
UNIT 11 INDUSTRIAL CAPITALISM IN RUSSIA

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11.0 OBJECTIVES

After reading this unit you should be able to:

- see how industrial capitalism in Russia developed late due to a number of factors that reinforced and prolonged features of environmental and institutional backwardness,
- see how the onus of overcoming these limitations fell on an ambitious state and an overburdened peasantry,
- see how in spite of these limitations Russian industry did manage spurts of high growth, and
- see how a limited market for consumer goods focused industrial growth mainly on heavy industry.

11.1 INTRODUCTION

The advance of industrial capitalism in Russia from the 1890s has been characterised as a process of late development because it occurred several decades after the industrialisation of Russia's main economic and political rivals, England, France and Germany. The delayed industrialisation of Russia is largely attributable to a series of factors that reinforced and prolonged features of environmental and institutional backwardness. As a result, this necessitated a wider role for the state in Russia as an industrial capitalist itself, than had been true in western economies.

The lateness of Russian industrialisation offered the benefit of borrowing rather than originating industrial strategies. But it also imposed on Russian capitalists the penalties of

dependence on the state and foreign investors for entrepreneurship, capital and markets. Lateness of industrialisation was, thus, complementary with dependent industrialisation.

Since the middle of the nineteenth century, the main problem confronting the Russian state was how to pursue her aspiration to be a great power in Europe with the highly inadequate resources at her disposal to sustain this claim. This imbued Russian industrialisation with a strongly political complexion throughout its history and into the Soviet period. The growth rates of the European economies were higher than the Russian throughout the nineteenth century since they had longer histories of industrialisation and more balanced economic profiles of development, balances between and within the agricultural and industrial sectors. For Russia, the delay in industrialisation and the lack of prerequisites widened the gulf between intention and achievement. Since the political strength of nation states came to be measured by economic indices, it was industrial criteria that underscored Russia's ability to maintain her independence from western Europe and assert her voice in the politics of nineteenth century Europe.

Whereas in western Europe the responsibility for industrialisation was borne by the industrial sector, in Russia the burden was primarily carried by the peasants. They did this by paying high taxes, exporting grain in order to pay these taxes, and postponing their demand for consumer manufactured items. The last fact was due to a typical feature of Russian industrial capitalism, its relatively greater concentration on heavy rather than light industries.

11.2 ENVIRONMENTAL FACTORS FOR BACKWARDNESS IN RUSSIA

The backwardness of Russia stemmed most prominently, perhaps, from what has been called the constant imbalance between the vast size of her territory and the sparseness and small size of her population. Until the nineteenth century the population was too limited to support sufficient productive activity that could then be taxed by the state. Moreover, the administrative and population centres of central and northern Russia were far from the raw material deposits in the south and east. They could be connected only by expensive and slow passage along rivers in summer and roads in winter. This raised the cost of transporting resources and made economic activity highly seasonal in nature. This situation began to be corrected only with the railways.

Being so far up north, Russia was exposed to extreme climatic rigours. Agriculture was possible for a shorter period of the year than anywhere else in the world. Lower grain yields and shorter seasons for pasturage than in Europe kept cereal and livestock product surpluses low. Peasant incomes, and purchasing power for industrial items, remained low and trade throughout the empire was constricted because most of the output was consumed rather than exchanged. The lack of capital among the peasants hindered investment in better agricultural inputs like fertiliser, seed, and machinery.

Faced with the naturally ungenerous lands of northern Europe, comprised of infertile podzol soil, thick forests, marshes and numerous waterways, Russian rulers turned to the conquest and colonisation of fertile arable land, eastward to the Urals and into Siberia, southward to the Black Sea littoral, and south-east toward the Caucasus and the Caspian. Indeed, colonisation formed so constant a motif in Russian history that the Russian historian, V.O. Kliuchevsky, described Russia as "a country which colonises itself."

Since crucial energy sources for industry, like iron ore and coking coal, were located on the peripheries of the Russian empire, industrialisation had to await the railways. Before that, higher transport costs than in Europe raised the unit cost of production of most manufactured commodities in Russia. The smelting of iron ore with coke helped England and other European countries develop their industrial production rapidly, on which The Krivoi Rog iron-ore basin and the Donets coal basin were located in territories which were conquered from the Turks during the 1730s. But factories using this fuel were located in the Central Industrial Region near Moscow and farther north towards St. Petersburg. The railways linked Krivoi Rog to Donets, and both of them to the rest of the country, only after the 1860s. Until as late as then, the Russian economy was built on grain, timber and forest produce as its main natural and exportable resources.

11.3 THE AGRICULTURAL INHERITANCE

In 1913, the rural population of Russia was still about 85% of the total; but only half of Russia's national income was produced by agriculture. The per capita income in towns was low, but it was still more than double the rural figure. The economic growth of the country largely depended on agricultural advance. Indeed, most explanations for late industrial development in Russia have concentrated on the prolonged predominance of the agricultural sector.

From 1860 to 1913, the estimate for the annual increase of agricultural output is 2%; this barely surpassed the annual rate of population increase of 1.5%. This increase was due in about equal measure to the expansion of acreage and to higher crop yields. Agricultural productivity however, or output per person engaged in agriculture, scarcely improved and remained very low in international comparison until 1913.

Grain production dominated agricultural production throughout the nineteenth century and by 1913 grain cereals comprised almost half of total agricultural output but was cultivated on almost 90% of land. In addition, livestock products and dairying provided a small share of agricultural incomes, and fodder crops and pasture lands occupied limited amounts of acreage.

11.3.1 Institutional Factors: Serfdom

By the fifteenth century serfdom had mostly disappeared from Western Europe. In Russia, on the contrary, a free rural population was enserfed between approximately 1550 and 1650. They discharged their obligations either in labour (*barshchina*) or in cash or kind (*obrok*). The conquest of the khanates of Kazan and Astrakhan in the 1550s opened much of the fertile southern Black Earth belt to Russian colonisation. As peasants flooded this area of virgin soil and freedom from landlords, large stretches of central and northwestern Russia were deserted. This posed problems in maintaining revenue collections and of a labour force for the landowners. Enserfing the peasants by tying them to the land and to particular landlords (*pomeshchiks*) provided a solution to both threats.

Serfdom curtailed the mobility of more than the peasantry. Other laws bound townsmen and clergymen also to their designated activities and residences.

11.3.2 Institutional Factors: The Commune

Collective responsibility for tax payments and military recruits in the countryside was sought to be ensured by the functions ascribed to the field commune (*obshchina*) and its political counterpart, the *mir*. Family units cultivated the land, but the commune collectively owned it. The *mir* acted as the smallest local administrative unit in the empire. Apart from jointly owning the land of its members, the commune was responsible for providing a variety of local services related to agricultural production, education, health and communications. Within the commune, arable land was divided into sections corresponding to the quality of the soil and distance from the village. Each household had the right to claim, in every such section, one or more strips corresponding to the number of its adult members; and these strips were periodically redivided among them. This system was meant to guarantee every household an equitable share of good and bad land to support itself and to pay its taxes.

The absence of private ownership and periodic redistribution reduced the incentive for peasants to make long-term improvements and invest capital in their farms even if they could afford to do so. Strip farming discouraged new crop rotations in the widely prevalent three-field system (that always left one-third of land fallow to regain its fertility), while their uneconomic size and the time lost in travelling to them depressed agricultural productivity. This led to the low land yields of newly-settled regions and poor labour productivity in the heavily populated areas of long settlement.

11.4 THE EFFECTS OF THE EMANCIPATION UPON INDUSTRIALISATION

Serfdom was clearly incompatible with the requirements of an industrialising economy. It ensured a restricted home market, a low level of agricultural technology, and low per capita

incomes. Its social structure mainly consisted of a small apex stratum of gentry and a huge peasant base; this permitted only a small middle class with the mobility, literacy and incomes necessary for an industrial society to emerge. Serfdom bred values and attitudes inimical to industrialisation because of the preference for trade in land and serfs over investment in industrial production.

By the middle of the nineteenth century, the belief that serfdom was incompatible with modern economic growth was spreading in Russian society. Its opponents argued that it was incompatible with the growing commercialisation of agriculture, with a modern army, and with free labour in industry. On the eve of the abolition of serfdom in 1861, called the Emancipation, serfs made up only 13% of the factory labour force. Industries like metallurgy employing forced labour were performing worse than those like textiles that employed free labour. In the first half of the nineteenth century, more and more serfs preferred to commute their labour obligations (*barshchina*) to payments in cash or kind (*obrok*); with it increasing non-agricultural employment injected social mobility into the rigid feudal social system.

The Russian countryside was convulsed by peasants protesting against serfdom in the 1840s and 1850s. Then, Russia's defeat in the Crimean War in 1856 made the abolition of serfdom seem urgent. It had failed to ensure either internal security from peasant unrest or external security from foreign agency. By the decree of 19 February 1861, serfs were granted equal civil status with members of other social estates, including the freedom to marry, conclude legal contracts, and to independently establish and run industrial and commercial enterprises. The land they tilled was to become their own, but they were required to pay for it; and the commune was made jointly responsible for these payments. These were known as redemption dues. Finally, the gentry were given some of the peasant land to compensate them for the loss of their serfs.



Fig. 1: Announcing the Emancipation of Serfs in 1861

The positive side of this measure has been seen as follows: peasants could now engage freely in industry and trade and retain the profits; and the scope of the money economy would be expanded because peasants now paid their redemption dues in cash. Conversely, many historians have contended that it is misleading to speak of the abolition of serfdom in 1861, because the newly emancipated serfs were burdened by long-term debt, and granted

inadequate and unbalanced allotments of land. Further because the commune was now jointly responsible for payments of dues, it restricted peasants moving out until they had paid off their dues. Thus the problem of peasant mobility remained acute.

The redemption payments were a severe tax burden on the peasantry. They were actually a tribute drained from agriculture. Little of it was reinvested in agriculture, since, after 1861, most landowners preferred to trade in land rather than improve its output and yield.

When these payments are considered together with a series of high and rising indirect taxes on items of necessity like alcohol, sugar, matches, tobacco and kerosene, it is clear that they were an enormous burden for peasants. But these indirect taxes provided an important component of funding for the railways and other forms of industry from the 1880s.

While the peasants lost only about 4% of land as a country-wide average, they lost about one-quarter of their land in the 16 Black-Earth and Steppe provinces, and about 31% in the Ukraine, which were the most valuable and fertile. The Russian economist Yanson estimated that whereas the subsistence needs of peasant farmers required a land allocation per capita of 13.5 acres of black soil or 20 acres of non-black soil, the actual provision to 75% of liberated serfs was only 10 acres or less.

Although this was not small by western or central European standards, two factors made agricultural development difficult. Firstly, rural population increased by 50% between 1862 and 1914, while the land under peasant control grew by only 30%. This reduced the available supplies of land by 25% down to 1881 and by 50% down to 1905.

The supply of land fell despite increased purchases and rentals in a context of rising land prices and rents, and falling cereal prices. The average price per *desiatina* (2.7 acres) of rural land rose by 615% between 1854 and 1905, or by 12-13% annually. This dramatic surge was not accompanied by a corresponding growth in agricultural productivity. The growth of productivity was constrained by the enormous "surplus rural population" of Russia, estimated between 33% and 40% of the total, as well as by backward agricultural methods. From 1876 to 1896, the "Long Depression" in grain prices on the world market, caused Russian prices to gradually but inexorably decline by one-half. This trend affected state revenues from grain exports, and the incomes of both the gentry and the peasantry. Since the land supply available in the commune grew slower than the population within it, the prospects for improving agricultural crop yields, barring individual effort, were dimmed by overcrowded villages, underproductive labour and by shrinking holdings.

By its functions of collective liability for tax obligations the commune controlled peasant movement to cities and industry. If peasants wished to leave, they had to purchase a permit, called a "passport", and clear all past debt, as well as remain liable for their share of communal taxes in the future. However, from the statistics of passports issued to peasants for seasonal work outside the commune, it seems that it did not actually restrict peasant mobility when better non-agricultural work opportunities were available. Some historians are of the view that real freedom to the peasants came with the removal of the per head poll tax (1882-1885) and the abolition of redemption payments in 1905.

The evidence on whether the emancipation furthered the expansion of the home market, a necessary if not sufficient condition for industrial capitalism, is mixed. The need for cash to pay redemption payments modified the passive nature of rural markets. Railways, local fairs and urban requirements made it possible, often compelled, peasants to market their crops.

The depth of peasant poverty, only gradually ameliorated in the twentieth century, made them small as well as irregular customers for industrial items since their incomes could be abruptly and profoundly disrupted, every third or fourth year, by poor harvest or famine.

11.5 THE ROLE OF THE STATE IN RUSSIAN INDUSTRIALISATION

The backwardness of the Russian economic and social systems, had legitimised state intervention more than anywhere else in Europe. This is particularly valid for the first, but

shortlived, wave of Russian industrialisation launched by Tsar Peter the Great (1689-1725). This was accomplished by building serf-manned factories to provision and arm the army and navy, undertaken at a frenzied pace and underscored by the best techniques that could be borrowed or stolen from Europe, often by Peter the Great himself. The landowning aristocracy was averse to industrialisation until at least the 1890s. The state appropriated the tasks of investment, consumption and production which in the west the capitalists had. From the mid-nineteenth century, the state focussed on four issues in order to promote industrial capitalism. They were the budget (balancing revenue with expenditure); the currency (stability in its value abroad); the balance of trade (the values of imports versus exports); and, the balance of payments (payments on loans).

Budgetary stability was to provide the infrastructural facilities necessary for industrialisation. A sound currency was essential for the inflow of foreign capital. A healthy balance of trade was necessary in order to pay for imported technology by exports of grain. Finally, Russia's international prestige was linked to prompt payment of interest on the debt, since the huge state debt was mostly held abroad.

Russia enjoyed a rapidly growing population and rich natural resources; but the peasants were poor, hence internal demand was limited. Given such weak individual demand, the state itself had to function as the leading buyer. It did so in many ways, including bulk state orders for heavy industry, guaranteed profits, and loans.

Having started late, Russian industries could not compete well with western industry. The state therefore provided protection by setting tariff rates for imports and exports. But it had to do so by striking a balance between and within the interests of agriculture and industry, on the one hand, and its own revenue requirements, on the other.

Tariffs were relatively low in Russia between the 1850s and the 1870s. During this period of low tariffs, imports rose substantially. Despite an expansion of agricultural exports, Russia had a trade deficit (the value of imports exceeded that of exports) throughout the 1860s and 1870s. By keeping tariffs low, the Russian state sought to stimulate light industries (like cotton textiles) to meet popular demand, rather than heavy industry whose demand would come from within the industrial sector. From 1877, and in 1881, 1884, 1885 and 1887, import duties began to be raised in order to protect the emerging metallurgical and mining industries.

11.6 THE GERSHCENKRON MODEL

Alexander Gerschenkron, whose account of Russian industrialisation has been most influential, devised a model to explain the particular nature of Russian industrialisation in particular and industrialisation in conditions of "economic backwardness" in general. This model rejects both the idea that the processes of development led by the "leader" (or first) industrialising country and "follower" (or later) nations in the process of industrialisation are essentially similar, and even the very concept of prerequisites for industrial revolutions. Instead it emphasises the ideological and institutional distinctions between these processes in different national settings depending on the relative degrees of backwardness. In his view, it is these differences that determine variations in the suddenness of the "spurt", the speed of industrial growth, and the resulting industrial structures.

Depending on a given country's relative economic backwardness at the start of industrialisation, the course and character of industrialisation tended to vary in the following ways in this model:

- a) The more strongly its industrialisation tended to start as a sudden great spurt proceeding at a relatively high rate of growth of manufactured output. In Russia, significant industrialisation began from a low base in the 1890s and during that decade industrial growth attained the highest rates in the world then.
- b) The more pronounced the stress on bigness of plant and enterprise. Indeed by 1900 Russia was the most highly "concentrated" economy in the world, because the larger enterprises had a higher share of output and workers here than elsewhere.
- c) The more pronounced the stress on producers' goods as against consumers' goods. Although the cotton industry (the pre-eminent consumer industry) remained the single

largest industry in pre-revolutionary Russia, state attention and capital investment favoured the mining and metallurgical branches of industry from the 1880s to 1913.

- d) The heavier the pressure on the consumption levels of its population. From the 1890s, state-directed industrialisation proceeded on the basis of high indirect taxes, the export of grain and the relative neglect of 'social' investment in areas like health, housing and schools. Taxes and the lack of social facilities affected peasants and workers most, and their consumption of industrial essentials appreciably improved only after about 1900.
- e) The greater the part played by special institutional factors designed to increase the supply of capital to the nascent industry and in addition to provide it with less decentralised and better informed entrepreneurial guidance. Gershchenkron contends that the more backward the country, the more pronounced was the coerciveness and comprehensiveness of these factors.

Russian industrialisation was indeed accompanied by the emergence of an overgrown state, dominated by a powerful Finance Ministry, whose sway over the economy exceeded this anywhere else in the then industrialising world. Coercion was comprehensive in that it thoroughly permeated patterns of work, life and the response to legitimate grievances by peasants and workers alike.

- f) The less able was agriculture to play an active role in the industrialisation process by offering nascent industry a growing internal market based in turn on growing productivity of labour.

In this respect, recent research suggests the need to qualify this proposition in the model. The per capita rates of growth of agricultural output were more respectable than was formerly assumed. Moreover, in the 1880s and 1890s the productivity of agricultural labour also rose, at about 75% of the industrial rate. After 1905, the Stolypin Reforms (that sought to promote individual farming) and growing migration to Siberia, generated better incomes and marketings, rising farm consumption and a diversification of production patterns. Agriculture was therefore performing as a progressively better complement for industry after 1900.

A distinctive trait of the Gerschchenkron model is provided by the presence of "substitutes" to compensate for the absence of essential props for industrialisation in different countries and periods. In Russia, the state substituted for factors that were missing or in short supply. It stepped in to perform the role that individual entrepreneurs had played in the English Industrial Revolution or the large investment banks in Germany. Gershchenkron regards this role of the state as an inevitable result of the tension that emanated from the growing gap between Russia and her European rivals.

The state in Russia did this in various ways. It remained the biggest single customer for industrial goods like iron and steel in order to offset the smallness of individual enterprise orders. Even in 1913, the number and resources of state banks overshadowed private banks. Given the shortage of bank credit, the state itself supplied credit to selected entrepreneurs. Or again, it sought to make good the deficiencies of a small and poorly-qualified entrepreneurial class by encouraging the import of foreign capital and skills.

The earlier view was that private enterprise was unable to assume the burden of mobilising resources for rapid industrial growth because of the size and urgency of the task; and that the state's own predominance stifled private capitalists. Revisionist enquiry increasingly reveals that the government was unwilling to accept growing private business activity outside state regulation.

The Gershchenkron model provides for the state's active role to diminish as the industrial boom gathers its own dynamic with expanding non-state enterprise and capital. Industrial growth after 1900 was considerably less reliant on state orders and railway expansion than earlier, as explained in section 11.8. Banks assumed a greater role as sources of investment funds, the share of light industries increased in total manufactured output, the per capita consumption of many basic items grew, and between 1900 and 1910, the rate of inflow of foreign capital into Russian industry and banking slowed down.

11.7 INDUSTRIALISATION BEFORE THE EMANCIPATION OF THE SERFS

The advance of modern technology in Russia before 1861 had been confined almost entirely to cotton spinning, distilling, printing and sugar refining. Even the cotton textile industry was largely rural in 1860, but its size was impressive: there were some 2 million cotton spindles in Russia then, a number exceeded only by Britain, France, Austria and the United States. The quality of output was low, however, and sales were restricted to a highly protected home market. Within the textile industry, wool weaving and the linen and silk industries retained their character as artisan industries. In the metallurgical sector, steam engines and turbines provided only 12% of the power used in 1861, while the rest came from water-mills.

Russian industrialisation achieved significant growth only after the 1890s. It has been noted in sections 11.1 and 11.2 that the provisions for Emancipation had been designed primarily to strengthen state control over agricultural surpluses and peasant labour rather than to promote industrial capitalism. Even if the motives for the Emancipation had been more favourable to industrial growth, the low economic level and inherited features of backwardness would have necessitated a preparatory period for industrial development. Other reforms by the state in the 1860s and 1870s laid the foundations for industrial capitalism, like the reform of the judiciary, local government, schools and the military.

Even moderate industrial growth had to await the resolution of the first crises that came in the wake of Emancipation. Firstly, although only 13% of industrial workers were serfs in 1861, the abolition of serfdom adversely influenced all industrial branches, including cotton textiles. The second affected the cotton industry initially. It relied entirely on imports of raw cotton, mostly from the United States. Owing to the American Civil War, cotton consumption dropped, and the slump affected the rest of the economy. The metallurgical industries, most reliant formerly on serfs, made little progress until the later 1880s, and the output of coal rose only gradually from 1861 to 1887.

11.8 THE RAILWAYS

It has been argued that railway construction rather than the abolition of serfdom was the watershed during the nineteenth century. The railways stimulated an internal and foreign market for grain in the 1860s. After that, it is widely accepted that railway construction represented the most important structural change in the Russian economy in the pre-revolutionary period. As the length of railway lines increased from about 1,000 miles in 1860 to more than 40,000 in 1916, a decisive factor in the advance of heavy industry and in the commercialisation of agriculture was created.

The first efforts in railway construction date from the pre-Reform period: the first line, the Tsarskoe line, opened in 1838, to be followed by the Warsaw-Vienna line (1851), the St. Petersburg-Moscow line (the Nikolaevskaya line, 1851), and the St. Petersburg-Warsaw line (1859). One factor in the abolition of serfdom had been the growing importance of agricultural marketings; accordingly, railway policy in the 1860s concentrated on linking the two capitals with the grain-producing areas in the Central Black Earth Zone. This was accomplished by 1868. By the mid-1870s, lines to ports on the Black Sea facilitated the export of grain. The length of track increased by 329% between 1868 and 1878.

Between 1861 and 1880 more than 80% of Russia's railways were built and operated by private companies, which usually benefited from guaranteed profits and subsidies. After 1880, however, the government itself stepped in more actively, by constructing and operating the majority of new lines, buying out private companies, and strictly controlling those that remained. By 1914, more than 70% of the railway network was owned and operated by the state.

11.9 INDUSTRIAL TRENDS FROM THE 1860s TO THE 1880s

The late 1860s and the early 1870s saw a considerable boom in the growth of industrial output and trade turnover, the founding of joint-stock companies, and the expansion of the railway

network. From 1873, under the impact of a general European crisis, the Russian economy experienced a crisis of overproduction of goods, falling prices and the failure of numerous industries and banks. Since this was primarily a crisis affecting iron, steel and fuel, contemporary observers correctly traced its roots to a decline in railway construction, and this soon affected industrial investment in the consumer industries too. The importance of the peasant consumer was highlighted by shrinking markets caused by poor harvests and famines in the first half of the 1870s. In 1877, under the impact of the Russo-Turkish war, industry was stimulated by military orders, as well as the good harvests of 1878 and 1879 which led to record grain exports.

This was shortlived. Industrial development went into decline from 1882 until 1885. There was another recession affecting most sectors in 1890 and its effects were sharpened by a catastrophic harvest failure and subsequent famine in 1891. Apart from the crop failure, the crisis was again prompted by declining investment in new railways, as well as by shortages of credit from western Europe, itself in crisis from 1880. This was expressed in slower rates of formation of new share-holding capital and railway network, in the closure of factories, and mass unemployment.

Industrial output doubled between 1862 and 1882, which implied an annual average growth rate of 3.5%. Between 1860 and 1890, coal output leapt up by 2005%, iron and steel production as well as petroleum extraction quadrupled, and, the railway network expanded by about 2000%. The industrial labour force doubled between 1860 and 1890.

11.10 THE BACKGROUND TO THE INDUSTRIAL SPURT OF THE 1890s

By the late 1880s and early 1890s economic conditions in Russia were ripe for a revival. The developments in metallurgy, coal mining and oil production, together with the mechanisation of cotton production and the revival of railway construction provided a springboard for the industrial spurt of the decade of the 1890s.

This spurt was critically dependent on two features: government policy towards industrialisation, and, peace in Europe. In the 1860s, the Russian government had been apprehensive about industrial development because the birth of new social classes like the proletariat and the ensuing tensions from worker unrest would introduce dangerous strains in the fabric of a largely agrarian society dominated by the interests of the nobility.

The cost of reimbursing the nobility for the loss of their serfs in 1861 had economic effects that lasted through the 1860s. From the 1850s to the 1870s, the Crimean War and the Russian-Turkish War had diverted state revenues away from productive investment towards the military, weakened the value of the Russian ruble abroad, and induced inflation within Russia.

International peace was an essential background to the movement of capital, goods and specialist technical advice on which the industrial leap of the 1890s depended. Russian Finance Ministers like Nikolai Khristianovich Bunge (1881-87), and Ivan Alekseevich Vyshnegradsky (1887-92) fruitfully utilised peace in Europe after 1878 to lay the foundations for budgetary expansion, monetary stability and foreign investment in Russia.

From the 1890s, industrialisation became the accepted as well as the central goal of the Russian state. This aspiration was most forcefully represented by Sergei Iulevich Witte, the Finance Minister from 1893. To a large extent Witte's motives were political. Since Russia was the most backward of the world's great powers in 1890s, industrialisation was a race against time for Witte. Economic strength had to be built up rapidly since political power was measured in terms of industrial productivity.

Check Your Progress 1

- 1) List some environmental factors responsible for Russia's backwardness

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- 2) What was the impact of an 'emancipation' on Russian industrialisation?

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- 3) What do we understand by the term 'substitutes' in the Gerschenkron model?

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- 4) What was the background to the industrial spurt of the 1890s?

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11.11 THE WITTE SYSTEM

Witte identified the taproots of industrial strength in railways and heavy industries. The Witte system was characterised by tariff protection, monetary stability and financial reform, heavy taxation and the encouragement of foreign investment. His plan was to stimulate private enterprise, and exploit Russia's rich natural resources through a vast programme of state capitalism. Developing the metallurgical and fuel industries would spark light industry. Agricultural marketings would be boosted by rising urban and industrial demand.

For Witte, the delayed start to industrialisation had to be compensated for by its rapid rate of growth, the import of the most advanced technology from Germany and the United States rather than England, and the establishment of mammoth factories with large work-forces. All these salient features sprang from the shortages of domestic capital, entrepreneurship and skilled labour as well as from anxieties about the widening gap between Russia and her political rivals.

It should be emphasised that although the Witte system represented a bold and timely exercise in massive state intervention, it was not entirely novel. Many of its features had been foreshadowed since the 1860s by former Finance Ministers like Mikhail Khristoforovich Reutern ((1862-78), N.K. Bunge and I.A. Vyshnegradsky. Measures had been undertaken by them to improve budgetary balances, stabilise the ruble and encourage foreign investment.

11.11.1 Fast Growth

Railway construction dominated the industrial upsurge of the 1890s. The length of track almost doubled so that 37% of the entire network, or one-half as much as was built in the preceding fifty years, was constructed during the 1890s. The total inventory of railway rolling stock (locomotives, passenger and freight wagons) also doubled between 1890 and 1900. Annual additions to the railway capital stock usually exceeded additions to the industrial capital stock between 1890 and 1905, and it was investment in rail and rolling stock that generated demand on a scale broad enough to sustain the new iron and steel industry in the Ukraine and the engineering industry in St. Petersburg. During the 1890s as much as one-third

of Russian iron output might have been absorbed by the railways, which also provided a major market for coal. In 1890, Russia had ranked fifth among nations in the length of her railway network, but by 1900 only the United States was ahead. Relative to her vast area of course, Russia's network remained thin and inadequate, as was starkly revealed during the First World War, but the railways undoubtedly represented the major industry.

From about 1895, railway investment was almost evenly divided between private and state capital. But the financial participation of the government was considerably greater, since, in addition to the direct state railway loans, the government guaranteed the profit on every loan as well as was prepared to buy back important or indebted railway lines from private companies. By 1900, the total capital of the Russian railways amounted to 4.7 billion rubles, of which approximately 3.5 billion, more than half the total state debt at that date, belonged to the state. Foreign investment in Russian railways in the 1890s, standing at about 341 million rubles, was proportionately much smaller than in extractive industry or banks.

Textiles remained far and away the leading individual industrial sector in the 1890s as it had been throughout the nineteenth century. Though cotton manufacture was not particularly fostered by Witte, its fastest period of growth in the century came in the 1890s with output rising at over 8% annually. By 1899 this industry was the largest single employer, with one in every seven industrial workers. During the 1890s the cotton industry was mechanised.

The basis of this highly impressive performance, the fastest in the world till then, lay in heavy industry, as the Russian state intended. In percentages, the annual rates of growth among sectors were: mining, 11.2; chemicals, 10.7; lumber, 9.3; metallurgy, 8.4; ceramics, 8.0; textiles, 7.8; and food processing, 1.7. There were striking increases in productivity too. Whereas in the cotton industry, the increase in the value of output was accompanied by an equal rise in the number of workers, in mining and metal production, output rose by 152% from 1887-97 and the work-force by only 39%. A conspicuous measure of the industrial spurt of the 1890s was that 40% of all industrial enterprises in 1900 had been founded since 1891.

The industrial upsurge of the 1890s was accompanied by the emergence of large factories that employed high shares of the labor force and produced high proportions of the output, in the given branch of industry. By 1900 Russian industry was more highly "concentrated" in this manner than that of either the United States or Germany. In 1890, 40% of Russia's industrial labour force were to be found in enterprises employing more than one thousand workers, and this rose to 50% by 1902. In 1911, only 7.5% of the largest companies (with a capital of over 5 million rubles each), accounted for over 38% of the capital invested in industrial and commercial companies. The banks were able to replace the state in the financing of industry after 1900 largely because of the occurrence of a similar process of "concentration": by 1900 there were only 43 banks (from 73 in 1873), six of them carrying 47% of total liabilities (loans), and this rose to 55% in 1914.

11.11.2 Revenue and Taxation

Witte needed to support his industrial policies by measures to bring in more revenue and to stabilise the external value of the ruble. Most of the 1890s were good years for borrowing abroad because the rate of interest was low; by converting expensive domestic loans to cheaper foreign loans he was able to reduce expenditure by over one billion rubles. Witte strove to preserve the favourable balance of trade secured in the 1880s by continuing a highly protective tariff policy and the encouragement of import substitution by direct state support for Russian industry by means of tax remissions and guarantees of profit. The Tariff of 1891, one of the most prohibitive in the world then, allowed free entry to only fourteen products for which there was little demand in Russia. Raw materials and manufactured products suffered heavy import duties. But owing to these high duties the output and efficiency of the metallurgical industry rose, thus encouraging the emergence of a Russian machine-building industry.

But Witte still faced two problems. Since state investment in railways rose massively, he needed income to balance his budget. Secondly, as grain prices, Russia's chief export, fell to their lowest in the early 1890s, he had to face a deteriorating balance of payments. To balance Russia's domestic budget and stimulate exports, Witte turned to higher taxation. He favoured indirect taxation, which accounted for about half of all revenue during the 1890s. The fact that

the main weight of these fell heaviest on the poorest has lent substance to the charge that the peasantry bore the brunt of the cost of Russian industrialisation.

State-initiated growth was to be financed by policies of taxation and loans, on the one hand, and by stabilising the currency and introducing the Gold Standard, on the other. Witte wanted to accelerate the rate of flow of foreign capital into Russia. Since foreigners were unwilling to lend to a country with a depreciating currency unless interest on their loans and profit on their capital were guaranteed by the ruble being backed by gold reserves, the adoption of the Gold Standard for Russia became essential.

This became possible after 1877, when all import duties were collected in terms of the gold, not the paper, ruble. Secondly, the ruble itself was stabilised by exchange control and by the policy of the State Bank to hold very high reserves relative to its issue of notes. In addition, the policies of heavy taxation contributed to building up substantial gold reserves and, eventually, following a good harvest in 1896, the ruble was placed upon the Gold Standard in January 1897.

The gains came in the forms of stabilisation of the exchange rate of the ruble, easier borrowing conditions abroad and a level of foreign investment between 1897 and 1913 that was twice as high as that between 1881 and 1897. But its cost was a huge burden of additional taxation, of extra forced exports of grain and the immobilisation of Russia's gold reserves.

11.11.3 Role of Foreign Capital

Foreign supplies of capital were indispensable to make good the inadequate supply from domestic sources. By encouraging its inflow, Russia had become Europe's largest debtor nation by 1914. The proportion of Russia's national debt that was held by foreigners rose from 30% in 1895 to 48% in 1914. Possibly one-half of this foreign investment was accounted for by state railway loans. The rest was distributed within industry, particularly the southern mining and metallurgical industries and the oil industry in the Caucasus, as well as in banks and trade. France and Belgium provided the bulk of foreign investment after 1890. According to estimates by J.P. McKay, the author of a study on foreign entrepreneurship in Russian industrialisation, the cumulative total amount of foreign capital in Russia increased from 215 million rubles in 1890 to 911 in 1900, 1,358 in 1910 and 2,206 in 1915. Its share in new industrial investment rose from 33% in 1890-92, to 47% in 1900-02, and to 50% in 1909-13.

Why did such large volumes of foreign capital flow into Russia in this period? At one level, the European bourgeoisie had enough surpluses after 1850 to invest in foreign lending. Why was Russia more successful than other countries in attracting this capital?

The rates of profit were higher in Russia than in western Europe. The government ensured tariff protection, guaranteed loans and profits, provided security against industrial action by workers. The adoption of the Gold Standard enhanced Russia's creditworthiness, at about the same time as the fact that the exceptionally low level of world interest rates in the 1890s made investments in Russia attractive.

Political factors also contributed. For instance, the German and French governments encouraged such investments in Russia as they competed to secure a Russian alliance. The alliance with Germany, known as the Dreikaiserbund of 1879, promoted the flow of German capital to Russia during the late 1870s and early 1880s. It then shifted to an alliance with France in 1894. Similarly, the Entente with Great Britain in 1907 led to a marked increase in the flow of British funds into Russia.



Fig. 2 : Stolypin Reforms : Russian Peasants Seek factory work, 1910

11.11.4 An Assessment of the Industrial Spurt of the 1890s

By the beginning of the twentieth century Russia had undoubtedly been transformed into a major industrial power. With 6% of world output of iron and steel, Russia occupied fourth place in this useful ranking of industrial powers, after the United States (42%), Germany (18%) and Great Britain (14%). In addition, Russia had the makings of a modern engineering industry while newer industries like basic chemicals had also begun to appear. Consumer goods industries thrived, largely on account of the growth of urban population. The construction of a huge railway network promised further wideranging economic advance, by reducing transport costs, improving inter-regional trade and stimulating population movement to areas of economic opportunity like Siberia and Central Asia.

These impressive achievements rested, however, on the fragile foundations of state investment in industry, the taxability of the peasantry and the continuous possibility of loans and investment capital from western Europe. In the Witte system, agriculture was barely affected by state policies that focussed attention and investment on industry. Witte was an advocate of the view that industrial improvement would somewhat automatically “trickle down” to agriculture and stimulate output and productivity in that sector too; the necessity of a separate policy was overlooked. Within the industrial sector, heavy industry received considerably greater relative investment and protection than consumer industries. These were the serious limitations of the Witte system. It encountered mounting opposition in official circles and among the nobility who were anxious to guard the interests of agriculture. The durability of the drive was weakened by the lack of an autonomous Russian capitalist stratum.

11.12 INDUSTRIAL CAPITALISM FROM 1901 TO 1914

The spurt of the 1890s came to an end in a recession from 1901. The most basic cause lay in the fact that the living standards of the peasantry had fallen and their tax-paying capacity had shrunk during the 1890s. Between 1897 and 1901 there was a series of well below-average harvests which hit the leading grain producing provinces; arrears of redemption and other payments rose and export earnings declined. This meant that capital expenditure by the government in industry could not be maintained at the levels of the 1890s, while its balance of trade and payments were adversely affected.

The immediate cause of the industrial crisis appears to have been a tightening of the money market from the middle of 1899. Rising world interest rates and a slowing in the flow of international investment had severe repercussions not only in Russia but in western Europe also. The industrial crisis manifested itself in numerous bankruptcies, sharply falling industrial prices, contracting output (especially in heavy industry) and over-production in leading branches like pig iron, iron and crude oil. During 1902, the worst year, some 2,400 industrial concerns closed down, including one-third of the mining ventures at Krivoi Rog and one-quarter of the largest metal producing enterprises. Industrial unemployment rose to the novel height of 90,000. Interest rates rose and share prices fell. The banks restricted loans to protect their capital reserves and working capital became more difficult to find. The depression mainly affected those branches of heavy industry which had expanded most rapidly in the 1890s.

This crisis led to the dismissal of Finance Minister S. Iu. Witte in 1903. Opponents of government industrial policy took this industrial crisis as evidence that the idea of heavy taxes on peasant consumption was deeply flawed and that Russian industrialisation was intrinsically artificial because it depended too heavily on government orders.

11.12.2 Monopolistic Devices

This crisis in Russian industry stimulated the growth of various monopolistic devices for regulating production and sales. In each sector, "syndicates" of the largest firms were formed for this purpose. This movement spread rapidly from 1902, above all in those dominated by foreign capital: Prodamet (1902) in the metallurgical industry; Prodvagon (1904) for railway carriages; and, Produgol (1906) for Donets coal are examples. By 1914 there were over 150 such organisations and they controlled not only the mining and metallurgical sectors, but also certain branches of light industry like textiles and sugar.

Unlike similar organisations in Germany called "cartels" with whom they have been compared, they were loose associations concerned with holding prices and controlling competition in the branch of industry they represented. Their methods varied. Some took over the allocation of orders to save on transport and sales costs while others controlled the terms of credit. The syndicates were usually sales agencies that rarely intervened to regulate output.

Industrialisation continued at a slightly lower annual growth rate of about 6% from 1901 to 1914. The crisis of 1901-3 had exposed the weakness of industrial policies based on state orders and railway construction since the industries producing consumer goods had been less affected. Accordingly, in the final pre-war years to 1914, industrial capitalism proceeded at a slower pace and in an altered framework. The war with Japan in 1904-1905 and the first Russian Revolution of 1905-1907 had strained the budget, as also had the abolition of redemption payments and the principle of joint responsibility for the payment of taxes. Railway construction proceeded at a slower rate and on a smaller scale.

In the Gershenkron model, the patterns of substitutions changed with banks rather than the state playing the leading role in the financing of industry by tapping foreign investment but deploying it mainly now through Russian companies.

A fresh depression hit several industrial sectors in 1907-8. A slump in the production of coal, iron and steel, cotton goods and refined oil was accompanied by a fall in prices and rising unemployment.

11.12.3 The Growth Years of 1908-13

All the sources agree that the last five years before the war, 1908-13, were years of steady, even impressive, growth in both industry and agriculture. Russian industry again expanded at a rapid rate after 1908, aided to an extent by excess production capacity in factories that had been established before 1900. Between 1908 and 1913, the output of pig-iron rose by 61%, that of coal by 73% and of iron and steel by 60%. This contributed to the output of large-scale industry rising, from 1908-13, at an annual average rate of more than 9% in current prices and more than 7% in the 1913 prices. These were impressive rates of growth, approximating to the

rapid rate of growth of the 1890s, and far in excess of the modest rates achieved between 1900 and 1907, when the annual rate of growth barely exceeded 1.5%.

Agricultural output rose faster between 1905 and 1913 than it had between 1895 and 1905. This was based on an increase in the sown area, and higher grain yields, although yields still remained low in Russia. Grain prices, and those of other agricultural products, rose relative to the prices of industrial goods both on domestic and world markets. With grain exports rising too, the peasants were able to provide a greater market for domestic industry.

On the eve of the First World War, output, investment, prices and profits all testified to rapid growth. The growth in the output of heavy industry continued to affect all sectors. But the growth of output in consumer goods did not lag far behind. It was most marked in rubber, footwear, woollens, fats and some foodstuffs. Indeed, by 1913, it was not the basic industries, such as mining and metallurgy, that dominated industrial production so much as consumer goods. Even after three decades of industrialisation by 1913, the two broad categories of textiles and foodstuffs together accounted for about one-half of gross industrial production. This was twice as much as mining, metallurgy and engineering combined. The Stolypin Reforms (1905-11), that permitted the voluntary disbanding of the commune and the abolition of joint land holding and joint responsibility for tax payments stimulated the growth of the labour force and augmented real incomes of the peasants. The increased volumes of purchase of industrial items by them was reflected in the fact that the average rates of profit in light industry exceeded those in heavy industry.

11.12.4 Russia in 1914

In the last year before military hostilities disrupted economic activity, Russia remained predominantly an agrarian country. Agriculture claimed the bulk of the population (more than 85% in rural areas), employment (67%) and national income (more than 70%) and the burdens of backwardness, poverty and illiteracy in Russia were essentially borne by the peasants.

Goldsmith has estimated that from 1860 to 1913, gross industrial production annually grew by about 5% (if both factory and craft industries are considered) and per capita production by about 3.5%. These were high rates of growth to maintain for half a century in that period of history. Russia's economic strength, however, remained her agricultural strength. It may be noted that agriculture was also the major economic sector where neither the state nor foreign capital were substantive entrepreneurs or even the major suppliers of technology and inputs.

By 1914, Russia had a significant industrial sector which was not an "enclave" as the modern sector in a colonised or contemporary underdeveloped economy tends to be. It was closely linked to the rest of the economy through the market and fiscal system. In fact, Russia possessed a "dual" industrial sector, made up of large factories and small-scale peasant and artisan establishments. Even during the 1890s, and according to the Russian economist S. G. Strumilin, the value of small-scale industrial production may have doubled, compared with a tripling in large-scale manufacturing. This dual industrial sector, with a high proportion of rural-based manufacturing, testified to continued economic backwardness.

In international comparison Russia was still an underdeveloped country and this provides another indicator of the persistence of economic backwardness. Real income per head, the best simple overall measure of the level of economic development, in Russia in 1913 was only about one-third as high as in the United States or in Great Britain, the most developed industrial capitalist economies then, and about one-half as high as in Germany, in many ways Russia's economic mentor, example and rival.

Check Your Progress 2

- 1) What was Witte's strategy to compensate for delayed start to industrialisation?

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2) What were the limitations of the industrial spurt of 1890s?

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3) What were the measures taken by 'Syndicates' to counter the industrial crisis in the beginning of the 20th century?

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4) By 1914 'what were the main features of the Russian industrial economy'?

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11.13 LET US SUM UP

We saw in this Unit how the growth of industrial capitalism in Russia struggled with the country's persistent backwardness. In the process a major role was played by the state which tried to mobilise a labour force by 'emancipation of serfs,' took policy initiatives like bringing in foreign capital for investment and took major initiatives in setting up centres of industry. However the burden of this industrialisation as we saw was borne by the peasantry. Insufficient growth in the agricultural sector tended to reinforce backwardness.

11.14 KEYWORDS

Labour Obligations	:	In Russia the compulsory labour rendered by serfs as a tribute to the landlords to whose land or persons they were tied to.
Substitutes (the theory of)	:	In Gerschenkron's view when essential features required for industrialisation like labour mobility, capital availability were found wanting 'substitutes' stepped in to fill the gap. In Russia's case the state played a major role as a 'substitute' and ensured labour and capital availability.
Monopoly	:	the situation in an industrial economy when one firm or group of firms acquire control of both resources for production and the market.
Syndicates	:	a group of firms joining together for monopoly operations in Russia

11.15 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

- 1) See Section 11.2. You can elaborate on the extreme climatic conditions which led to the agriculture year being shorter and shorter pasturage season. This led to lower cereal and livestock product surpluses. You also need to point out that since the crucial energy sources like iron ore and coal were located at the periphery of the empire, Russia had to await a major transportation link like the railway before these resources could be exploited.
- 2) See Section 11.4. Peasants could now engage more freely in industry and trade and retain profits. Secondly, the scope of money economy expanded since the redemption dues could be paid in cash. Yet on the negative side the heavy redemption dues were a severe tax burden. This led to a one sided tribute being taken from agriculture very little of which came back to land and mostly went in to land owner's. However, a number of indirect taxes, imposed by the state and a burden on peasantry, did help finance crucial industries. But the burden of debt and taxes on the other hand restricted labour mobility.
- 3) See Section 11.6. Also see keywords.
- 4) See Section 11.10. You may elaborate on the two features of government policy towards industrialisation and peace in Europe.

Check Your Progress 2

- 1) See Section 11.1.11. You may point out Witte's emphasis on heavy industry, rapid rate of growth, tariff protection, etc
- 2) See Sub-sec 11.11.1. You may point out features connected with the tightening of the money market.
- 3) See Sub-sec. 11.12.2. You can point out measures like control of credit and monopoly of transport, etc.
- 4) See Sub-sec. 11.12.4.

SOME USEFUL BOOKS FOR THIS BLOCK

E.J. Hobsbawm : Industry & Empire, Penguin
J.I.T. Bury : France 1814-1940 (London 1969)
W. Carr : A History of Germany (1815-1945 (London, 1979)
G. Stephenson : A History of Russia 1812-1945 (London, 1969)