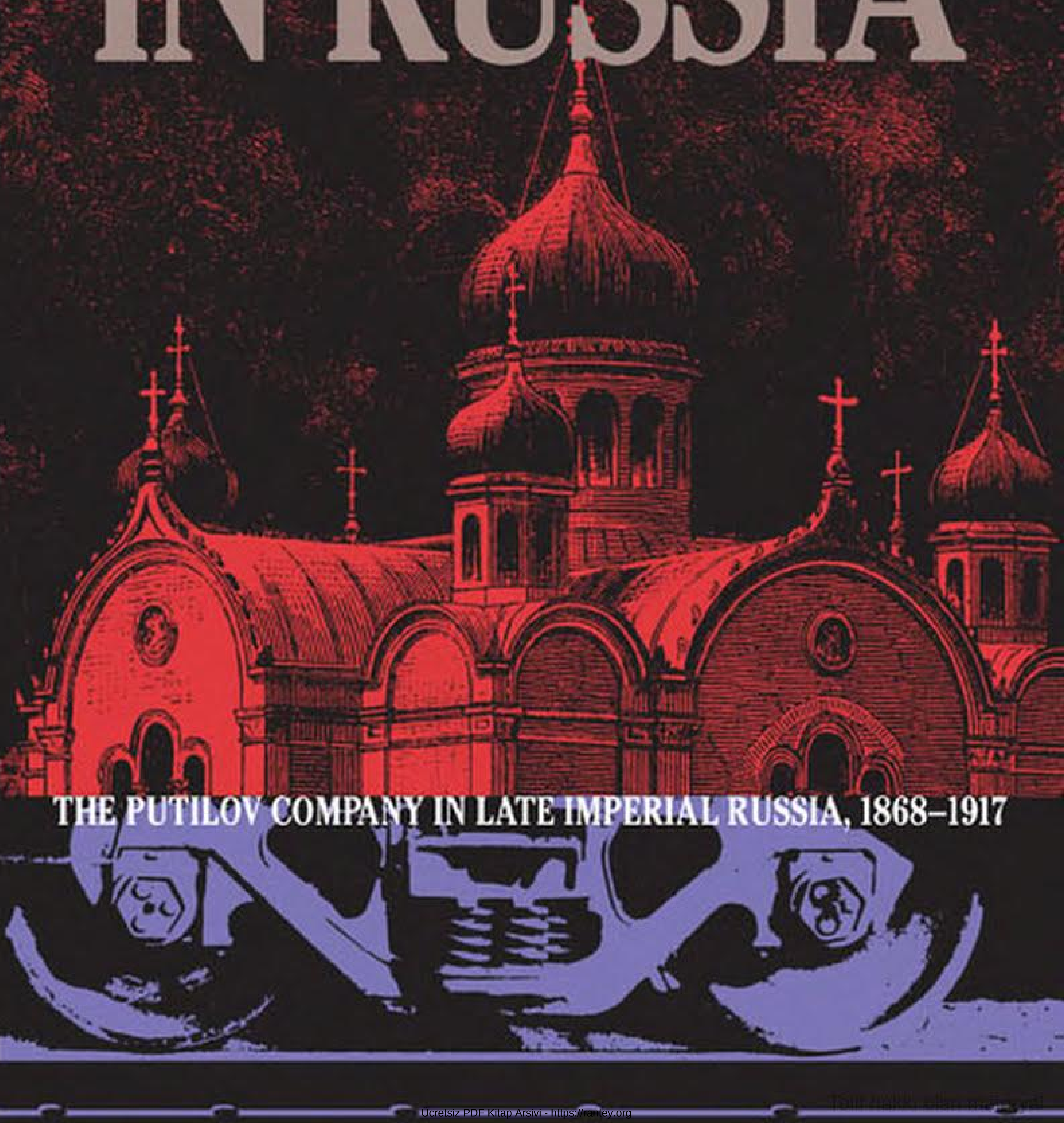
JONATHAN A. GRANT

BIG BUSINESS IN RUSSIA



THE PUTILOV COMPANY IN LATE IMPERIAL RUSSIA, 1868–1917

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INTRODUCTION

As Russia emerges from the legacy of the Soviet command economy in the late twentieth century, it is worth remembering that this is not the first time that Russians have struggled to adapt to the complexities of contemporary capitalism. From the late nineteenth century to 1917, entrepreneurs and government officials confronted comparable challenges as they attempted to integrate private enterprise, foreign investment, and the latest foreign production techniques into the Russian environment. To shed light on the tsarist experience, this study examines the history of the Putilov Company in the late imperial period. It offers a perspective generally lacking in previous works on the tsarist economy, namely, that of the Russian businessmen themselves.

The question of Russia's relation to the rest of the world, and to the West in particular, remains a fundamental issue in Russian historiography. Conventionally, historians have taken Russian development to be backward or an exceptional deviation from Western norms, and these scholars have suggested that Russian businessmen operated according to a different understanding from their Western counterparts. In this view, tsarist autocracy and Russian uniqueness conditioned these differences. My study seeks to answer the questions regarding the exceptionalism of Russian business development by posing the question: Did Russian businessmen conduct their affairs in a unique way based on an essentially different understanding of the market and the state, or did they pursue strategies for growth that would have been intelligible to their contemporaries in Britain, France, Germany, and the United States? This study eschews grand theory in favor of straightforward comparison. In posing this question I do not argue for a convergence toward a single path of development, but in answering it I do point out the strong parallels between the development of the Putilov Company in Russia and its cohorts in Europe and the United States. In making those comparisons, this study relies on the secondary literature in American and European business history.

The main thesis of this work is that contrary to long-held historiographical assumptions, Russian business development was not deviant; indeed, the Putilov Company's board of directors followed strategies for growth that were consistent with the decisions of contemporary firms in Europe and the United States. By 1900, the Putilov Company was already the largest private factory and the most important defense firm in tsarist Russia. Putilov's market behavior was not essentially different from that of its Western counterparts such as Krupp, Schneider-Creusot, Vickers, and Skoda. Putilov's directors made decisions to abandon old product lines and undertook new ones based on their reading of the markets, and they considered state agencies to be long-term customers in those markets.

However, contradicting the assumptions about its dependency on the state, by 1900 Putilov was no longer a creature of state indulgence, but enjoyed a healthy private market share as well. Moreover, the private market share remained the more substantial portion even as the company embarked on its career as a defense enterprise. Thus, an overview of Putilov's growth and development calls for a reevaluation of the strength of the Russian domestic markets for industrial goods and the direct role of the state in industrializing Russia.

Currently the subfield of business history in Russia is virtually nonexistent. Although a few specialists have delved into various areas of business activity in Russia, by and large these works deal either with companies established in Russia by foreigners or with nonindustrial firms such as banking, insurance, or publishing.[1] No one has yet created any detailed studies of a native Russian metalworking enterprise. Russian business history has not attracted much scholarly attention for a variety of reasons. First, in tsarist society itself few among the educated social groups had any interest in commercial activities, and if they gave much thought at all to businessmen, their attitudes were usually negative or hostile. The revolutionary intelligentsia, liberal urban professionals, and members of the old nobility all evinced a strong distaste for Russian businessmen, and to some extent this dislike had roots in an older negative image of the merchant.[2]

The intelligentsia, both liberal and revolutionary, played a particularly significant role in writing businessmen out of the picture because they were preoccupied with their own struggle against the autocratic regime. Consequently, the intelligentsia tended to view everything through the lens of an irreconcilable conflict between state and society. The seeming political apathy of businessmen was taken to mean that they were either irrelevant to the vital struggle or that they were too cozy with the state.[3] If it is true that the winners write the history, then the Russian Revolution in 1917 served as yet another reason to ignore business history. The Bolsheviks consciously swept aside the remnants of capitalism, and later Soviet scholars emphasized the heroic struggle of workers and party members to vanquish the exploiting class. The industrialists appeared as little more than background scenery to the real historical drama of proletarian revolution.

Even had they had the inclination, scholars faced serious obstacles to pursuing business history while the Soviet Union still existed. Soviet historians were not free to investigate any topic, and their interpretations were subject to official ideological constraints and censorship. In this respect, there were domestic political and career considerations at stake if one deviated from the guidelines. In addition, both Soviet and foreign researchers enjoyed only limited access to archival materials, and those materials were themselves reduced by the tendency of businesses not to maintain their records or by the destruction of records during the First World War and the Russian Civil War.

Studies of industrialization in Russia have tended to play down the role of Russian industrialists, and the few works written on Russian businessmen do not express much interest in their business activities. Even the most recent works by Thomas Owen and Susan McCaffray are less concerned with Russian business behavior than with capitalism as a system.[4] To rectify this imbalance and to answer the questions regarding the exceptional character of Russian business development, it is necessary to analyze business activity at the level of the firm. That is to say, it is the individual firm that integrates new technology into production, reacts to market forces, and develops strategies for growth. Therefore, it is important to understand Russian industrial history at the micro level.

Can we generalize from the history of a single firm? The Putilov Company offers several advantages for this analysis. First, the Putilov works had been under state and private ownership at different times and retained close connections to the War and Naval Ministries. In this way it resembled other metalworking enterprises established in St. Petersburg after the Crimean War. Indeed, the company's founder, Nikolai Ivanovich Putilov, had served in the Naval Ministry prior to purchasing the plant in 1868. Moreover, virtually all of the metalworking enterprises experienced financial hardship, even though they received significant government contracts and ultimately had to sell out to foreign investors or the Naval Ministry. For example, Putilov sold out to foreigners, while Thomson and Obukhov were bought out by the Naval Ministry because of financial collapse. As a result, the state took over the Russo-Baltic Iron-Working and Mechanical Company, the Obukhov plant, and the Nevskii Shipbuilding plant.[5] Thus, the experience of the Putilov factory was typical of all the major Petersburg industrial enterprises. Second, the company's evolution from a personally owned factory into a joint-stock company with a diversified product mix ranging from metallurgical goods to locomotives, rolling stock, and defense items paralleled the development of other engineering firms in imperial Russia—thus illuminating that development. Putilov was not unique in its early reliance on the state, its early hardships, or its development strategies.

However, the company's specific characteristics were also significant. In physical size and capacity, Putilov held pride of place in Russia. Ultimately, the Putilov works became the largest factory employer in Russia, and by the early twentieth century it had become the largest supplier of light artillery for the tsarist government. Thus, Putilov occupied an important place in Russia's heavy industry sector and in the Petersburg region. Putilov was also the largest joint-stock engineering company in Russia in terms of output. Although the view has been refuted that the state had a driving role in the Russian economy as a whole, assumptions about state-driven industrial development continue to hold sway in discussions of the Russian heavy industry sector generally, and of the industrial enterprises of St. Petersburg in particular. Therefore, the Putilov Company seems a useful choice as a critical case study for testing the limits of state dependency.[6] If Putilov, the most important defense supplier, was not dependent on the state, then who was? Given both its commonalities with other Russian firms and its own specific characteristics, Putilov can serve as an important case. This study will show that the state's role has been overstated even for such a presumed state-dependent enterprise as the Putilov Company.

The Problem of Russian Exceptionalism

Since Peter Chaadaev penned his philosophical letters in the 1820s and 1830s, his assertions about the exceptional nature of Russia's historical development and the idea of Russian backwardness in comparison to Western civilization have been central to discussions of Russian identity. In 1829 Chaadaev declared, "We have never moved in concert with other peoples; we do not belong to any of the great families of mankind. We are not part of the Occident, nor are we part of the Orient." Further, he wrote in 1835:

> What did we discover, invent, or create? It is not a question of running after them; it is a question of an honest appraisal of ourselves. . . . After that we shall advance more rapidly than the others because we have come after them, because we have all their experience and all the work of the centuries which precede us.

In his later thinking, Chaadaev also devised the concept of the advantages of backwardness: Russia, unburdened by the weight of history that has impeded the West, could actually skip a stage of historical development and overtake the West. Although Chaadaev cast his ideas in terms of moral and spiritual development, later generations of Russian thinkers translated them into materialistic and economic terms.[7] In this way, Alexander Gerschenkron's mid-twentieth-century thesis about the advantages of backwardness for industrializing countries was rooted in a much deeper Russian intellectual tradition.[8] Gerschenkron placed Chaadaev's old question of whether Russia was a Western or an Eastern country in an economic context.

Gerschenkron's achievement was to universalize the question of Russian exceptionalism; in so doing, he contributed to the emerging school of modernization theory.[9] The modernization model is based on two assumptions: first, that all societies are ultimately headed toward the same destination, even though they have different points of departure; and second, that success is assured. Hence the model assumes the convergence of social development: all industrial societies are becoming more alike.[10] Gerschenkron argued that in more "backward" or less developed countries the state takes on the role played by private initiative in earlier industrializing nations. Russia enjoyed the advantages of backwardness in that it could simply import the latest techniques and technology for its industrial advancement; meanwhile, the state would intervene to supply the missing elements, primarily by providing a market for heavy industrial goods, especially railway equipment. Through fiscal policy, Gerschenkron noted, the government encouraged the influx of foreign capital from Europe, which laid the basis for large-scale industry. Once the process of industrialization was initiated, the government could play a less active role, and by 1912, in Gerschenkron's view, Russia was on its way to self-sustaining growth. This, in turn, signified that Russia had arrived on the path of "normal" development for modern industrial economies.[11] Thus, rather than being exceptional, Russia was simply one example of a backward industrializer.

Subsequent scholarship on Russian economic history has seriously questioned Gerschenkron's propositions. In macroeconomic terms, several works, especially those of Peter Gatrell and Paul Gregory, decisively demonstrate that in terms of fostering investment and pursuing a conscious industrial policy, Gerschenkron overstated the role of the state in Russian industrial development.[12] Additionally, John McKay's work shows that foreign capital and foreign expertise made important contributions to Russian industrial development, but that high interest returns on private foreign portfolio investments played more of a role than state efforts in attracting foreign capital. This was especially true in the iron and steel industry of South Russia.[13] Taken together, these studies challenge Gerschenkron's model.[14]

Yet the issue of Russia's modernization remains. Indeed, although modernization theory has generally fallen into disuse, it still has a firm grip on Russian history. In fact, it has received a second wind in the 1980s and 1990s and is still central to discussions of Russian development in the late imperial period. Perhaps this quirk can be explained by the fact that historical studies are shaped by contemporary economic conditions in the country under study. Therefore, the difficulties experienced by newly independent countries in Africa since the late 1960s in fulfilling the promises of economic modernization, coupled with the continuing frustrations of industrialization in Latin America, have created a skeptical pessimism that rejects modernization theory in those areas.[15] Meanwhile, perhaps modernization theory has held on so long in the Russian field because of the Soviet Union's relative success as an atomic superpower with a large heavy industry base and a successful space program.

In the field of Russian studies, the main line of division runs between those who consider modernization to be essentially a material or technological process and those who view it as an abstract or institutional one. For scholars in the first group, the long-term secular trends in Russian economic performance since the emancipation of the serfs in 1861 conform to the pattern of a modernizing economy and society, and they generally regard Russia as modern. They point to urbanization, improved literacy, high annual rates of growth, and a declining share for agriculture combined with a rising share for industry in the national economy as evidence for Russia's modernization.[16] Historians in the second group suggest that Russian businessmen operated according to a different understanding from their modern Western counterparts—differences attributed to autocracy and Russia's unique history. Along these lines, Fred Carstensen and Gregory Guroff argue that in terms of entrepreneurship Russia did not modernize. As they see it,

> The use of the terms modernization and industrialization requires some reflection. For these purposes industrialization is but one possible component of the broad process of modernization. It is useful to distinguish between the terms because the thrust of our argument is that Russia failed to modernize even though it industrialized. To put the matter in somewhat different form, Russia wanted, and to a significant degree acquired, the industrial brawn of the West, but not the "brain" of Western development, the complex matrix of institutional arrangements that created a polycentric society which tended to devalue tradition, to emphasize functional specialization, to separate spheres of activity, and to promote individualistic behavior.[17]

Joseph Bradley's detailed study of the tsarist small arms arsenals supports this view. He presents specific examples of the failure to modernize in state arsenals through their inability to innovate. Thus, the arsenals were trapped in a continuing cycle of borrowing new technology and production techniques because cultural factors inhibited product development and retarded technological diffusion. Specifically, Bradley argues that technological change in Russia has come from above or outside—that is, from the state or from foreigners—and that consequently market forces played no role. As a result, the arsenals did not internalize the innovations they benefited from because they had no financial motivation to do so; hence the small arms industry failed to reproduce even native technology, much less domesticate foreign ones.[18] In effect, Bradley too argues that Russians were unsuccessful in obtaining the "brain" of the West. In addition, the second group of scholars consider tsarist autocracy to have been the impeding force. The implication is that entrepreneurship among Russians was fundamentally different or exceptional because it was conditioned by the strict limits imposed by the autocratic state.

Both groups share an assumption that there is a clear standard against which to measure modernity or modernization. Usually that standard is the West or, more specifically, the industrial experience of Britain. By framing the discussion in this way, they assume that there is a single model for development and that Russia either moves toward it to become modern or deviates from it to remain exceptional. In the absence of any single universal model, the whole concept of modernization has received considerable criticism.[19] Therefore, let us lay aside the term *modern* and the intellectual baggage it carries with it.

Since Russian business history is a veritable blank slate, it is useful to place it in the context of the more established field of business history in the West. In particular, Alfred Chandler's concepts provide a means of comparing the managerial mentality of Putilov's board of directors with the patterns established by their counterparts in Britain, Germany, and the United States. Chandler posits a connection between corporate strategies for growth and structural change in company administration on the one hand, and the emergence of *managerial capitalism* on the other. By this term he means that salaried professional managers came to make the firm's decisions.[20] In Chandler's terms, the modern industrial enterprise emerged as the result of entrepreneurs pursuing an interrelated set of investments in large production facilities, distribution, and management.[21] If we again remove the *modern* label and concentrate on the behavior of firms as Chandler describes them, then we can find some use in comparing his patterns of investment with Russian business behavior. From the standpoint of Chandler's work, the Russian experience at Putilov seems to resemble most closely the German case.

There are dangers, of course, in trying to make Russia conform to analytical models devised for Western Europe and North America. Just because Russian businessmen adopted institutional forms similar to those of the West does not mean they employed them in the same way. Carstensen and Guroff argue, for example, that St. Petersburg firms "adopted a Western form devoid of much of its Western content"[22] as part of their contention that Russian entrepreneurs organized joint-stock companies but did not manage them as they were managed in the West. However, since prior to this study no one had researched any one Russian corporation in detail, Carstensen and Guroff's position cannot be substantiated.

In terms of the firm's performance, a strong case can be made for the appropriateness of measuring Putilov against the standards for big business in Europe. In his comprehensive survey of enterprises in Britain, France, and Germany, Youssef Cassis devises an effective and tangible set of quantitative benchmarks for European big business in terms of the size of the work force, capitalization, and profits. For the pre-1914 era, he suggests as criteria 5,000 employees and 2 million pounds sterling for paid-up capital. While profits will vary most with size, Cassis noted that for the big armaments firms the profits in the years 1911–1913 ranged from 639,000 pounds sterling for Armstrong to 1,762,000 pounds sterling for Krupp. On all these counts, Putilov deserves to be considered a big business firm as well. The plant employed 12,000 workers by 1901; by 1914 it was capitalized at roughly 2.5 million pounds sterling; and from 1911 to 1913 Putilov earned profits equivalent to 724,490 pounds sterling, putting it ahead of Armstrong but below Vickers and Krupp.[23]

The role of the firm and of industrialists in imperial Russia remains terra incognita. Soviet historians produced a number of excellent statistical studies of military and naval production in the nineteenth and early twentieth centuries[24] and on the banking links to arms production.[25]

These authors, however, did not give much attention to the firms themselves or to their directors, although they assumed close connections between arms suppliers and state officials involved in the process. A recent exception is A. N. Bokhanov's work, which fleshes out some of the connections between Russia's business elite and the bureaucracy in general, although Bokhanov is not especially concerned with the arms business.[26] Meanwhile, Soviet histories of individual military and naval factories are preoccupied with the development of the workers' movement and Bolshevik organization and pay only scant attention to the industrialists.[27] The Soviet works provide comprehensive statistical descriptions of military and naval production and a thorough accounting of the financial arrangements involved in weapons contracts, but they do not move on to analyze who made the decisions that accounted for that production.

Western scholars have exhibited a similar lack of interest in the industrialists generally. In the last decade this situation has begun to change, however; a number of studies have appeared that discuss the role of industrialists in imperial Russia, and most of these concentrate on Moscow industrialists. In part, the greater attention to the Moscow group reflects the available source base.[28] On this score, the business elite in Moscow is unquestionably better represented than any other group in the empire. Additionally, the prominence of Moscow in Russian and Soviet historiography can be seen as the result of the Slavophile legacy. Although it is usually acknowledged that St. Petersburg was economically important, the imperial capital is often omitted from Russian business histories because there international trade, foreign investment, and the bureaucracy reigned. The Slavophiles loathed all those elements and saw them as contributing to the artificiality of St. Petersburg. It is testimony to the pervasiveness of the Slavophile ideology that present-day historians echo the same themes.

The limited number of studies on Russian businessmen have focused on their collective failure as a bourgeoisie rather than the business practices of their individual firms. The fixation with the historical "problem" of the bourgeoisie itself results from a reading of tsarist history with an eye toward the coming Bolshevik revolution. Western studies have taken the Moscow industrialists as models for the native Russian bourgeoisie for two reasons. First, researchers have reproduced the intelligentsia's Slavophile view that Moscow was the "natural" center of Russia, as opposed to the "artificial" capital in St. Petersburg. Beginning in the 1850s, the Moscow business elite were closely associated with Slavophile intellectuals, and that collaboration colored the Moscow businessmen's view of themselves in relation to St. Petersburg. This attitude on the part of Moscow industrialists has seeped into recent research. Without a doubt, Moscow businessmen conceived of themselves as qualitatively different from the "other" industrialists in St. Petersburg against whom they defined themselves. However, the "Slavic capitalism" of the Muscovites, as described by Owen, was more a myth of romantic self-conception than a real statement about actual business practices.[29] Just because some Moscow industrialists imagined themselves to be morally superior and less mercenary did not make them so. Second, a small number of Moscow industrialists did attempt to organize politically after 1905. Historians have interpreted the political activities of Moscow leaders as proof of the existence of a bourgeoisie and have contrasted these events with the lack of such activity among the St. Petersburg group.

This scholarly quest for a Russian bourgeoisie in Moscow has seriously warped our conceptions of Russian business history generally. By taking Moscow as the "natural" or legitimate center of a national bourgeoisie, this paradigm excludes St. Petersburg industrialists as somehow unnatural creatures of the state. If we set aside Moscow and take St. Petersburg on its own terms, we may better understand the complexities of business-state relations in the late imperial era, regardless of whether or not a bourgeoisie existed in Russia. Because it was the empire's corporate and financial capital as well as the political capital, historians should give more attention to business developments in St. Petersburg. However, with the exception of Ruth Roosa's study of the Association of Industry and Trade in St. Petersburg, the few studies that are concerned with Petersburg are primarily devoted to the labor question and the problem of workers' class consciousness, although these works do address management's collective role.[30]

Western historians who have studied business development in the Russian armaments sector focus on the role of foreign firms.[31] Among the few works available in English that directly address the topic of foreign arms suppliers in Russia, Goldstein concentrates solely on the English firm Vickers, while Bradley examines the technology transfer in small arms production from the United States to the three state arsenals during the 1860s and 1870s.[32] In addition, Jacob Kipp looks at foreign ties to Russian naval production during the 1860s and Peter Gatrell deals with naval procurement after 1905.[33]

The one notable exception to this pattern is Gatrell's monograph on tsarist rearmament in the 1900–1914 period. Because Gatrell considers the tsarist defense sector as a whole, he is therefore more concerned with macroeconomic trends than a detailed analysis of any one firm. Moreover, the state-owned defense works occupy most of his attention. Regarding private industry, Gatrell relies heavily on Soviet secondary works for his information. As a result, he has little to add to our understanding of the private firms. This is especially true of his specific discussion of the Putilov Company.[34]

Sources

The potential source base for Russian business history poses certain problems. To some degree, historical accident always determines what sources are available to scholars. As Gatrell observes with regard to the Petersburg industrialists,

> It is difficult to uncover evidence of their personal opinions and aspirations. Unlike politicians, they tended to leave no track in the memoir literature. Unlike full-time officials, their deliberations do not figure in the public record. Many business archives, which might shed light on their ideology and policies, failed to survive the war and revolution.[35]

Not to leave the impression that Russia is also exceptional in lacking adequate sources for business history, I should note that Gatrell's observations could just as easily apply to industrialists in the United States or Western Europe. Generally, business historians do not enjoy the rich variety of sources that usually aid the study of political leaders. Nevertheless, for this study, another historical accident has determined the availability of sources. The Central State Historical Archive of St. Petersburg, which holds the records for the Putilov Company's board of directors, was unfortunately closed for repair work during my research trip in 1994 and then was closed indefinitely. Owing to the relative scarcity of primary sources, the Putilov Company's special publication commemorating the centennial of the founding offers a doubly valuable glimpse into the firm's operations.[36] Even though the inner workings of the company are difficult to fathom, they may be explored indirectly.

The external relations of the company can be reconstructed through a close reading of the firm's correspondence with various banks and government offices, which is preserved in the Russian State Historical Archive (RGIA) in St. Petersburg. These collections of bank records have been used before by historians, but the inherent bias in these sources toward the role of the banks has not been adequately considered. One reason for privileging the role of the banks lies in the operating assumptions of the liberal and Marxist schools of interpretation. In the liberal interpretation of Russian industrialization, as exemplified by Gerschenkron's work, the economic historian adopts a version of the state-versus-society paradigm whereby an emerging autonomous market serves the function of civil society in casting off the heavy hand of state tutelage. The Marxist version, taking the cue from Lenin's *Imperialism: The Highest Stage of Capitalism*, attempts to lay the groundwork for 1917 by tracing the evolutionary stages of capitalism from cartels through syndicates, arriving finally at monopoly capitalism. In this scheme, the driving force becomes the banks, whereas in the liberal version the banks replace the bureaucracy as the guiding hand of economic coordination.[37] One reason that historians may overestimate the profile of the big banks in industrial affairs is that they rely on bank correspondence, and bank involvement naturally looms large in those documents. When viewed from the perspective of a single firm, however, the role of the banks rapidly diminishes.

In addition, the company's dealings with the tsarist army and navy may be probed in the collections of the Russian State Archive of the Navy (RGAV-MF) in St. Petersburg and of the Russian State Military-Historical Archive (RGVIA) in Moscow. The records of the Main Artillery Administration (GAU), especially the contracts concluded between GAU and the Putilov Company, yielded a great deal of information about Putilov's venture into armaments production. The value of these documents is that they reveal how the firm competed with the state arsenals for orders and how state officials responded. Besides these Russian archival sources, a small volume of very insightful material assessing Putilov's growing armaments and naval production in an international perspective is available from the British Admiralty intelligence reports of the British Public Record Office (PRO) in Kew.

Given the paucity of narrative sources left behind by the businessmen themselves, one must turn to other means to uncover their behavior and the operation of the firm. Here the problem is similar to that faced by social historians who are forced to rely on various forms of quantitative analysis in lieu of more traditional documentary sources. In the case of the Putilov Company, a useful source is the company's published annual account books, which cover the years 1873–1879, 1883–1902, and 1911–1914 and are available in the Lenin Library in Moscow. Corporations in Russia were required to publish annual accounts, and although these books are almost completely devoid of text, the financial information that they contain helps to illuminate the workings of the company and its implementation of various business strategies. How the board chose to allocate funds for new construction certainly is one gauge of corporate behavior. Nothing indicates the importance of a particular aspect of the firm's production better than the board's willingness to invest in it. More important, though, the balance sheets, dividends, working capital, and departmental production figures define and reflect the parameters of the business world in which Putilov's directors lived and worked, and therefore this information can also provide a glimpse into how they understood and functioned in that world.

However, without a way to corroborate the annual accounts with internal documents, one must use published account books with care. Soviet scholar I. F. Gindin questions the reliability of published account books generally, and the Putilov account books specifically. In 1913, according to Gindin, the company's president, A. I. Putilov, ordered the chief bookkeeper of the company to falsify the books in order to cover a loss of 1,137,000 rubles for the year and to create a profit that would allow for dividends. According to Gindin, the accountant complied and created a profit of 2,875,000 rubles on the books.[38] The origin of this accusation can be traced to M. Mitel'man's history of the Putilov factory in which Mitel'man states that the company kept two sets of books, one for publication and one for the board members. He presents as evidence a conversation between A. I. Putilov and the accountant, whom Mitel'man identified as Egor Egorovich Ioganson.[39] But Mitel'man's assertion is highly suspect for two reasons. First, he provides no citation at all for the conversation. Second, Ioganson did not hold the position of chief accountant in 1913; in fact, he did not become chief accountant until 1917, by which time A. I. Putilov had already been removed from the board when the state sequestered the firm in 1916. The chief accountant for the Putilov Company at the time of this alleged conversation was actually V. Breitigam.[40] Therefore, the specific case against the reliability of Putilov's published account books has no real foundation. It seems reasonable to accept them as valid sources and not outright fabrications, just as such published accounts and balance sheets should not be dismissed out of hand for business history in the West.[41]

A final useful source base for this project is the Russian business press of the era. In particular the *Trade-Industry Newspaper (Torgovo-Promyshlennaia Gazeta),* 1893–1914, is invaluable for reconstructing the narrative of Putilov's development. The newspaper regularly reported on the annual shareholders' meetings of the major Russian enterprises including the Putilov Company and the large joint-stock banks. For the 1870s and 1880s, the business coverage is not as helpful, but tidbits of information can be found in the *Exchange News (Birzhevyia Vedomosti)* and the *Government Herald (Pravitel'stvennyi Vestnik).*

What do these source materials indicate about the market strategies chosen by the company's board of directors and how they pursued their orders? How dependent was the Putilov Company on the state for its well-being, and how did the company's directors construct and market the firm's image? By analyzing the firm's perception of the market, its behavior in the market, and its use of the state as a market, one may answer these questions and shed some light on the functioning and conception of the market as understood by business decision makers in late imperial Russia.

It becomes clear that the Putilov Company in late imperial Russia developed atop an intersection of overlapping sets of states and markets. This may sound odd at first because Russian economic historians are accustomed to regarding the tsarist state as a monolithic body. Nevertheless, students of tsarist bureaucracy have recognized for some time that the different ministries pursued their own distinct policies, which often came into conflict.[42] For the Putilov Company the "state" customer was actually comprised of three different ministries: the Ministry of Transport, the War Ministry, and the Naval Ministry. Each ministry had its own procurement and payment policies, and each functioned as a distinct customer for a different set of products. Along with these bureaucratic clients, the Putilov Company also participated in multiple private domestic markets including the markets for railroad equipment, construction equipment, industrial machine building, and steel implements. In practical terms, the company's board identified segments in the state apparatus and the domestic market and generated product lines to fit. Therefore, in the Putilov board room, the state and the market interacted.

This interaction of state and market raises the issue of the compatibility of autocracy and capitalism yet again. We must distinguish between capitalism as an abstract social and legal system and capitalism as actual business behavior. One might expect capitalism in tsarist Russia to be very different from the Western variety because of the great differences between Russia's legal and political systems and those of the West. The common operative assumption, based on Weberian notions about capitalism as a system, is that Russia lacked the rational-legal order requisite for corporate capitalism because autocracy preempted property rights and other legal protections seen as necessary for predictability and long-term investment. On the surface this proposition is easy to accept. However, when we examine the actual business behavior of the Putilov Company we find that it mirrors exactly the behavior of comparable Western firms, even though Western firms operated in a different, nonautocratic environment. If autocracy and corporate business were so incompatible, how are we to account for the striking similarities in business behavior between the Russian businessmen at Putilov and their Western counterparts? The market strategies, long-term investment choices, and cartel behaviors were virtually identical, even though the legal and political structures were quite different in Russia.

The key point is that *autocratic* does not have to mean *unpredictable,* and in fact the Putilov Company's interactions with the state reveal that there was an increasing sense of routine and predictability that made it possible for businessmen to make long-term plans. This growing predictability and routinization meant that the Putilov board members could reasonably expect certain outcomes and act accordingly, even though they did not have the same legal guarantees as in the West. Under autocracy it was possible to have both personal predictability through the person of a patron and systemic predictability through the routine operation of the proper bureaucratic channels. Thus, it was possible to work the person or to work the system to achieve the desired results. Whether it was in the process of renewing the corporate charter or expecting business contracts to be arranged and executed in a certain way, the businessmen understood the rules of the game and were able to adapt to those rules. The Putilov Company's weakest business performance coincided with the period of its strongest personal support from the government. Later, in the 1885–1914 period, the company experienced its greatest corporate successes as the state's bureaucratic behavior became more routinized and therefore more predictable. In working the system, the Putilov Company could expect to be able to renew and modify its corporate charters and expand long-term capital investment in its diversification plans without any obvious concern or anxiety that those outcomes would not occur as a matter of course, even though Russia was an autocracy. Such matters had truly become routine. This is part of the reason why Putilov's business behavior had so much in common with its Western cohorts. The other part of the explanation lies in the fact that the market proved to be more important than the state for the company's prosperity.

The basic arguments of this book are organized chronologically. Chapter 1 traces the rise and fall of the Putilov Company under N. I. Putilov from 1868 to 1880. The state facilitated Putilov's rise as Russia's largest rail producer but could not prevent his fall. The company clearly enjoyed the indulgence of state officials, and in its formative stage the company owed much to the state. Chapter 2 examines the strategies for growth pursued by the company's board of directors under president N. N. Antsyforov (1885–1900). In this period the company reacted to a contracting rail market by diversifying its product line. Here I argue that the Putilov board's search for long-term growth led to development choices consistent with the strategies of European armaments firms. These choices did not result from immediate response to the economic downturn of 1899–1902, but were in fact the result of development strategies originating in 1885–1895. The expansion of the artillery business between 1900 and 1907 is treated in detail in chapter 3. The multiyear artillery contract of 1903–1907 proved to be pivotal for the fate of the firm. As the company committed greater and greater resources to artillery production runs, it fell victim to War Ministry payment policies that prevented the firm from receiving pay until the conclusion of the entire order. This resulted in cash flow problems that served as an incentive to recruit more active bank involvement.

Chapter 4 looks at the role of banks in financing and controlling the company from 1907 to 1914 as the company expanded into naval construction. I contend that the role of the banks in determining the direction of the Putilov enterprise has been grossly exaggerated and that the firm actually maintained its autonomy. Chapter 5 follows the fate of the company during the First World War and up to the revolutions of 1917. The state sequestered the company in 1916 as the result of a condominium of interests between Duma members, who supported Moscow suppliers, the War Ministry which wanted the factory under its control, and State Council members who feared labor unrest at the plant could spark a revolution in the capital. The company was vulnerable because of financial overextension during the years 1912–1914. Chapter 6 assesses the company's participation in cartels and draws conclusions about the position of Putilov between state and market in the tsarist era.

Because of its comparative dimensions, this Putilov case study should be of interest to a variety of scholarly audiences. Besides addressing issues of concern to Russian historians and historians of Western business, the Putilov experience speaks to those who are concerned with privatization and business in post-Soviet Russia as well. The company still exists as the newly privatized joint stock company Kirovsky Zavod in St. Petersburg, and today it is in the process of adjusting to the new market conditions in post-Soviet Russia by adopting strategies that are very similar to those of the old Putilov Company. Kirovsky's development since 1992 and its similarities to the Czech firm Skoda are the subject of the epilogue. Thus, a comparative study of Putilov/Kirovsky serves to illuminate a usable past for Russian business history.

1

The Rise and Fall of a Rail Manufacturing Giant

N. I. Putilov and the Putilov Company, 1868–1885

Nikolai Ivanovich Putilov harbored a grandiose entrepreneurial vision. Perceiving opportunites in Russia's generally weak metalworking industry, Putilov embarked on a course of development in which he attempted to integrate rail production into an elaborate transportation network. Starting with a rail factory, Putilov sought to establish a series of enterprises including rail production, a railroad, and a huge commercial port. These rather frenetic plans called for large amounts of capital and ultimately resulted in bankruptcy by the time of Putilov's death in 1880. At first glance, it is difficult to find a coherent growth strategy in Putilov's various enterprises. However, if we look at his industrial and commercial enterprises as part of a whole, rather than individually, then an underlying logic does emerge. In the short term, a desperate situation for the Nicholas Railroad gave Putilov the opportunity to acquire the rail factory. Once he had this factory, it became the center of his plans to create the commercial port and the railroad line. With the creation of these projects, the factory would be linked both to the port and to the other main railroad lines of the empire, and additionally the transport costs for the factory's imported raw materials would be reduced.

The story of N. I. Putilov's meteoric rise and then financial collapse was by no means uncommon among metalworking enterprises in the St. Petersburg region in the 1860s and 1870s. Like the other St. Petersburg enterprises founded after the Crimean War, the Putilov rail factory suffered through financial hardship and change of ownership. Until the

1850s, most factories involved in heavy industry were state-owned because of the military importance of those fields. However, after the Crimean War the government turned to private enterprise because of financial difficulties. The tsarist government employed a number of methods to shift the financial burden of maintaining these plants onto the private sector, such as guaranteeing returns on loans to attract foreign capital, leasing state plants to private firms, setting up protective tariffs, and sanctioning the creation of joint-stock companies.

Nevertheless, virtually all of the new private metalworking companies in St. Petersburg experienced financial hardship, even though they received significant government contracts, and they ultimately had to sell out to foreign investors or the Naval Ministry. For example, the Baltic Works belonged in 1856 to Carr and Macpherson and was one of the first private works that undertook building ships of war of large dimensions, the hulls having been built at Admiralty or Nevskii, and the machinery at Baird's or Kolpino. In 1877 they reverted to the Admiralty's ownership. All these works depended entirely on government orders, and private firms seldom applied to them for any work except repairs.[1] Thus, the fate of the Putilov factory was typical of all major industrial enterprises in St. Petersburg.

Even though the end results may resemble those of other Petersburg firms, Putilov's experience was not necessarily typical. Why did Putilov rise and fall? How was his path similar to that of others and how was it unique? These are important questions because, at the very least, an analysis of Putilov's experience calls into question the standard explanation that the European depression of 1873 caused all these industrial failures.[2] The Putilov factory became the most important rail producer in Russia through a combination of state indulgence, private initiative, and luck. Putilov himself was remarkably adept at obtaining support through the personal intervention of particular state officials. The state aided N. I. Putilov's rise but ultimately could not prevent his fall, although state officials did try to cushion the blow as much as possible.

Therefore, Putilov's story reveals both the extent and the limits of state involvement on the Petersburg industrial scene, as well as the importance of the individual entrepreneur. In 1854 Russia had 29 mechanical workshops with 3,000 workmen, representing a production of 2 million rubles a year. By 1865 the number had increased to 126 workshops employing 18,000 workers and producing 12 million rubles' worth of goods annually. In 1870 some 198 workshops with 30,000 workers averaged 29 million rubles of production per year. Commenting on Russia's industrial expansion, a British consular commercial report observed, "This increase is mostly in St. Petersburg and is attributable to Government orders."[3]

The factory that would become known as the Putilov works began as a state iron foundry built on Kotlin Island in 1789. In 1801 this operation was moved to the outskirts of St. Petersburg because the island location seemed too vulnerable to coastal attack. By March 1801, the new iron works was already making shells for the army and navy. Until 1803 the factory manufactured only shells, and it remained primarily a shell producer, although later it began to produce other iron goods for both the state and private customers. In 1842 the state sold the factory to the Vladel'tsev Mining Company, and in 1844 this private firm attempted to introduce rail production but went bankrupt in 1845. Given its importance as a shell producer, the factory returned to state ownership. Three years later, the state leased the factory to Colonel Ogarev. By that time, the factory was quite large and employed approximately 800 workers. Ogarev proved to be no more successful than the previous private owners, and the enterprise again failed. After being sold to yet another private firm and subsequently floundering again, the factory returned to state hands once more. Eventually, N. I. Putilov bought the plant in 1868, and the works bore his name until the end of the imperial period.[4]

Nikolai Ivanovich Putilov embarked on his industrial career by way of state service in the Naval Ministry. Born in 1817 into a noble family in Novgorod, Putilov entered the navy in 1830. After serving on various ships on the Gulf of Finland and the Baltic, he became a lieutenant in 1841. He left the navy in 1844, but four years later joined the Naval Ministry, where he was attached to the shipbuilding department as a junior officer with a special commission. Trained in naval mathematics, he taught at the Naval Academy until the early 1850s. During the Crimean War, Putilov rose through the administrative ranks of the shipbuilding department and gained experience overseeing both private machine factories and the repair works in Kronstadt. His contributions to the development of Russia's steam-powered gunboats and Petersburg's shipbuilding and munitions industries brought him to the attention of Grand Duke Konstantin, who later became an important patron. His accomplishments in economizing the construction operations earned him the Order of St. Vladimir, fourth class, but after the war Putilov left the Naval Ministry and turned his attention to developing the metalworking industry in northern Russia and Finland.

By the mid-1860s, Putilov had leased several factories in St. Petersburg to bolster Russian military production, including the Samsonievskii (formerly Nobel) machine works and the duke of Leuchtenberg's foundry. At the time, the government's concern about a possible European war over the Polish crisis of 1863 enabled Putilov to arrange the leases with state support. Having undertaken the first production of iron railroads in Finland, Putilov built three factories on Lake Saima to make boiler iron for the Russian fleet. Then, with Obukhov and Kudriavtsev, Putilov created the first steel cannon factory in Russia (Obukhov) and experimented with preparing tempered iron shells to eliminate Russia's dependence on foreign suppliers. Putilov's enterprises had put him in debt by 1866, and only the state's renewed interest in subsidizing the military and railroad industries in 1867 saved his financial fortunes by opening the way for him to acquire the Ogarev factory. Along with the plant, Putilov landed a huge government contract for manufacturing rails.[5]

Putilov's career background shares some important similarities with others from the generation of Petersburg industrialists who emerged in this post–Crimean War environment. Generally, these entrepreneurs came from foreign or noble backgrounds and usually founded and managed their own factories. The few natives who established their own firms (Putilov, Poletika, Semiannikov) had all received training in the state's technical institutes. Vasilii Poletika, a Ukrainian nobleman and the new owner of Nevskii foundry, had retired from the army as a colonel in 1856. Like Putilov, Poletika had used his state contacts to receive orders for locomotive and railroad equipment from the Ministry of Transport.[6]

In turn, the managers in charge of the state naval factories also shared similar backgrounds. Typically, these factory commanders, contemporaries of the first generation of private Petersburg industrialists, began their careers in the Naval Cadet Corps. Then, like Putilov, after duty aboard ship they worked for a time in some administrative capacity, either in the commercial sector or in a government ministry before moving into factory administration. For example, L. F. Gadd, director of the Izhorsk naval yard from 1872 to 1887, served on commercial ships and as director-administrator of the Society of the Volga-Don Railroad and Steamship Line. N. A. Bykov served in the Ministry of Transport as an inspector of navigation along the Don before becoming the commander of Izhorsk (1892–1894).[7]

The similarities in the backgrounds of state and private industrialists in Petersburg offers a clue as to why N. I. Putilov rose so quickly in the iron and steel sector. As a member of the service nobility and having had a dis-tin-guished career in the naval establishment, Putilov possessed the requisite background to earn the trust of state officials. State works continued to predominate in tsarist metalworking. When faced with a choice between saving a private enterprise or protecting a government operation, state officials usually chose to preserve suppliers under their own control. In a pinch, though, the state would turn to private enterprise to help carry the burden of maintaining existing plants.

The history of the state armories provides another good example of this relationship. Confronted by severe budgetary restrictions following the Crimean War, the War Ministry recognized that it had to attract private capital in order to save the three state small arms factories. However, the War Ministry sought to avoid becoming completely dependent on private manufacturers and did not want to relinquish the armories to private persons, whether Russian or foreign. So the ministry offered to lease the armories to their commanders. Under the conditions of leasehold management, the armories remained as the property of the War Ministry and the leaseholder had to be an officer in government service.[8] We have already seen this pattern in the history of the rail and shell factory prior to Putilov's acquisition of it. In this context, the fact that Putilov had a background in the armed forces undoubtedly helped his cause. It is hard to imagine the state handing over the Ogarev factory to someone without a background in the armed forces.

N. I. Putilov's background and experience were therefore important to his entry into Petersburg metalworking, but more significant in explaining his rapid rise was the fact that he fulfilled his promises regarding rail production very impressively between 1867 and 1870. On 15 June 1867, N. I. Putilov had already concluded a contract with the state Railroad Administration to supply 2.8 million poods of rails over seven years beginning in 1870 (one ton equals 55.5 poods). In fall 1867, however, the state-owned Nicholas Railroad was experiencing supply difficulties because an early freeze prevented overseas rail deliveries from Belgium and England. Seeing an opportunity, Putilov offered to provide 600,000 poods of rails if he were allowed to acquire the Ogarev factory to fill the order for the Nicholas Railroad. On 20 January 1868, Putilov's newly acquired rail factory began rolling rails and after eighteen days had produced 5,000 poods. Soon production reached 2 million poods per year.[9]

Beginning in 1869, Putilov devoted his efforts to building a commercial port in St. Petersburg and a railroad to connect the port to his rail factory. However, according to Baron A. I. Del'vig, a former head of the Ministry of Transport and later one of Putilov's business associates, "Putilov, by his nature, could not be content with this factory activity: a big dreamer and optimist in his own affairs, he intended to construct a port by the side of his own factory to attract all incoming and outgoing Petersburg trade."[10] Without the canal, only light-draught ships could travel up the Neva, and larger ships had to stop at Kronstadt and discharge there. The freight costs from Kronstadt to the city of St. Petersburg itself significantly added to the expense. From Newcastle to Kronstadt, shipping cost 6 shillings 6 pence per ton, yet it cost another 2 shillings per ton for the 30 kilometers from Kronstadt to St. Petersburg. In addition, traversing the final leg to the city often required two weeks, sometimes longer.[11] Putilov's proposal was one of a number of projects for developing a deeper St. Petersburg commercial port that had been floating around for years. Putilov proposed building a canal from Kronstadt alongside his rail factory to a deep-water port that would unite with the Nicholas Railroad along the Neva River, thus linking the Nicholas, Baltic, and Warsaw railroad lines. The charters of these new companies called for at least 18 million rubles of capital simply to construct the port near the Putilov rail factory and another 2 million rubles for the linking railroad. Del'vig observed,

> Neither of these enterprises was guaranteed by the government, and only Putilov and similar optimists could believe in the possibility to amass so much capital. . . . Putilov himself believed in their realization and, hoping that it would come about more quickly if part of his enterprises was already initiated, set about purchasing a large amount of land for the port and the construction of his railroad, spending on this money and deposits received from contracts for supplying rails.[12]

Putilov formed his railroad company on 27 March 1870 and initiated the construction of a railway network to connect the southwestern side of St. Petersburg with the southeastern part of the Neva, thereby linking the Warsaw and Moscow rail lines and tying them to the Putilov factory.[13]

We must be cautious about accepting Del'vig's assessment of Putilov's plans. Del'vig wrote his memoirs after these events, and no doubt the fact that he lived through the Putilov Company's bankruptcy, and suffered financially as a result, colored his recollections. Nevertheless, in this instance Del'vig identified accurately what proved to be the crack in N. I. Putilov's financial foundation that brought the whole edifice down. In order to generate the enormous capital necessary for his rail company and his port company, Putilov tapped the advances paid to his rail factory. In effect, Putilov treated these three separate enterprises as one big pocket from which he could draw money as he saw fit. In this way, he deprived the Putilov rail factory of its potential profits by redirecting its deposits and cash advances for rail orders into the Putilov Railroad Company and the port construction project, but this anticipates the outcome.

At the time, Putilov had every reason to be confident about his ability to realize his plans. In 1870 his reputation as an industrialist and his business fortunes had reached their zenith. Putilov basked in the glory of his rail factory's superior achievement. On 13 June 1870, Putilov hosted a parade and dinner at his rail factory to celebrate the completion of the four millionth pood of rails. Approximately 250 guests attended, including many engineers and representatives from the War Ministry. At the dinner Putilov toasted the working people of Russia, and especially those of his factory who were present at the festivities. Putilov could justifiably take pride in his accomplishments. The factory had provided about two-thirds of Russia's total rail production and had gained public attention as an enterprise to which the government ascribed great importance.[14]

Since Putilov was spending large sums for work on the construction of the port and linking railroad, he did not have adequate working capital at the rail factory in 1871 and 1872. As a result of his siphoning money from the rail factory to finance the port and railway companies, the factory's production fell off and the quality of its steel-headed rails suffered. From 1868 to 1870, rail production had steadily increased from approximately 1 million poods to 1.6 million poods. However, production declined by almost half over the following three years, from 1.4 million poods in 1871 to 700,000 poods by 1873. This in turn reduced confidence in Putilov in St. Petersburg financial circles. From other quarters, some criticized Putilov's success as a mirage based entirely on government orders. As evidence of the state's overindulgence of Putilov, they cited its sale of 5 million poods of used rails to the factory at an extremely low price and then buying back the finished product at a price considerably higher than the cost of imported rails.[15]

To line up support, Putilov approached Baron Andrei I. Del'vig in 1873, explaining that his factories were not functioning because of a lack of working capital. Moreover, he could not arrange any credit in Petersburg because of hostility to his enterprises on the part of the St. Petersburg Stock Exchange, expediters, and bankers. Local investors preferred to build the port in Oranienbaum, since they owned shares in the adjacent Baltic Railroad. Therefore, Putilov perceived that his only salvation would be found among the Moscow bankers—over whom, in his opinion, Fedor V. Chizhov had unlimited influence. Chizhov was a Slavophile writer and banker on the board of the Moscow Merchant Mutual Credit Society. Putilov therefore asked Del'vig to write to Chizhov urging support for his plans. Putilov added that he needed capital for the formation of the Putilov Manufacturing Company (chartered on 24 October 1872), since he would have to transfer the sums received for advances on rail contracts from the newly chartered company to other enterprises. Del'vig accordingly wrote the letter and gave it to Putilov.[16]

Upon his return from meetings with bankers in Moscow, Putilov declared to Del'vig that the Moscow Merchant Mutual Credit Society, the Moscow Commercial Credit Society, and the Trade Bank were prepared to loan him the necessary capital on condition that Del'vig serve on the council of the company. At first Del'vig refused on the grounds that the proposed company would be a fiction, since all the shares would belong to a single owner—that is, Putilov. Putilov eventually managed to persuade Del'vig, and in May 1873 the Moscow banks decided to loan Putilov 1.5 million rubles on the security of his 32,000 shares in the Putilov Company. Del'vig's concerns were justified. Putilov gave 100 shares each to various acquaintances, including Del'vig, so that they could be selected as members of the council and board of the company. Putilov then convened the general meeting of shareholders in early 1873—at which, of course, members were chosen according to Putilov's direction.[17]

The Moscow group's support of Putilov in establishing his company requires some comment because it seems to fly in the face of the Moscow businessmen's recognized antipathy toward St. Petersburg and the state bureaucracy. Undoubtedly, Moscow bankers and industrialists resented Petersburg officialdom, but they also had their own connections to the state. The Moscow group considered Del'vig their man in St. Petersburg, and he reciprocated the sentiment. Del'vig held Slavophile views himself and was on very close terms with Chizhov. It seems, then, that Putilov knew exactly what he was doing when he approached Del'vig in order to connect with Chizhov. Moreover, the Moscow group, including Del'vig, wanted to prove that a native Russian could construct railroads without state guarantees or foreign engineers. In their eyes, Putilov had earned a reputation as the first Russian to accomplish the large-scale manufacture of rails, and he had shown himself to be a technological innovator.[18] Putilov had played an important part in the strides taken by Russian heavy industry since its feeble beginnings after the Crimean War, and his rail factory acted as the core of the initial development of a domestic rail industry. The Putilov factory's position within Russia's rail industry can be seen from the data on rail production published in the journal of the Ministry of Transport. (See table 1.1.) In helping Putilov, the Moscow backers considered themselves to be furthering Russian business development in a useful enterprise. With financing from Moscow, the actual account year for the Putilov Company commenced on 1 September 1873.

The tsarist state set the legal confines for corporate activity in imper-

Table 1.1
Steel Rail Production by the Putilov Company, 1868–1874 (in poods)

	Russian Total	*Putilov Company*	*(%)*
1868	1,442,510	1,001,410	69.0
1869	2,580,104	1,599,787	62.0
1870	2,483,433	1,658,355	67.0
1871	2,352,278	1,416,022	60.0
1872	1,860,529	949,434	51.0
1873	1,602,970	713,720	45.0
1874	2,986,049	1,313,073	44.0

Source: Keppen, *Materialy dlia istorii rel'sovogo proizvodstv*, 118–21.

ial Russia under the law of corporations of 1836. This law combined an interest in fostering corporate capitalism, as in Western Europe, with the tsarist state's penchant for bureaucratic control of any potentially autonomous activity. These different impulses resulted in a guarantee for limited liability, as was common in Western Europe, along with stronger state oversight of incorporation, in keeping with tsarist proclivities. On the regulatory side, all charters for incorporation had to be reviewed by the ministerial bureaucracy and then signed by the tsar.[19]

The 1836 law established the operating rules for the relationship between the board of directors *(pravlenie)* and the shareholders. By law, the company actually came into existence at the first general assembly of shareholders at which the stockholders elected a board of at least three directors. The board was required to operate by majority rule, while at the annual meeting the shareholders were to set general policy and elect the directors by a three-fourths' vote of those present, with votes determined by the number of shares owned. In addition, an audit commission *(revizionnaia komissia)* had to oversee the company's books and present its audit to the shareholders at the annual meeting. To protect against potential abuses, members of the audit commission could not serve on the board simultaneously.[20]

The law did not outline a specific formula for corporate charters; however, certain items typically recurred. These included a stated purpose for the foundation of the company, along with its privileges and responsibilities, and the capital formation of the company in terms of stock capital, bonds, and the obligations of the owners. Corporate charters also usually described the company's board of directors and its duties, and specified the distribution of profits and dividends. In addition, charters established the role for shareholders and stated the means for disbanding the company.[21]

The charter for the Putilov Company conformed to this general pattern. According to the founding charter for the Putilov corporation *(Obshchestvo Putilovskikh Zavodov)* in 1873, the company consisted of five factories: the rail and mechanical factory in Petersburg, the Arkadiia factory in Petersburg, and three smaller ironworks in Finland. The administration of the business was to be divided between the board of directors and the council. The board consisted of four directors selected at the general shareholders' meeting. Each director was obliged upon entering the position to own no less than 100 shares of Putilov stock, which was to be kept in the cash account of the board of directors during his tenure. Two years after the first four directors were selected, one position would be up for election every year.[22]

Responsibility for the operation of the company rested with the Putilov board. The obligations of the board included maintaining records and accounts, and overseeing proper payment of interest for bonds and their liquidation. The board was also required to compose a plan of activity and estimates for the coming year no later than 15 November of each year, and equally to inform the council of the means for developing the enterprise for the council's examination. The board selected its administrative office, the bookkeeper, the administrators, and other divisional staff of the factories and presented them to the council for reward out of the company's profits. Additionally, the board had to present to the council any proposals for purchase or lease of immovable property and composed a semiannual account for the preceding year no later than 15 March. The board decided all issues by a majority vote. In case of a split on any question, the matter was transferred to the council. No fewer than three directors were required to sign requests for disbursements.[23]

The corporate charter clearly defined the rules and obligations for stockholders' meetings. The board had to call a general shareholders' meeting no later than May of each year. In addition, an extraordinary meeting could be called at the request of ten shareholders with voting rights. To have voting rights, a shareholder had to own at least 50 shares. Those holding 100 shares received two votes, 200 shares conferred three votes, and 300 or more shares four votes. Stockholders with fewer than 50 shares could attend the general meeting but could not vote. Shareholders could be represented by proxy, but in any event no individual could have more than eight votes at a meeting. For a general meeting to take place, at least one-third of the total number of shares had to be represented.[24]

The Putilov Company's charter spelled out the tasks that could be executed at the general meeting and included fairly precise formulas for the distribution of profits. For example, annual accounts were examined, and dividends, reserve capital, and pensions were determined at the meeting. It was also to be the forum for considering proposals for expanding or increasing the enterprise, for discussing motions to supplement or change the charter, and for electing directors and members of the council. As specified in the charter, no less than 10 percent of the gross profit had to be allocated for reserve capital. The remainder of the profit, if it did not exceed 8 percent of the stock capital, was converted into dividends for the shareholders. If the remainder amounted to more than 8 percent of the stock capital, then 12 percent went to the council, 8 percent to the directors, 10 percent to the division heads, 5 percent to the employees, and the remainder to the shareholders.[25]

In September 1873 the Putilov Company became active, but after a promising start the firm began to falter. Initially the infusion of new money from its incorporation as a joint-stock company buoyed the flagging rail production, and output practically doubled, returning briefly to 1871 levels (about 1.3 million poods). Soon after, however, the firm encountered financial difficulties. In particular, raw material costs increased. The prices for imported English coal and iron jumped 50 percent, and because materials were acquired so late in the year, freight was very expensive and a significant amount had to be moved by horse-drawn vehicles from Kronstadt in winter. These higher costs created financial difficulties because, according to contracts concluded with the Department of Railroads, the factories should have manufactured simple iron rails, not ones with steel heads. The price for a pood of the first was set at 1 ruble 47 kopeks, but the latter at 1 ruble 80 kopeks. Because of the high cost of raw materials, the preparation of simple iron rails would have caused losses to the factories.[26]

Putilov managed to avoid this problem by changing the contract. He began negotiations with the Ministry of Transport to convert the contracts for iron rails with steel heads into ones for rails made completely of steel in June 1873. After two years, in April 1875, the ministry approved a converted contract for 4 million poods of steel rails over five years. Under the new terms, iron rails would be accepted only through 1875. The price per pood of steel rails was 2 rubles 37 kopeks, and the total order amounted to 10,540,120 rubles after rail ties had been factored in. The company received an advance of 1 million rubles for the newly converted contract. Along with this, the company had to build new plant for the manufacture of steel and rolling steel rails. When steel-headed rail production concluded in July 1875, the company was completely tapped out financially. Minister of Transport K. N. Pos'et sought the agreement of Finance Minister M. Kh. Reutern to give the company advances for a million rubles for the assembly of rails in the second account year. The beneficence of the state in renegotiating the contract and providing advances enabled the Putilov Company to post a profit of 622,000 rubles in its first sixteen months.[27]

Why were the ministries so obliging toward Putilov? Although specific details are lacking, it is possible to speculate on two possible reasons. First, Putilov was taking advantage of the fact that Reutern generally placed military and political considerations above economic ones when it came to railroad construction. In this context, as long as domestic production capacity was expected to increase and improve, it was considered worth the additional expenditure. Second, from the perspective of the Ministry of Transport, Putilov was the only producer offering all-steel rails. Also, no Russian factory had undertaken the manufacture of railway parts such as bearings, nuts, bolts, and the like before Putilov did in 1868, and Putilov served as one of the very few Russian enterprises that made wheels and springs for locomotives.[28] In practical terms, this meant that the Putilov factory was a vital part of Russia's rail industry, and it would receive generous terms because of its unique position.

Putilov's practice of converting old contracts into new ones that offered fresh cash advances was not limited to rail production. Before the formation of the corporation, N. I. Putilov had also concluded a contract with the Department of Railroads for the assembly of locomotives and had received 300,000 rubles as an advance. At that time, he did not even have a workshop capable of manufacturing locomotives, since construction and equipment would cost enormous sums. As with the steel rails, Putilov found a way to convert this contract as well. With the aim of doubling Russian domestic production for railroads, the Ministry of Transport in 1874 ordered cars from many factory owners for high prices, demanding that all parts should be Russian-made from Russian materials. Since a railroad car workshop would cost much less than a locomotive workshop, the board of the Putilov Company decided to request a change from a contract for the assembly of locomotives to a contract for railcars. Putilov obtained an agreement to change the contract. Railroad car construction still required a new, special workshop, and the company did build one well and at significant cost. Yet production proceeded very slowly in part because of the cost of raw materials. Imported supplies of coal and iron cost the company about 350,000 rubles in 1876. These costs and the lack of working capital compelled the company to incur new debts, including 500,000 rubles from one of the members of company's council, Vasilii Pavlovich Aleksandrovskii, and a loan from the Moscow banks for 400,000 rubles.[29]

The advent of steel rail production did not deliver the company from its financial woes. The steel-rolling workshop made possible the production of all-steel rails at the factory beginning in 1875. In 1876, however, the company experienced losses totaling almost 1 million rubles, of which the rail factory itself accounted for one-third. The chief causes for the factory's losses were production delays; the rail factory had to pay over 200,000 rubles in late fines.[30] In 1877 the Putilov factory produced 643,000 poods of steel rails, and by 1879 this figure had grown to 3 million poods. However, at the same time the company suffered a series of losses owing to the high costs for imported raw materials and the large interest from the debt burden.

Despite ongoing losses and mounting debt, Putilov continued to pursue the development of the port and railroad companies simultaneously. For the construction of the canal, Putilov had managed to enlist contractors from England, Edwin Clark and William Ponchard and Company. Because Minister of Transport Pos'et preferred to give the contract to a Russian, Putilov stepped forward as the sole contractor, while the Englishmen served as silent partners. At that time, Putilov was still convinced that the construction of the port would bring huge profits. By lobbying Pos'et, Putilov got 4 million rubles in advance by rechartering the United Putilov Railroad Company in December 1875, even though the company charter was not approved by the Committee of Ministers until 12 October 1876. This reincorporation of the railroad company was designed to finish and supply a railroad from the Neva River to the sea canal, with links to the Nicholas, Warsaw, Tsarskoe Selo, and Baltic railroads. It would also have a continuation along the northern side of the canal. Meanwhile, in order to keep the rail factory solvent, Putilov was negotiating with a French company about leasing it. On 16 August 1876, construction work actually commenced for the St. Petersburg canal. Grand Prince Konstantin Nikolaevich, Minister of Transport Pos'et, and Naval Ministry representative

Stepan Stepanovich Lesovskii attended the ceremony. Unfortunately, Putilov never completed his grand plans for the canal. The government took over the canal project and finished it in the 1880s.[31]

Along with reincorporating and renegotiating contracts, Putilov continually reshuffled his loans in an attempt to slow the financial hemorrhage. Three Moscow banks loaned Putilov capital on their terms for only six months, after which time Putilov had to pay interest and arrange a new loan letter. Unable to pay all the interest, Putilov agreed with one bank in Moscow to pay off the interest on the other two. Then Putilov partially paid that bank and took a new loan for six months. In this way, Putilov got into a pattern of taking a new loan every half year. Each time, he assured the Moscow banks that he would pay all the capital early, then repawned his own shares to other banks and the State Bank.

In 1875 Putilov quickly formed the Port Company and repawned his stock yet again. This time, though, he did not manage to renegotiate the credit notes for a six-month term. Instead, the term was only three months. In January 1876, Putilov failed to make the interest payment to the Moscow banks, and they sent notes out for collection. Somehow Putilov found some money, but the constant shuffling of loans and stock threatened to ruin not just Putilov, but the banks as well. The potential collapse of the Moscow banks prompted the State Bank to step in and stabilize the situation. With great relief, Chizhov and the Moscow banks ceded their Putilov shares to the State Bank at a loss of more than 300,000 rubles in order to free themselves from any further entanglements with N. I. Putilov. As a result, beginning in 1877 a significant majority of company shares went into the hands of the State Bank, which from that time on became an actual owner of the factory with its own representatives on the board of directors.[32]

By the time Putilov died in 1880, he had managed to direct his enterprises into complete financial disarray. In 1881 the remaining board of directors considered selling off two of the company's factories in Finland and decided to close the Putilov factory itself for an extended Easter holiday, dismissing the workers because there were no new orders. The effects of N. I. Putilov's bankruptcy lingered until the early 1890s. The final meeting of his creditors took place in 1893, at which time almost 2.8 million rubles of the 6-million-ruble debt had been paid out by the administration responsible for its liquidation. The final payment represented about 10 kopeks per ruble of dividend held by the creditors.[33]

It is tempting to explain Putilov's financial collapse as a specific example of the general problem of Russia's weak industrial and financial development in the context of a European financial crisis. For example, Heather Hogan argues that by the mid-1870s the European depression tightened credit in Russia, and this adversely affected Putilov's strategy directly. His joint-stock company "soon faltered as well due to the financial crisis sweeping Europe," she writes. "Putilov was forced to curtail production and fire a third of his work force. His attempt to relieve the financial pressure by entering into the production of rolling stock also failed, and through the end of the decade the factory's debt continued to grow."[34]

Although Putilov certainly experienced chronic financial difficulties, Hogan's argument places too much emphasis on a systemic explanation and not enough on Putilov's contributions to his own problems. All told, from 1867 to 1879 the government paid out more than 131 million rubles for rails, locomotives, and wagons, of which Putilov received orders worth 32 million. These orders should have sufficed to keep the factory going. The problem, as we have seen, lay with Putilov's grandiose plans. Instead of reinvesting and providing his rail factory with sufficient capital reserves, Putilov used the factory's orders and cash advances in a financial shell game to develop his separate port and railroad companies. This extremely short-sighted policy brought down the whole operation because there was no way the port or railroad companies could possibly generate revenues in the immediate future.

Yes, Putilov felt financial pressures, but they were largely of his own making. His rail factory actually operated with a profit of 350,000 rubles in 1877 and 548,000 rubles in 1878, even as the company itself showed overall losses in those years. The fact that a rail factory could survive in Russia during the European financial crisis is proved by the example of the Briansk rail factory. In 1880, when the Putilov factory was heading for bankruptcy and state ownership, Briansk reported a profit of 1,911,521 rubles, and two other producers, Kolomna and Lilpop, were paying dividends of 12–20 percent.[35] Moreover, N. I. Putilov repeatedly managed to find financial backers within Russia. So lack of capital did not pose insurmountable difficulties. Given his poor performance record, one wonders why Putilov did not have more trouble finding capital.

His repeated success in arranging financial deals suggests that N. I. Putilov's personality must have played a significant role in attracting supporters. He was nothing if not persistent. Putilov continually hounded Del'vig. At first he wanted Del'vig to use his influence in Moscow, and then he pressured him to join the company. It is a testimony to Putilov's persuasiveness that Del'vig relented and joined the project despite strong misgivings. Also, Putilov's restless energy and hands-on approach seemed to fit the spirit of the times in postemancipation Russia. His early achievements were significant, and they fed his enthusiasm to achieve still greater projects. His supporters in Moscow were won over by his optimism for Russia's future and his genuine patriotism. By 1875, though, Chizhov had serious doubts about Putilov's entrepreneurial abilities. He had come to consider Putilov an incompetent entrepreneur who was consciously trying to drag as many people as possible into his enterprises in the hopes that somehow they would bail him out. Although Chizhov viewed the enterprises themselves as useful, he regarded Putilov as nothing more than a dishonest pretender and con man. When Putilov finally overreached himself, it was characteristically in grand style.[36]

Although Nikolai Putilov's attempts to combine a steel rail plant, a railroad company, and a port facility ultimately failed, his strategic thinking should not be readily dismissed as eccentric or uniquely Russian. Putilov's plans seem quite typical in comparison with the experience of American steel manufacturers in the 1870s. In the United States the same groups of corporations often owned and controlled both railroads and steel mills. For example, the Pennsylvania Railroad combined the roles of user and producer—common practice for this industrial sector. The Pennsylvania Railroad Company formed the Pennsylvania Steel Company and awarded it a $200,000 contract for steel rails.

In this regard, Nikolai Putilov's strategy would have been readily comprehensible to Andrew Carnegie. The Bethlehem Steel Company also started off in 1861 as a captive enterprise of a railroad company. In another similarity, steelmaking in the United States was initially created for a single product: Bessemer steel rails. Railroad officials had a stake in developing the early Bessemer steel plants, since the railroads consumed almost all of their steel.[37]

Yet N. I. Putilov did bequeath another lasting legacy to the Putilov Company besides debt. He had overseen the creation of a physical plant large enough to allow for economies of scale. Alfred Chandler observes, "The critical entrepreneurial act was not the invention—or even the initial commercialization—of a new or greatly improved product or process. Instead it was the construction of a plant of the optimal size required to exploit fully the economies of scale or those of scope, or both."[38] This observation certainly holds true in Putilov's case. His technological pioneering in Russia's rail industry did not save the company from collapse. However, he left behind a production facility that could dominate Russia's industrial scene by the scale of its output. Part of the reason for the State Bank's involvement was that the Putilov factory had already become too large to be allowed to fail. The Committee of Ministers noted in August 1881 that if the factory were to close, many workers would be left without any means of support.[39] Putilov's substantial contribution to Russian steel rail production is evident from table 1.2.

In October 1882 the government picked up the question of how to dispose of the Putilov Company. At that point, the State Bank owned seven-eighths of the company's shares and participated in the direction of the business. The State Bank also made large outlays to support the activity of the factory in view of the loans for the factory's materials and goods and itself took part in the administration of the company's business. The termination of this relationship could be attained by the sale of the stock belonging to the bank or the liquidation of the Putilov Company. Representatives of the Briansk and Warsaw factories proposed to acquire the shares, but the minister of finance rejected the offer, citing the potential

Table 1.2

Steel Rail Production by the Putilov Company, 1875–1880 (in poods)

	Russian Total	*Putilov Company*	(%)
1875	800,000	800,000	(100)
1876	800,000	800,000	(100)
1877	1,362,485	643,725	(47)
1878	3,332,513	1,045,466	(31)
1879	8,739,809	3,020,759	(35)
1880	11,977,542	2,992,351	(25)

Source: Keppen, *Materialy dlia istorii rel'sovogo proizvodstva*, 118–21.

loss to the bank of 4.8 million rubles. Therefore, Minister of Finance N. Kh. Bunge proposed that the activity of the Putilov factories should continue under state ownership until the working of the current materials and goods was completed. Then the factory should be closed if it had not received any new orders that could sustain it without state support or should be sold for less of a loss than currently proposed. If neither of those options appeared, then the company was to be dissolved in accordance with the firm's charter.

The following year, the state did sell the shares to the Briansk and Warsaw factories. As of 1885, the Putilov Company was able to buy out the Briansk and Warsaw steel syndicate by paying off the outstanding State Bank loans and regaining the 34,000 shares held in state hands. From that point, the board of the Putilov Company was headed by N. N. Antsyforov, former president of the company's council.[40] Bunge's sell-off of the Putilov plant was consistent with his belief that material aid for Russian industry was less important than legal reforms and factory legislation.[41]

The early history of the Putilov Company bore the imprint of the state's hand. The state had physically created the plant, encouraged and supported its product line, and come to its aid repeatedly with advances and orders. In the end, the factory returned to state hands. In spite of the pervasive presence of the state, however, Putilov's experience also illustrated the limits of state control over free enterprise and its tolerance of illegal activities. N. I. Putilov flouted the restrictions and principles of the corporate charter in any number of ways. He freely disposed of the company's shares and capital, and through reincorporations and renegotiations of state contracts he obtained multiple cash advances.

If anything, Putilov showed how much wheeling and dealing was possible within autocratic Russia. It was not difficult for him to obtain approval for his corporate charters. If an industrialist could gain the confidence of powerful officials and patrons such as Minister of Transport Pos'et, he could accomplish much. So even if autocracy could impede free enterprise through a stifling control over business activity, it could also potentially permit business a very wide latitude indeed. N. I. Putilov succeeded brilliantly in securing personal support from high state officials, thereby working the individual official within the autocratic system. Yet he ended in business failure and bankruptcy because his fortunes rested on the extremely narrow base of these few personal connections.

Finally, the story of Putilov's rise and fall has much in common with the experience of other Petersburg industrialists. His social background and career path fit the profile of the other plant directors and owners in Petersburg heavy industry, and this no doubt aided his rise by affording him the very important state connections that he used so well. Also, his enterprise ended in failure, as with most of the others in his generation. However, we need more detailed studies of the other firms before we can safely generalize about the reasons for their business failures. While it may be true that these other firms collapsed because of the strains of the European depression, the Putilov case raises doubts about ascribing that general cause as the explanation for specific failures.

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