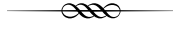


CHAPTER 1



Founding and Feeding an Imperial City

The creation of St. Petersburg as a seaport, capital, and metropolis marks a major turning point in Russian history. It proclaimed Tsar Peter I's break with Muscovite Russia and ushered in the new, imperial period of Russian history, which would last until 1917.¹ Although St. Petersburg's importance as a cultural icon, an agent of cultural change, and an economic enterprise forms the subject of countless books and articles in many languages, this chapter addresses two aspects of St. Petersburg's beginning and rise that have received far less attention: why did Peter create St. Petersburg on an infertile and inhospitable site in the far northwestern corner of his realm, and having done so, how did he arrange to feed the multitude of people he deliberately brought there.

A NEW SEAPORT

On October 11, 1702, in the third year of Russia's war against Sweden, Peter's army captured the Swedish fort at Noteborg, where the Neva River exits from Lake Ladoga. In recognition of its strategic importance, Peter renamed the captured fort Schlüsselburg (later Shlissel'burg) after the German word for "key" because, as he noted in his journal, "with this key the gates into the enemy's lands

were opened.”² The following May Peter’s forces captured a smaller fort downstream at Nienschants (Nyenskans), just above the delta where the Neva empties into the Gulf of Finland. With those two victories Peter’s forces brought all seventy-four kilometers of the Neva under Russian control, divided Swedish forces to the north and east in Karelia from those to the south and west in Ingria and Estland, and gave Russia access to the Gulf of Finland.

Almost immediately after the capture of Nienschants, Peter began building a new fort downstream on a small island in the Neva River delta. In itself that was a simple, prudent military decision on the part of a commander determined to hold territory he had seized, but Peter had grander ambitions, too. With the declared intention of making “that place great and populous,” Peter proceeded to pour money, manpower, and other resources into the site, turning it into a military base, a port, a commercial center, and the capital of the Russian Empire.³ By the time Peter died, in 1725, St. Petersburg had 40,000 inhabitants and had been set on a path to continued growth that would make it one of the largest cities in Europe by the end of the eighteenth century.

Although Peter referred to the site of his new city as a “paradise,” most observers, both in his time and in centuries to follow, disagreed. Except for the small settlement that had grown up around the Swedish fort at Nienschants during the seventeenth century, the site had long remained a wilderness—and for good reasons. It lay in a no-man’s-land between the possessions of Sweden and Russia, on the very fringes of those states. The climate was inhospitable and unhealthy, frigid and overcast in winter and cool and damp in summer. The several branches of the Neva River divided the city into separate quarters, or “sides,” that would not be connected with permanent bridges before the middle of the nineteenth century. The Neva normally froze in November and thawed in April, and whenever ice dams or a strong southwesterly wind resisted its flow, the river would back up over the low-lying delta. A description of St. Petersburg published at the end of the eighteenth century counted 23 inundations between 1721 and 1778, and the historian James Cracraft has counted 269 floods between 1703 and 1986.⁴ The countryside surrounding the city was equally uninviting. Rocky to the north and swampy to the south, it was incapable of producing in abundance anything useful to mankind other than trees. A large settlement in such a location could neither provide for its own needs locally nor satisfy them by drawing on an established commerce.

Counterbalancing its many shortcomings, Peter’s new city offered one decisive advantage: it combined access to the sea on one side with access to the Russian interior on the other. In the particular circumstance of the Great Northern War, that combination allowed Peter to construct a navy from domestic materials and then use it to wrest control of the Gulf of Finland and the eastern Baltic Sea from the Swedes. Once that had been accomplished, St. Petersburg could

then become a commercial port from which Russian products could be shipped to the markets of western Europe. Peter carried out those aims sequentially, but the order in which he formulated them is less clear. Perhaps his only goal at first was to build a navy to fight the Swedes, and the goal of selling Russian goods abroad came later, as new prospects arose from military success. In assuming that Peter stumbled onto a policy of enormous commercial value for the future of Russia, however, such an interpretation of events ignores not only Peter's life-long interest in commerce and trade routes but also the question of why he attacked Sweden in the first place.⁵ Did he do so only to achieve his stated aim of recapturing Ingria as a part of his patrimony that had been ceded to Sweden in 1617? But then why did he want Ingria, empty and ostensibly worthless, even at the cost of war at a time when he was already engaged in a costly war against the Ottoman Empire?

The greater probability is that Peter went to war against Sweden specifically to acquire a Baltic port through which Russian and Asian goods could enter the world market and that the construction of a navy was only a part of that larger aim. In the negotiations at Preobrazhenskoe in November 1699 that formulated the terms of the anti-Swedish alliance, Peter insisted that Russia should have access to the Baltic Sea and had that point included in the formal alliance agreement as the price of his participation.⁶ Then, just a few days after the capture of Nienschants, his public bulletins began announcing his intention to bring goods to the Neva River delta from the East Indies, Persia, and China and to create a port that would replace Nienschants and enter the Baltic trade in competition with Narva and Riga.⁷

A wealth of circumstantial evidence suggests that Peter had long had such a goal had in mind. Well before his personal tour of Europe in 1697, at the age of twenty-five, he had come to understand that the goods Russia produced in abundance, such as timber, tar, hemp, hides, iron, and grain, commanded prices in western Europe far higher than those they attracted at home. Increasing the sale of Russian commodities to foreign consumers, therefore, presented the direct and attainable possibility of enriching Russia, its subjects, and its ruler.⁸ Tsar Ivan the Terrible (1533–1584) had understood as much when he founded Kholmogory and Archangel in the far north and waged war for twenty-five years in an ultimately futile effort to capture the Baltic ports in Livonia.⁹ So too had A. L. Ordin-Nashchokin, a leading statesman of the 1660s, who had emphasized the importance of Russia's acquiring ports on the Baltic. Sweden also realized the potential importance of Russian trade through the Baltic and had tried repeatedly to attract Russian exports to Narva and Nienschants, but the Russian government, unwilling to put its trade under the control of a foreign power, had responded by imposing discriminatory duties and other measures to divert Russia's foreign trade to Archangel.¹⁰

OTHER SEAPORTS

ARCHANGEL

Since its founding in 1584 Archangel had demonstrated the profits to be gained by sending Russian goods abroad, but Archangel's location also limited the possibility of increasing those profits. Goods from the Russian heartland bound for Archangel could be hauled by cart or sled to Vologda, some 460 kilometers northeast of Moscow, and then carried by boat down the Sukhona and Northern Dvina rivers. Goods from the Urals and the Viatka region could also reach the Northern Dvina through its eastern tributaries. From Archangel, Dutch and English ships carried Russian goods through the White Sea into the Barents Sea and then around Norway's North Cape to the North Sea and onward to ports across Europe. But Archangel's location left much to be desired. Ice blocked both the sea route to Europe and the river route from the interior for more than half the year. Even when those routes were open, the dangers and difficulties of moving goods to and from Archangel raised their cost and reduced the volume of Russia's exports. A Swedish study of Russian trade in the middle of the seventeenth century stressed the fact that for western European shippers, a round trip to Archangel took three times longer than a comparable voyage to ports on the Baltic or the Gulf of Finland.¹¹ Despite its many shortcomings, however, Archangel was still the only port in Russia's possession when Peter came to power.

AZOV

When Peter visited Archangel for the first time in 1693–1694, he was fascinated by the sea and the prospects that it opened for Russia, but his subsequent actions suggest that he also gained an understanding of Archangel's limitations. Much of the rest of his life would be spent trying to acquire seaports that offered better, more direct connections between Russian producers and European consumers. Peter's first attempt to acquire a better port took him to Azov, an Ottoman fortress near the mouth of the Don River, in the far distant south. Ultimately his efforts to make Azov into a new and better Archangel turned out to be a false start, but by revealing Peter's objectives and methods, those efforts help to explain his subsequent actions at St. Petersburg.

Russia was already at war with the Ottomans when Peter seized the reins of power from his half-sister, Sophia, in 1689. Instead of continuing to attack the Ottoman's vassal state in the Crimea, as the previous regime had done, Peter directed his forces against the Ottoman fort at Azov near the mouth of the Don River. After failing to capture Azov in 1695, Peter constructed a shipyard (*admiralteiskii dvor*) at Voronezh on the upper Don, close to abundant sources of timber and the raw materials for naval stores, where foreign technicians, including thirteen master shipbuilders from the Venetian Arsenal, designed and built

brigantines, galleys, and men-of-war for use in the second siege of Azov and subsequently for naval action on the Sea of Azov and beyond.¹²

After conquering Azov in 1696, Peter did what he thought necessary to make Azov the crucial pivot of transportation between the Russian interior and the Mediterranean Basin. To connect Azov with the Volga Basin and its extensive network of rivers, Peter hired foreign engineers, including the Englishman John Perry, to construct a canal between the Volga and the Don. Then he ordered the creation of a canal between tributaries of the Don and the Oka that would allow water transport of goods to Azov from Moscow and the central Russian heartland. Several locks were actually built on the Volga-Don canal before the project was discontinued in 1701, when Peter refocused his attention and his resources on the Baltic. Even then, work continued on the Oka-Don (Ivanovskii) Canal until Peter was forced to return Azov to the Ottomans in 1711, by which time more than twenty stone locks had been constructed along the canal's projected route.¹³

At Azov itself Peter ordered the construction of new fortifications along contemporary European lines and took a close personal interest in their design. A civilian settlement, significantly named Petropolis, was to be laid out in a planned and orderly fashion on the bank opposite the military garrison. That it was to be a city of considerable size and importance can be surmised from Peter's instruction to the Orthodox Church to appoint a senior bishop or metropolitan for the new settlement.¹⁴ Peter established an annual trade fair at Azov, and in 1701 he ordered Ukrainian merchants to bring their wares to Azov and not to sell them at other fairs or in other towns.¹⁵

From Azov Peter extended his projects outward to the sea. In 1696 he ordered nautical surveys made of the Don, the Sea of Azov, and the Black Sea. In 1702 the information gathered in those surveys was incorporated into a series of maps of Azov and the surrounding region, and soundings made by the warship *Krepost'* were plotted on a map of the Black Sea from the Straits of Kerch to Constantinople. Two years later an atlas of the Don and its estuary was compiled in Amsterdam under the direction of Admiral Cornelius Cruys.¹⁶ Aware that the harbor at Azov was silting up, Peter began to develop a port at Taganrog beyond the mouth of the Don where shallow craft from Azov could transfer their cargoes to larger, seagoing vessels.

Compared to Archangel and St. Petersburg, Azov offered several important advantages. For one thing, the harbor at Taganrog and the waterways leading to it were free of ice for eight months of the year; for another, the Don provided Azov with easy downstream transport from the southern edge of central Russia, and Peter's canals promised to extend its reach to the Oka and the Volga. Moreover, because the Don flows for hundreds of kilometers through the fertile black-earth steppe, Azov, unlike Archangel or St. Petersburg, would have had no difficulty obtaining cereals for its own provisioning and for export.

On the other side of the ledger, Azov had two serious handicaps. First, the

harbor at Taganrog was shallow, exposed, and difficult for seagoing vessels to approach. Second, the Ottomans continued to control crucial straits separating Azov and Taganrog from the Black Sea, the Aegean, and the Mediterranean. Peter ignored the first handicap, but he quickly set out to eliminate the second.¹⁷ He sought a new alliance against the Ottoman Empire and a wider war that would open Russia's way to the Mediterranean and the markets of Europe. Had his plan succeeded, St. Petersburg might never have been created at all, for it is easy to imagine that in the course of a long war against the Ottomans, Peter would have moved Russia's capital from Moscow to Azov with consequences no less significant though very different from those that followed its transfer from Moscow to St. Petersburg.

On his "Great Embassy" to Europe in 1697–1698, Peter learned that the allies he needed were too concerned about the Spanish succession to take any interest in his scheme to dismember the Ottoman Empire. But he also discovered that Saxony and Denmark were seriously interested in an alliance to partition the Swedish Empire in the Baltic. Still, even after he went to war against Sweden and suffered an embarrassing defeat by Charles XII at Narva, Peter did not abandon his hopes for the Black Sea so much as he subordinated them to his more immediate concerns in the northwest. Even while Peter was mobilizing Russia's resources to fight the Swedes, work continued on Azov, Taganrog, and the Oka-Don Canal. Then, after defeating Charles XII at Poltava in 1709, Peter once again went to war against the Ottomans. The ensuing campaign resulted in an ignominious defeat, and Peter escaped disaster only by agreeing to return Azov to its former owners. Only then did Peter abandon his ambitious plans for the Black Sea region to pursue the Baltic alternative with single-minded determination.

NARVA, REVAL, AND RIGA

Military victories in 1711 and the Peace of Nystadt in 1721 brought Russia additional ports on the Baltic, but none so advantageous as St. Petersburg. Narva was a small city that had served briefly as Russia's "window on the west" at the time of Ivan IV, but by the early eighteenth century its harbor was too shallow for most merchant ships. Navigable rivers provided transportation to Narva from the flax-growing regions around Pskov and Velikie Luki but not from other, more central regions. Moreover, the waterways leading to Narva were interrupted by the deep waters of Lake Peipus, whose large swells threatened to capsize shallow river craft, and by a waterfall just a few kilometers inland from the port.¹⁸ Reval (Tallinn) had a fine harbor, but with no water transport from the interior, it served mainly as a port for agricultural commodities hauled overland from nearby estates in Estland.¹⁹ Riga was a substantial city with an extensive agricultural hinterland drained by the Western Dvina and a long-established maritime trade. Peter was pleased to annex Riga and collect tolls and duties on its exports, but its already flourishing trade could not be significantly

expanded to accommodate an increased flow of Russian goods. Riga remained an important destination for Russian and Ukrainian hemp, but Russian products, as opposed to those originating in Livonia and the Polish Commonwealth, could be brought to Riga only from the western edge of Russia and a part of the northern Ukraine, and until 1773 they were subject to tolls and tariffs on entering and leaving Poland.²⁰ Peter recognized Estland and Livland as fiefs of the Russian Empire rather than as integral parts of Russia, and he confirmed their traditional laws and practices, including those concerned with commerce, tariffs, and tolls.

ST. PETERSBURG'S ADVANTAGE

As a harbor for large merchant ships, St. Petersburg was inferior to Reval and even to Riga. A bar at the mouth of the river could not be crossed by vessels drawing more than 2.6 meters (8.5 feet). Peter dealt with that problem by creating a deep-water port at Kronstadt, on Kotlin Island, some twenty-nine kilometers out into the Gulf of Finland, to serve St. Petersburg as Taganrog was to have served Azov. Even so, the harbor did not offer sheltered conditions for loading and unloading cargo, and it was closed by ice for approximately half the year.²¹

The great advantage that St. Petersburg held over the other Baltic ports that Peter acquired from Sweden was that it could be connected directly to the Russian heartland. The Neva River flows to St. Petersburg in a broad, deep channel from Lake Ladoga, which serves as a great catch basin for the lakes and rivers of northwestern Russia. To the south and east only a relatively low and narrow divide stands between several rivers that feed Lake Ladoga and several tributaries of the Volga heading to the Caspian Sea. A canal joining two rivers on opposite sides of that divide therefore would create a continuous waterway from the Caspian to the Baltic and make it possible to transport goods to St. Petersburg by water from as far away as Astrakhan, the northern Ukraine, and the Ural Mountains—or even, at greater remove, from Central Asia, Persia, and the Caucasus. With such a canal St. Petersburg would in effect become the seaport for the Volga and provide that landlocked river system with the outlet that nature had denied it. The potential value of a seaport that could be connected by water to the Volga far surpassed the value of one that could not, and thus St. Petersburg, like Azov before it, possessed an advantage that no other seaport in Peter's possession could match.

THE WATERWAY

The importance of a waterway connecting a seaport with the interior cannot be overemphasized. No matter how good its harbor or how mild its climate, a seaport that cannot profitably acquire export goods faces severe limitations. At the time, water transport offered the most profitable and in some instances the only profitable means of moving heavy, bulky goods over long distances.

Overland transport—by packhorses, carts, or wagons in summer or, more commonly, by sleds or sledges in winter—was sometimes used to transport grain, hemp, or even iron over hundreds of kilometers under special circumstances, especially when cost was not the greatest concern, but normally it was used over much shorter distances to haul goods to the nearest trading wharf (*pristan*) on a navigable river. As the governor of Tambov observed in 1785, when a drought hindered grain shipments from that province, “Transporting grain overland is incomparably more expensive and more difficult than if water were available.”²² E. G. Istomina, a specialist in the history of Russian water transport, has calculated that a normal barge on the middle Volga could carry as much cargo as one hundred carts or sleds and that on the shallower rivers between the Volga and St. Petersburg, a small boat with a crew of six could carry more cargo than twenty-seven carts or sleds. She further estimates that transporting goods from the Volga to St. Petersburg by road cost ten times as much as doing so by water.²³ That differential is neither surprising nor out of line with comparative costs in other places. Studies of the costs of shipping grain from the eastern regions of the Polish-Lithuanian Commonwealth to Riga show that whereas water transport increased the price of the grain by 6 to 50 percent, depending on the distance, overland transport added 4 to 125 percent and was profitable only for distances shorter than 150 kilometers.²⁴ In early eighteenth-century France, Marshal Vauban found that six men and four horses could transport as much cargo in an ordinary boat as two hundred men and four hundred horses could haul overland on ordinary roads.²⁵

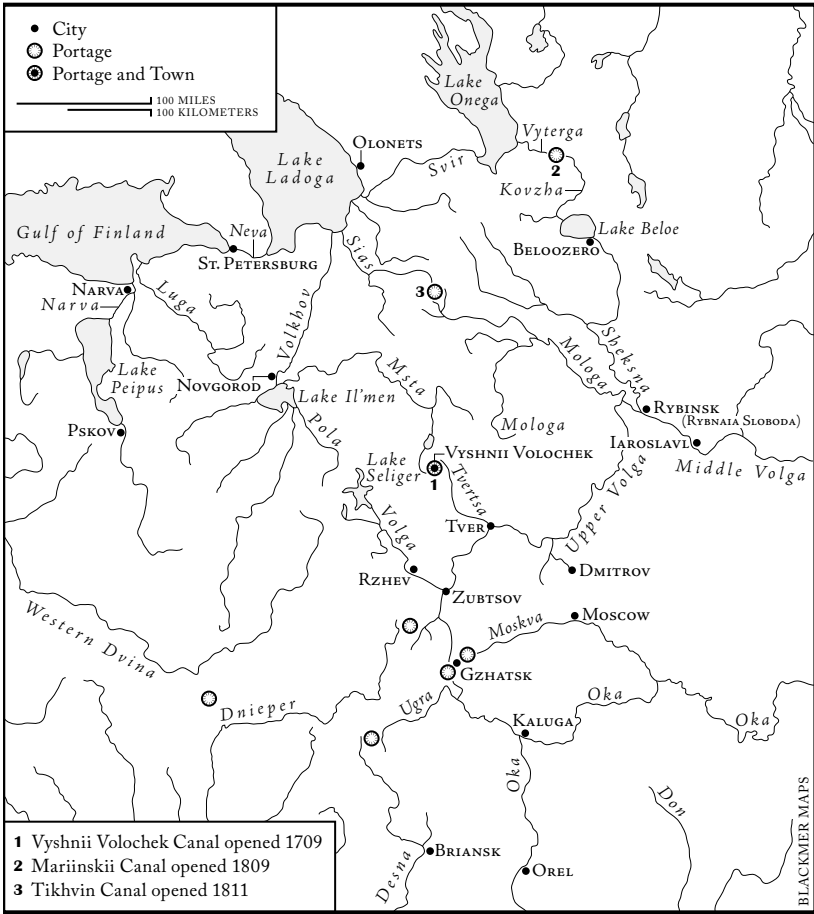
In Russia sleds and sledges using so-called winter roads offered a faster and more convenient form of overland transport than carts and wagons, but because the draft animals could not graze, they progressively ate into the profits, especially in the north, where fodder was scarce and expensive. In his account of Russia published in 1716, John Perry, commenting on the need to supply St. Petersburg by water, explained that one major limitation on overland transport was “the very great Scarcity and Dearness of Forage for Horses” and that in the St. Petersburg region, “all manner of provisions” were “usually three to four times as dear and forage for their horses, etc. at least six to eight times as dear as . . . at Moscow.”²⁶ Two years later a Dutch observer reported that Tver, Torzhok, and Vyshnii Volochek, three towns on the main road between Moscow and St. Petersburg, were filled with goods that could not be moved overland because of the poor condition of the roads and the high cost of fodder and thus would have to be brought to St. Petersburg in the spring by water.²⁷

Improvements to the Moscow-St. Petersburg highway eventually lowered travel times and therefore the cost of overland transport from the Volga to St. Petersburg. In 1777 one of four boats carrying wheat owned by the grain merchant I. A. Tolchenov was still on the far side of the divide when the navigation season ended. To avoid the costs of “wintering over,” Tolchenov had the cargo

hauled overland on sledges to St. Petersburg yet still managed to sell all four boatloads for what he termed “a modest profit.”²⁸ By the early nineteenth century, the British commercial analyst J. Jepson Oddy considered it economically feasible to transport heavy goods overland from Moscow to St. Petersburg even though it was still more expensive than shipping by water.²⁹

By the late eighteenth and early nineteenth centuries, hauling heavy, bulky commodities overland from beyond the divide to St. Petersburg had become feasible, but it remained exceptional. In Peter’s time direct water transport from the interior was an essential requirement for a seaport that was to serve as an outlet for Russian exports. That requirement explains not only Peter’s choice of Azov and St. Petersburg but also his decisions to connect them to the Volga by means of canals. Like St. Petersburg, Peter’s canals were enormously ambitious undertakings for his time. Europe’s first successful canal across a watershed between two river basins, the Canal de Briare, between the Loire and the Seine in France, opened in 1642 after thirty-eight years of investment and construction, and the vastly more impressive Canal du Midi, which crosses the divide between the Atlantic and the Mediterranean in southern France, was completed in 1681, less than twenty years before Peter started work on his canals to connect Azov with the Volga. When Peter gave the order to start digging, the only canals across divides and watersheds to be found anywhere in Europe were those in France.

In 1701, after Peter had gone to war with Sweden but before his armies had occupied the delta of the Neva, Peter sent John Perry and a Russian named Korchmin to investigate possible sites for canals across the divide between the watersheds of the Volga and the Neva. Perry and Korchmin quickly identified three existing portages where a canal or canals would permit continuous passage by water from the Volga to the Gulf of Finland: one between the Sias and the Tikhvinka, a tributary of the Mologa, which offered the shortest and most direct route from the Volga to the Neva, though it was obstructed by a high summit and numerous rapids; a second portage between the Vytegra and Kovzha rivers, which presented the lowest elevations but would require building twenty-two locks and a canal seven kilometers long; and a third between the Tvertsa and Tsna, which needed only a very short canal and two locks but lacked sufficient water at the summit to operate the locks and which also led to dangerous rapids on the northwestern slope (see map 1). Impatient to have the waterway in operation, Peter chose the third possibility. In January 1703 he put Vasilii and Matvei Gagarin in charge of creating a canal between the Tvertsa and the Tsna at Vyshnii Volochek, a coaching station (*iam*) on the road between Moscow and Novgorod. The Gagarins, in turn, hired Adrian Hauter, an engineer from the Netherlands, to plan and direct the construction. In 1709 Hauter’s creation, a simple, direct canal 2.8 kilometers long with a lock at each end, was opened to river craft and enabled them to transport cargo from the Volga to St. Petersburg without portage.³⁰



Map 1. Natural Waterways in Northwestern Russia

Although the Dutch had dug canals in their low-lying country for centuries, they had no experience with the different requirements of a canal across a divide. Hauter's canal followed the Dutch model and was inappropriate for the location. Because Hauter's design failed to retain water at the summit, his canal sometimes lacked sufficient water for operation, while at other times it experienced flooding and serious erosion. After numerous complaints from merchants and state officials claiming that such problems were interfering with the movement of merchandise and supplies to St. Petersburg, Peter received a more constructive memorandum about Hauter's canal from a Novgorodian merchant named Mikhail Serdiukov. Serdiukov explained why Hauter's canal could never function satisfactorily and how a different design would not only solve the problems but also permit a much larger volume of traffic to move through the canal. In 1719, after a personal interview, Peter assigned the canal at Vyshnii Volochek and

the land surrounding it to Serdiukov as a concession. Serdiukov received authorization to collect tolls, to build mills on the sluices, and to establish a brewery, a tavern, and other enterprises. In return, he redesigned and rebuilt the canal and constructed a reservoir and aqueducts to provide it with water from nearby lakes and streams.³¹

Serdiukov had solved the most serious problems at Vyshnii Volochek by 1722, but other trouble spots along the 980-kilometer length of the waterway from the Volga to St. Petersburg continued to interfere with the passage of barges. The deep and often turbulent waters of Lake Ladoga presented the greatest hazard. Because the lake is much deeper to the north than it is to the south, between the mouth of the Volkhov and source of the Neva, a north wind could and often did raise up huge waves that all too often swamped and sank the flat-bottomed river boats crossing the lake on their way to St. Petersburg. In 1718, claiming that 10,000 river craft had been lost in Lake Ladoga since the founding of St. Petersburg, Peter ordered the creation of a canal 104 kilometers long around the southwestern corner of the lake, from Novaia Ladoga near the mouth of the Volkhov to Shlissel'burg near the source of the Neva.³² In contrast to Serdiukov's undertakings at Vyshnii Volochek, the Ladoga Canal was a simple bypass canal with no change in elevation. Dissatisfied with its progress, Peter personally inspected the works in 1723 and put General Berkhart Christoph von Münnich in charge. Using soldiers for labor, Münnich completed the work in 1731, but the canal was shallower and narrower than Peter had wanted. For the remainder of the eighteenth century, the Ladoga Canal determined the legally allowable width of vessels plying the waterways between the Volga and St. Petersburg.

Canals over the divide and around Lake Ladoga eliminated the most urgent problems along the Volga–St. Petersburg waterway, but the passage of Lake Il'men, between the Msta and Volkhov rivers, would remain a hazard until the turn of the nineteenth century. Other problems, such as low water in the Tvertsa on the southeastern slope of the divide, a number of dangerous rapids in the Msta on the northwestern slope, and less dangerous rapids in the Volkhov, were addressed sporadically, with improvements gradually introduced from 1722 until the so-called Vyshnii Volochek System was finally abandoned in 1889. Essential for delivering goods to St. Petersburg, the Vyshnii Volochek System could not be used to ship goods from St. Petersburg to the interior because of the rapids and swift currents on the north side of the divide. Imported goods that were easily available in St. Petersburg thus remained scarce and much more expensive in the interior. Boats delivering cargo to St. Petersburg were routinely broken up and sold as firewood for the capital even though state officials continued to worry about deforestation along the waterway and the rising cost of boats.

In her evaluation of Peter I and his deeds, Lindsey Hughes judged Peter's projects for canals and other improvements to the waterways to have been "wasteful," but in fact they were necessary and essential components of his plans

Table 1. Number of ships using the port of St. Petersburg-Kronstadt, 1718–1797

	1718	1720	1722	1724	1760	1766	1773	1784	1790	1797
Arrivals	52	75	114	270	338	394	676	890	932	1,267
Departures	n.a.	n.a.	n.a.	n.a.	325	363	669	n.a.	n.a.	1,224

Sources: Sukhnovalov, "Ekonomicheskaiia zhizn' Peterburga," 1:86; Makarov, "Ekonomicheskaiia zhizn' Peterburga," 1:288.

for St. Petersburg and Azov (both of which she also questioned).³³ Despite all its hazards and limitations, the waterway through Vyshnii Volochek supplied St. Petersburg with the commodities on which its commerce and even its very existence depended. In a memorandum on commerce and transportation presented to Empress Catherine II in 1763, General N. E. Murav'ev noted, "the well being not only of St. Petersburg but also of the surrounding regions, which supply the capital with goods and which themselves depend on products brought from the southern provinces, depends on the good condition of the waterways."³⁴ In 1764 Jakob Sievers, the newly appointed governor of Novgorod Province, called the deteriorating condition of the locks at Vyshnii Volochek to Catherine's attention and urged her to have them repaired, because, he said, "it is through them that St. Petersburg lives."³⁵ In 1810, as the unique role of the Vyshnii Volochek System neared its end with the opening of two additional waterways, the director of water communications reminded Alexander I that "by this one route the capital . . . [had] been supplied with needed products from the interior of Russia both for its own needs and for export abroad."³⁶ Peter I had not only understood the importance of Vyshnii Volochek for St. Petersburg; he had also foreseen it before his army had conquered Nienschants and occupied the delta of the Neva.

SEAPORT, CAPITAL, METROPOLIS

St. Petersburg's entered a new period of growth and development in 1722. Serdiukov's improvements at Vyshnii Volochek had increased the delivery of export goods at the same time that the end of the Great Northern War had cleared the way for their transport through the Baltic (see table 1). Peter also reinforced those structural changes in St. Petersburg's trade with a series of decrees discouraging and in some cases prohibiting the export of specific commodities from Archangel and other northern ports.³⁷ The combined result was a rapid increase in St. Petersburg's maritime commerce. Between 1712 and 1719 an average of 2,166 metric tons of cargo had passed through the locks at Vyshnii Volochek each year. From 1722 to 1731 that figure increased to more than 156,600 metric tons per year, and by the 1750s it would rise to 216,000 metric tons per year.³⁸ In that same period the quantity and value of St. Petersburg's exports surged and quickly surpassed those of Archangel (see table 2).

Table 2. Value of exports from Archangel and St. Petersburg, 1704–1752 (in thousands of rubles)

Year	Archangel	St. Petersburg
1710	1,688	0
1718	n/a	233
1719	2,344.2	68.6
1720	1,445.5	n/a
1723	294	n/a
1725	120	2,035.2
1726	285.4	2,403.4
1739	326.9	2,247.3
1740	676.6	n/a
1743	309.8	2,214.8
1744	373.7	3,717.4
1748	283.3	2,214.8
1749	339.8	3,910.0
1750	282.1	4,439.8
1751	421.0	3,510.0
1752	312.4	4,357.6

Source: Repin, "Izmenenie ob"ema i struktury eksporta Arkhangel'skogo i Peterburgskogo," 177.

Peter's motives for making St. Petersburg the capital of the newly renamed Russian Empire are less obvious than his motives for making it Russia's primary seaport. By most accounts, the relocation of government agencies and officials occurred gradually and unprogrammatically, at least at first, and extended over a decade until Peter officially declared St. Petersburg the seat of government in 1713. According to the gradualist interpretation, Peter began spending so much time there both because it was a center of operations in the war against Sweden and because he loved his "paradise" on the Neva as much as he detested Moscow and the old ways it represented. Then, unable or unwilling to travel to Moscow to meet government officials, he made them come to him, first as a matter of expediency and only later as a matter of policy.³⁹

Nonetheless, Peter's matter-of-fact reference to the new settlement as "the capital" (*stolitsa*) in a letter dated September 4, 1704, indicates that he had already included that role in his vision of the city he planned to create.⁴⁰ Peter wrote that letter to Alexander Menshikov, his close friend and confidant and the man most likely to have known Peter's intentions. Peter had already appointed Menshikov governor of the newly conquered region and had delegated to him the task of

making the new settlement “great and populous” in accordance with the tsar’s instructions.

Although St. Petersburg is often mentioned as a precedent for Washington, New Delhi, Brasília, Canberra, Islamabad, and other capitals constructed as planned cities on previously empty sites, it differed from those new capitals in one crucial respect: they were conceived as stand-apart centers of government, whereas St. Petersburg was designed to serve as a seat of commerce, culture, and government all in one. As seaport, imperial capital, and metropolis combined, St. Petersburg was much less the predecessor of Washington, D.C., than it was the successor to Constantinople and, more distantly, Alexandria. The first new city of that type since Constantinople, it was also the first since then to be named for its founder.

Although Peter finally and officially named his city St. Petersburg in honor of his patron saint, his original intention, announced on August 24, 1703, had been to name it “Piterburg” after himself. Piterburg (or Peterburg or Peterburkh, as it was variously written) meant in Dutch or German exactly what Petropolis, the name he had chosen for the new settlement near Azov, meant in Greek. Before he settled on the name St. Petersburg, Peter and others sometimes called the new city “Petropol” and occasionally referred to it as “Sviatoi Gorod Petra” (Peter’s Holy City).⁴¹ Some contemporaries saw Peter’s bold moves, naming the city and transferring Russia’s seat of government from Moscow to the new port, as evoking those of Constantine. Although there is no explicit evidence to prove that Peter set out deliberately to follow that Roman emperor’s example when he created St. Petersburg, he and others did not fail to note the obvious parallels.⁴² Exactly when Peter became aware of them and how far he took those parallels is a subject for speculation and further research, but there is no denying their existence: like Constantine, Peter the Great ruled as emperor and “father of the fatherland,” with the right to designate his own successor, and he would preside over a senate and a synod in a new, eponymous capital and future metropolis that would become the new political, cultural, and economic center of his empire. It would become the stage on which so many of the monarchy’s “scenarios of power,” to use Richard Wortman’s perceptive term, would be enacted.⁴³

If Peter had simply wanted to move Russia’s capital away from Moscow, a city that in his mind embodied everything he was trying to change, he had many options. He could have relocated the seat of government to a provincial city on the route between St. Petersburg and Moscow, such as Tver or Novgorod; to some other provincial city; or to some convenient but unoccupied site as a stand-alone capital. Alternatively, he could have made Preobrazhenskoe, a village just outside Moscow, his version of Versailles. Instead, Peter wanted to create an imperial capital that would also be a thriving center of maritime trade and commerce. It was Peter’s ideology or “vision” that led him to want such a capital, but it was geography that determined and limited his possibilities. With no site comparable

to Constantinople available to him, Peter's choices were limited to Archangel, Azov, or St. Petersburg. All had significant shortcomings, but St. Petersburg offered the best choice because its shortcomings were offset by decisive advantages.

Although they occurred almost simultaneously, creating a port and naval base near the mouth of the Neva and transferring the government's central organs to St. Petersburg were independent developments, as the Supreme Privy Council understood in the late 1720s when it tried to separate them. Faced with the expense and inconvenience of ruling Russia from a distant corner of the empire, the Supreme Privy Council, which had acquired control of the government under the teenaged emperor Peter II, seriously considered moving the capital back to Moscow and might have done so if its power had survived the succession crisis of 1730. Such a move would have left St. Petersburg to serve as an outlet for Russian exports, like Archangel, and as a naval base.

From an economic as well as from an administrative point of view, the council's line of thought had much to recommend it. Although Peter's decision to create a seaport near the mouth of the Neva had demonstrated a brilliant understanding of economic geography, his decision to make St. Petersburg Russia's capital defied many considerations of economics and geography. Transporting goods to St. Petersburg made sense when those goods could be sold to foreign merchants at a profit but not when they were used to shelter, clothe, and feed multitudes of people there rather than in Moscow, where virtually everything other than imported luxuries was cheaper. Moreover, the need to transport goods for domestic consumption, especially building materials and foodstuffs, strained the limited carrying capacity of the waterways leading to St. Petersburg and interfered with the delivery of export goods. Yet deliveries of timber and cereals for domestic consumption always received the highest priority. In a decree dated June 26, 1720, listing the various goods delivered to St. Petersburg from the interior, Peter's government specifically identified timber and cereals as the two most important items on the list.⁴⁴ And so they remained: in 1797–1798 it was concern over deliveries of timber and cereals that finally prompted Paul's government to seek new water routes between the capital and the interior.⁴⁵

By the time of Peter's death, in 1725, St. Petersburg was not only an imposing naval base and a busy commercial port but also the capital of the Russian Empire, and it was on its way to becoming a major European city. To the delta of the Neva came state officials and courtiers, along with their households and servants; imperial guards regiments; sailors and shipbuilders; construction crews; and ordinary people seeking work and opportunity in the midst of so much money and so many needs. European ambassadors, commercial representatives, scholars, and specialists of many kinds also found employment in one of Europe's fastest growing cities. Beginning as a small settlement in 1703, St. Petersburg had become a substantial city by 1725; by 1790 it would surpass Moscow as Russia's largest city, and by 1811 it would rank as the fifth-largest city in Europe (see table 3).⁴⁶

Table 3. The population of St. Petersburg, 1703–1811

	1703	1725	1750	1784	1800	1811
Permanent residents	negligible	40,000	95,000	192,000	222,000	336,000

Source: Jones, "Getting the Goods to St. Petersburg," 414.

THE DEMAND FOR RYE FLOUR

With few exceptions, the diet of eighteenth-century Russians consisted mainly of cereals. Oats, buckwheat, barley, and millet were commonly consumed in the form of groats (*krupa*) or meal (*tolokno*) served as gruel or porridge (*kasha*). Rye and wheat were processed as flour and used to make bread, rolls, pancakes, noodles, fritters, pies, and other baked goods. Flour was also used as a thickener for soup (*pokhleбка*). Slightly fermented rye was used to make kvas, the most common beverage, and various grains were brewed and distilled to make beer and vodka. Vegetables, namely cabbage, carrots, turnips, garlic, onions, cucumbers, and mushrooms, along with berries, added variety, vitamins, and flavor to the daily diet of cereals. Potatoes, which would become a dietary staple in the second half of the nineteenth century, were virtually unknown in the eighteenth. Protein came principally from dairy products such as milk, sour cream (*smetana*), and cottage cheese (*tvorog*) but rarely, if ever, from other kinds of cheese. Fish and meat were readily available to those who could afford them. For the vast majority who could not, fish and meat constituted a relatively small component of the regular diet, while bread and other cereals accounted for the bulk of it.⁴⁷

Evidence from every quarter indicates that the Russian diet centered on cereals, especially rye. In the 1780s a topographical description of Tver listed the foodstuffs typical for most residents of that northwestern province: "The peasants' diet consists for the most part of plain bread, boiled garden vegetables, and milk. They eat meat on feast days." Noting that peasants under the jurisdiction of the state treasury enjoyed a higher standard of living than did the nobility's serfs, it said that the former normally lived on rye bread; milk; soup with sour cream; kasha made from oats, barley, or buckwheat; pancakes; and pies filled with carrots, buckwheat kasha, or cottage cheese—all this supplemented with steamed turnips, fried mushrooms, onions, sour cabbage, and hempseed oil. On feast days these peasants ate meat; on fast days, only cabbage soup, kasha, and vegetables. Their principal beverage was kvas.⁴⁸

While this account did not attempt to quantify consumption, those who had to provide food for others did. According to L. N. Semenova, monasteries in northern Russia based their accounting on the assumption that an adult male peasant needed two chetveriks or two puds of rye flour a month. Noble landowners in northern Russia also allotted the same ration to each of their non-

Table 4. Estimated annual demand for rye flour in St. Petersburg

Year	Population	Demand (in chetverts)	Demand (in metric tons)
1725	40,000	90,000	11,056.0
1750	95,000	213,750	26,258.0
1784	192,000	432,000	53,063.8
1800	222,000	499,500	61,360.8
1811	336,000	756,000	92,870.4

agricultural workers.⁴⁹ Equal to 32.76 kilograms, that amount is virtually identical to the flour ration that the army assigned to Russian soldiers from the late seventeenth through the middle of the nineteenth century.⁵⁰ In St. Petersburg employers and officials made similar assumptions when calculating the food needs of those in their charge. In the first half of the eighteenth century, whenever state agencies provided their workers with a monthly allotment of food as part of their salaries, they invariably included either two chetveriks or two puds (32.76 kilograms) of rye flour together with a much smaller quantity of groats and some salt and vegetable oil. When they included fish or meat (usually pork), they normally allotted something close to two kilograms per worker per month.⁵¹

Clearly, Russian authorities in different places and at different times all shared a common assumption that peasants, other workers, and soldiers consumed approximately one kilogram of rye flour a day, primarily in the form of bread. One kilogram of rye flour would yield approximately 3,500 calories, 16.7 percent above the 3,000 calories set by the World Health Organization as the daily requirement for an adult male. Slightly fermented and containing lactic acid, Russian rye bread was also heavy, filling, and slow to digest.⁵²

In 1786, when St. Petersburg was threatened with a shortage of flour, an extraordinary five-member commission on grain appointed by Empress Catherine II attempted to calculate the city's immediate and future need for cereals. The commission noted that "since the round number of 180,000 inhabitants" contained "an undetermined number of children," it would assume a minimum rate of consumption of one and a half chetveriks (approximately 23 kg) of rye flour per month, or an annual intake of 2.25 chetverts (276.4 kg) for every man, woman, and child in the city.⁵³

Let us assume, then, a minimum annual consumption of 2.25 chetverts, or 276.4 kilograms, of rye flour for all residents. All other foodstuffs amounted to supplements that could be ignored in an emergency, but rye flour constituted the essential, irreducible basis of subsistence. Thus the minimum annual requirement for food in St. Petersburg in given years can be estimated by multiplying the total population from table 3 by these. The results appear in table 4.

Table 5. Quantities of flour, groats, and raw grain en route to St. Petersburg as recorded at the Shlissel'burg terminus of the Ladoga Canal and reported to the Commission on Grain in 1786 (converted to metric tons)

Year	Rye flour	Wheat flour	Fine flour in sacks	Groats of various kinds	Unmilled grain of various kinds
1781	55,248	8,974	5,454	9,476.4	53,518
1782	65,909	11,881	7,627	8,291.0	40,535
1783	51,465	4,288	5,333	6,518.9	55,434
1784	61,341	6,091	6,384	6,260	68,290
1785	55,175	7,761	7,739	4,736	46,176

Source: "Vedomost' o propushchennykh v Sankt Peterburg chrez ladozhskii kanal sudakh, plotakh, obrubakh i o provezennykh na sudakh khlebe," SPFIRI. RAN, f. 36, d. 410, l. 232. Shapiro, "O roli Peterburga," 389–91, gives figures for those same years that are almost but not quite identical, differing by only 10–150 tons per year, which indicates a different source.

Records of actual deliveries of rye flour and other grains to St. Petersburg in the early 1780s, reproduced in table 5, enhance the credibility of those estimates, for they demonstrate that table 4's estimated demand for 1784, based on those assumptions, pretty well fits the supply in 1781–1785, before the government noticed the rising prices and threatened shortage of 1786. Thus the quantity of rye flour arriving in Shlissel'burg averaged 57,828 metric tons over the five years from 1781 to 1785, which is close to my estimated demand of 52,704 metric tons for 1784, especially given that an unspecified quantity of the rye flour arriving in Shlissel'burg was destined for Vyborg and other towns and garrisons in Ingria and Karelia. The delivery of rye flour in amounts greater than the minimum estimated needs of the city also reflects the good harvests and abundant supplies that prevailed during these years, when the government felt uncharacteristically confident about provisioning St. Petersburg and permitted the export of rye. By 1786–1787, however, officials had to confront rising prices and possible shortages, which the Commission on Grain attributed in part to an unexpected influx of 58,000 workers who had come to the city, creating additional demand and upsetting the grain balance.⁵⁴

Table 5 also shows that at least for the years in question, rye flour amounted to between 41 and 49 percent of the total amount of grain and flour passing through the Ladoga Canal. Of the remainder, only groats constituted part of the general diet of the city's population. Wheat flour and fine flour were consumed primarily by foreigners and wealthy Russians, but as substitutes for rye flour they still counted as part of the city's food supply. Unmilled grain did not, how-

ever, because as the Commission on Grain noted, “The sale of unmilled grain never occur[red] in St. Petersburg.”⁵⁵ In fact, there were so few gristmills in the region surrounding the capital that in times of shortage, the government found it difficult to substitute shipments of grain for flour. Unmilled rye and wheat could be exported in the early 1780s. Unmilled barley was used primarily for brewing. Unmilled oats, which alone accounted for between 70 and 88 percent of the unmilled grain in any given year, were mostly fed to horses and, while not counting as part of the food supply, still counted as a basic necessity for the city. If the extrapolations for the early 1780s are equally valid for other years, they would mean that the city’s total annual demand for grain and flour was somewhat more than twice the estimated demand for rye flour alone.

MEETING THE CITY’S NEED FOR RYE FLOUR

From the moment his armies seized the Swedish fortresses in Ingria, Peter had to contend with the problem of supplying flour to the occupants of a grain-deficient region that could not meet its own needs. As usual, his first instinct was simply to order his subjects to do what he wanted done. Peter’s decree of 1703 thus stipulated that each household must deliver either four chetveriks (61.64 kg) of rye flour or one (volumetric) chetvert (approximately 131 kg) of oats and five puds (82 kilograms) of hay to one of four designated collection points on or near the northwestern frontier: St. Petersburg, Shlissel’burg, Iamburg, or Pskov. Russians were accustomed to paying a tax in kind, known as “*zaprosnyi* grain,” for provisioning of the army and had done so at least since the reign of Tsar Michael (1613–1645), but whereas previous legislation had required taxpayers to deliver their grain to local collection points or in some instances to Moscow, Peter now demanded that they deliver it to far-off Ingria.⁵⁶ By doing so, Peter transferred the responsibility for, costs of, and difficulties attendant on transporting grain to the northwestern frontier, shifting all these to Russia’s peasants and their masters and thus making his problem their problem.

In the central and northern regions, where surplus grain was scarce, many of the taxpayers subject to Peter’s decree responded to it by paying private contractors (*podriachiki*) to fulfill their obligations for them. The contractors purchased grain in bulk in surplus-producing regions where prices were low and delivered it to the designated depots on behalf of those who had hired them. Until the opening of canals across the divide and around Lake Ladoga, the cost of delivering the grain could easily exceed the price of the grain itself. In the first decade of the eighteenth century, a chetvert of grain that cost approximately one ruble in the province of Moscow normally cost three rubles to deliver to St. Petersburg.⁵⁷ Still, contractors managed to make a profit from purchasing grain in the south and transporting it to the northwestern frontier, even after the state, ever suspicious of profiteering, imposed a tax on their purchases.⁵⁸

In the later stages of the Great Northern War, Peter’s government increas-

ingly monetized the burdens it imposed on his subjects, converting other obligations to cash that it then used to purchase the goods and services it required. This process began in 1717, when Prince A. M. Cherkasskii, director of the Chancellery of Urban Works, sent Peter a report contending that forced labor was more costly and less efficient than hired labor. Citing specific facts and figures, Cherkasskii argued that he could save money on his projects by paying workers wages and firing them for cause instead of continuing to round up unwilling workers; forcing them to work; preventing their escape; and providing them with food, shelter, and medical care. This scheme would also produce better results. Even so, Cherkasskii wanted to make the change gradually because most Russians were unfamiliar with wage labor. In his report, Cherkasskii also opposed the practice of compelling merchants to settle in St. Petersburg, arguing that the ban on exports from Archangel would lead the appropriate merchants to relocate to St. Petersburg willingly without disturbing those who did not fit the city's needs.⁵⁹ Peter approved Cherkasskii's proposals, and by 1721 both the compulsory resettlement of merchants and compulsory labor on state construction had been replaced by a newfound reliance on market forces and the rational calculation of economic self-interest.

Almost simultaneously Peter's government was similarly changing how it fed and financed the armed forces and the agencies that supported them. A decree from November 1718 called for the registering of individual male "souls" rather than households as the basic unit of taxation supporting the army. Several clarifications followed, but the household, or *dvor*, was still the basic unit of taxation in September 1721, when the state converted the tax in kind into a cash payment of one ruble per household to be delivered to St. Petersburg for provisioning the army.⁶⁰ In 1725, when the individual taxable male rather than the household finally became the official unit of taxation, the rate was initially set at seventy-four kopecks per "revision soul." Almost immediately, however, the rate was reduced to seventy kopecks per soul for peasants and remained fixed at that level until 1795. In the interval the state reversed Peter's practice of demanding ever larger sums from the taxpayers, and the taxpayers accustomed themselves to paying their taxes in cash rather than in kind. In 1795, when the state finally raised the poll tax and tried to collect part of it in kind, taxpayers who were required to pay part of the tax in grain protested, and a special commission appointed to investigate the protest reported "no inclination or custom among the inhabitants to pay their taxes in grain."⁶¹ After 1721, compulsory deliveries of cereals were replaced by the compulsory delivery of money, which the army and other state agencies could then use to purchase cereals either in the provinces or in the city itself.⁶²

In St. Petersburg the largest and most important buyer of cereals was the Provisions Chancellery (Proviantskaia Kantseliaria), which provided monthly rations to the many army and navy units based in the provinces of St. Petersburg and Vyborg. By the end of the eighteenth century, military personnel and their

dependents constituted 50,304 of the enumerated inhabitants of the city of St. Petersburg. In addition, two regiments of cavalry and one regiment of infantry were perennially quartered in the city but were not included in the official count of residents.⁶³ To feed all the enlisted men and their dependents in and around the capital, the Provisions Chancellery negotiated contracts with merchants who brought cereals to St. Petersburg. In the second half of the eighteenth century, it also purchased surplus flour secondhand from other state agencies. All told, contracts let by state agencies in the 1720s accounted for 37 percent of all grain exiting the Ladoga Canal at Shlissel'burg. By 1809 such contracts still accounted for 36 percent of the rye flour, 33 percent of the groats, and 10 percent of the oats arriving at Shlissel'burg.⁶⁴

By the 1720s most state agencies other than the military simply paid their St. Petersburg employees significantly higher wages than those they disbursed in other locations and let the workers find their own sustenance in the city's markets. There these workers met the rapidly increasing number of people who were not in the government's employ but who were attracted to the city by the many opportunities it offered. One way or another, most of the money spent on cereals in St. Petersburg came from the taxes paid by peasants.

Before the reopening of the Vyshnii Volochek Canal in 1722 and the opening of the Ladoga Canal in 1731, the government's ability and willingness to pay high prices brought cereals to St. Petersburg regardless of the cost and difficulty of transport. In wintertime peasants, state coachmen (*iamshchiki*), contractors, and others hauled cargoes across the divide from the interior provinces to wharves from which they could be shipped downstream to St. Petersburg in the spring.⁶⁵ During the Great Northern War, moreover, Peter's embargo on exports across Russia's western frontier and Sweden's naval blockade of the Baltic combined to create temporary surpluses in Estland and western Poland that could be moved overland to St. Petersburg as long as the price remained high enough to cover the costs of transportation. The conclusion of the Great Northern War in 1721 and the almost simultaneous reopening of the Vyshnii Volochek Canal promised to end those unusual circumstances by increasing supplies and lowering prices. Instead, at the very moment when St. Petersburg residents began to expect a steady and increasing flow of cereals from across the divide, poor harvests in the interior provinces provided a sharp reminder of the city's vulnerability to famine.

THE STATE AND THE MARKET

During the so-called hunger years of the early 1720s, Peter's government reacted to shortages and rising prices by trying to control and manipulate the cereals market. Peter's first instinct was to try to hold down prices by fiat. In a decree enumerating the duties of his newly appointed chief of police (*Politsseimeister*) in St. Petersburg in May 1718, the emperor instructed him see to it that the price of food neither rose nor fell.⁶⁶ When the shortfall in deliveries rendered

that injunction impractical, Peter responded with a new decree in April 1722; this one set maximum prices for various food items, but as supplies continued to shrink, bread and flour were either sold at prices higher than the law allowed or not sold at all. In February 1723 Peter turned from price controls to profit controls with a decree setting 10 percent as the maximum profit allowed on sales of cereals and imposing a tax on each transaction.⁶⁷ Along with instituting those measures, Peter took steps to increase the amount of grain and flour available for sale. His decree of April 13, 1723, prohibited the export of cereals from the Russian Empire and invited imports by removing restrictions and import duties on cereals. The decree was to be publicized not only in Estland and Livland but also in Königsberg and Danzig.⁶⁸

Undertaken in an emergency, Peter's decree of April 13, 1723, made an extraordinary exception to his standing policy of feeding St. Petersburg with Russian cereals, and Peter rescinded it the following year. In 1724 he reimposed tariffs on cereals imported from abroad, although at half the rate charged on other goods, and later that same year he eliminated internal tariffs on all foodstuffs sent to St. Petersburg from within Russia.⁶⁹ Those laws, combined with the earlier decree prohibiting the export of cereals from St. Petersburg whenever the price of rye flour in the province of Moscow exceeded one ruble per chetvert, effectively defined the St. Petersburg cereals market as an extension of the Moscow grain market, binding them together and erecting barriers between them and the international European market.⁷⁰

Peter's laws restricting the import and export of cereals through St. Petersburg followed the pattern set by other European states. Poland, Livland, and Estland regularly exported surplus grain in great quantities, but most European states wanted to maintain a balance between the internal production of grain and its internal consumption insofar as that was possible, thus confining their cereals markets within their own borders. In Russia, as in most of Europe at that time, authorities sought to avoid treating cereals as mere commodities that should be traded on the open market like other goods. In normal times authorities allowed cereals markets to function under controlled conditions, but in times of shortages and rising prices, latent suspicions of the cereals trade and all who engaged in it quickly came to the fore, and authorities would move in to regulate, control, and distribute.⁷¹ Over the longer run, however, the major strategic tools for regulating the cereals trade were thought to be taxes, tariffs, and controls over imports and exports.

Peter's legislation may have helped to mitigate St. Petersburg's subsistence crisis in the 1720s, but substantial relief came only in the 1730s, when improvements to the waterways finally combined with normal harvests in the interior provinces to increase supplies. From the 1720s to the 1730s, the "real price" of cereals in St. Petersburg fell dramatically in comparison to the general level of other prices, and despite the steady increase in the city's population, it continued

its overall decline until the 1760s, when it began to climb once again.⁷² Within those broad trends, however, lay some sharp fluctuations that occurred whenever a meager harvest in the interior sent prices in St. Petersburg spiraling upward. That happened in 1734–1735, 1765–1766, and 1786–1788, and each time the government tried to hold down prices and increase supplies by taking emergency measures. In the last two instances, the government also conducted investigations of the St. Petersburg cereals trade that provided it (and later historians) with basic information about the trade's normal operations.

By the end of his reign Peter I had not only directed the creation of a new city of some 40,000 people but also overseen the creation of a framework of laws, regulations, and practices that defined the St. Petersburg cereals market. Like all markets, it functioned on the basis of exchange. What St. Petersburg had to exchange was money, acquired through taxes, tariffs, minted coinage, and profits from foreign trade. Producers in the interior provinces needed money to pay taxes and, in the case of the landowners, to acquire the accoutrement of a westernized style of life. To get the cash they needed, producers had to sell grain and other agricultural products. Separated by hundreds and even thousands of kilometers, the two ends of the exchange system were connected by a network of transport and a set of commercial activities. Those systems of transport and commerce, the infrastructure of the cereals trade, were organized, supported, and improved by the state, but their successful operation depended on the perceived self-interest of thousands and even hundreds of thousands of Russians whose activities converted raw grain for sale in distant provinces into consumable products for sale in the markets of St. Petersburg.