro-chemistry, setting up experimental field stations in Russia's five soil-type regions, and beginning investigations into the effects of mineral fertilizers.

*Mendeleev represented Russia at the 1867 International Paris Exposition, where he could make contacts with industrialists and study the technologies presented, for possible introduction into Russia. Mendeleev then toured every major chemical plant in Germany, France, and Belgium. When he returned, the government issued his findings as a book, *The Current Development of Certain Chemical Industries in Application to Russia—The World Exposition of 1867.**

In 1868, Mendeleev founded the Russian Chemical Society, to serve as a forum for scientific thought directed to "building up the wealth of the country." Among this core group of scientists, industrialists, government officials, and financiers was Ivan A. Vyshnegradsky, a mechanical engineer, military technology expert, director of the Southwestern Railroad Company, and director of the St. Petersburg Technological Institute.

Vyshnegradsky became minister of finance, in 1889. His two most important accomplishments in office were the start-up of the Trans-Siberian Railroad project and the drafting of a protective tariff. Among the men brought into his ministry to oversee these tasks were Mendeleev, to chair the commission on the protective tariff, and Count Sergei Witte, then executive director of the Southwestern Railway Company, to head the new railroad department of the Finance Ministry.

*For Mendeleev, the tariff commission was a platform from which to organize for the American System. His 1891 *Tariff Report*, which we excerpt here, was a manifesto against British free trade and the enforced backwardness of Britain's colonies.*

Peter the Great [Tsar 1682-1725] reorganized Russia, in order to prepare for its industrial growth and in order to lead it closer to the rest of the world, and together with the West. (Until the abolition of serfdom and the construction of the

railroads, the fundamental idea of the reformer could not be realized on a large scale; only the Russian eagles rose to meet this idea and made the "colossus of the East" one of the powerful new forces, influencing the destiny of the whole world.) Our weapons have been sheathed for a long time, although they are close at hand, but it is clear that strength does not reside in them, but rather in economic production relations. . . .

If there is a visible glimmer of the dawn of general peace and of a just distribution of the prosperity possible for countries and peoples, then this is strictly thanks to industry, because the experience of history has shown the inadequacy of other means for achieving this—neither the concentration of military power, nor any particular form of land ownership, nor the very highest development of education. . . . The ancient and even the middle ages were strong due to armies and their conquests, but the coming period derives its strength from science and industry and their conquests. . . .

The present book is intended, within my ability, to clarify the relation existing between the development of industry in our country and the tariff. But since the tariff, like any law, is designed not for the past but for the present time, the degree of effect of the new tariff on industry belongs to Russia's future. . . . Most of all, it is my desire to show the possibility of a coherent Russian economic life through the development of its industry. This will, however . . . be in full understanding that the possibility of finding additional productive work for the people is more necessary than anything else.

It is not without reason, that the whole world considers us Russians to be a still young and fresh people. We're young and still fresh in respect to industry. My knowledge of Russia's existing conditions and my knowledge of the Russian people's capabilities for the highest form of human activity, convince me that Russia's forthcoming industrial conquests should be the true crowning achievements of Peter, an unprecedented flourishing of Russia's strength. Not to conquer India, the way history has it, but to conquer a more suitable place in the industrial progress of the entire world—this is what Peter bequeathed us, and not secretly,

but openly. But this will has remained as yet unfulfilled, and the time is ripe for its fulfillment.

Russia's agricultural period has come to a close. There are so many seeking new additional earnings, and so many debts are piled up on the surface of the land, that one inevitably comes to think: Couldn't payment be extracted from underneath the arable layer? For you realize, that a few hundred thousand Englishmen digging coal . . . earn for themselves and for all of Europe, just as much as tens of millions of Russians sowing and reaping rye. . . .

The danger of free trade

In conclusion, I consider it necessary to say that one of the collateral causes for the appearance of this work is the circumstance that in our Russian literature very often, and in the current literature even too often, there are to be found works of the so-called free trade tendency, where it is usually asserted that protectionism is only supported in Russia by people who lack scientific training, and for petty, self-serving ends.

Belonging to the small circle of Russians who have given their entire lives to science, who own neither factories nor plants, and knowing that contemporary science has uncovered crude untruths and omissions in the "classical" and "orthodox" teachings of the free trade school, and, finally, seeing that the historical and experimental—that is the real—path of study of political economy leads to different conclusions than those of the freetraders, which are taken on faith as "the last word in science"—I consider it my duty, partly in defense of truly contemporary, progressing science, to say openly and loudly that I stand for rational protectionism. Free tradism as a doctrine is very shaky; the free trade form of activity suits only countries that have already consolidated their manufacturing industry; protectionism as an absolute doctrine is the same sort of nonsense as free trade absolutism; and the protectionist mode of activity is perfectly appropriate now for Russia, as it was for England in its time. . . .

[Concerning] the "classics" Adam Smith and David Ricardo, it is time to cease taking them at their word on everything. It is worth reading them, but in reading them, one ought to see how erroneous is their reasoning; and if someone does not see this, then he should not pretend to understand the subject. The doctrine of the free-traders may be logical, rational, and beautiful. That does not mean it is true. "Phlogiston" was very logical, rational and beautiful, but it did not pass the test of experiment and turned into something completely different, to the degree that all chemistry was at one time called "anti-phlogiston teaching." It must be understood, that the economic doctrines of the "nationalists" and the "historical school" have long since broken free-tradism at the roots, and that contemporary economic science should, for clarity, be called "anti-free trade." This must, absolutely must be known by anyone who would speak on economic questions in the name of science.

Sergei Witte, 1912

The fight for Russian industry

Count Witte's appointment to the Ministry of Finance commission to draft the 1891 tariff law came as he was finishing his Russian-language edition of Friedrich List's *National System of Political Economy*, a work Witte called "the solution for Russia." Witte shared List's view, that railroads were vital for large-scale national development, and for drawing the rural population into an increasingly urban-oriented society.

One year after the tariff was inaugurated, Witte replaced Vyshnegradsky as minister of finance. He initiated financial reforms to accelerate the influx of foreign capital, and capital accumulation domestically. In 1894, he ended speculation on the ruble on the Berlin money markets, by secretly buying up rubles and then pulling the plug on speculators when their contracts came due. He reorganized the state bank to issue loans for industry, and created a network of state savings banks, both to "awaken the restlessness of enterprise" in the peasantry and working population, and to increase capital formation. Every railroad station and school was authorized to install a bank branch.

In January 1897, Witte placed Russia on the gold standard, calling this "one of the greatest successes in the peaceful cultural development of mankind." This measure, coupled with the 1894 stabilization of the ruble, created the conditions for a rapid influx of foreign capital, which increasingly took the form of investment in founding chartered companies and industrial works, rather than credit to the government.

Scientist Dmitri Mendeleev's assertion in the 1891 tariff report, that "Russia has now reached the period at which the already existing germs of manufacturing industry must develop with tremendous pace," was becoming reality. Railway development is exemplary: The 5,400-mile Trans-Siberian Railroad was completed on schedule in 1903; the amount of track laid from St. Petersburg to the Crimean Sea tripled. Railroads were the largest single industry in the country, employing 400,000 people in 1900, and were forcibly transforming other sectors. The metallurgical industries were developing apace, while approximately one-half of all finished metal products were railroad tracks. The oil and