

## Chapter 8

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### France

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Gerschenkron did not devote as much research to the economic development of France during the nineteenth century as he did to the cases of Russia, Austria, Germany and Italy. This is hardly surprising given his interest in the specific features of industrialization in conditions of economic backwardness; in spite of all her ‘failures’, in the middle of the century, France was the most advanced of the large continental countries (Gerschenkron 1962:44).

Gerschenkron’s appraisal of French economic growth reflects what was probably the mainstream view among scholars in the 1950s. The period of both the Bourbon Restoration and the so-called Bourgeois Monarchy, he says, ‘must be regarded as one of relative stagnation’ (Gerschenkron 1968:265). Thereafter, he pinpointed a ‘spurt’ during the 1850s which, however, ‘could not be sustained and the French industrial economy continued at a rather slow pace until some acceleration occurred in the years immediately preceding the outbreak of war in 1914’ (Gerschenkron 1968:266). Over the whole of the century, French economic performance is judged as ‘unimpressive’. Among the various retarding factors that were then discussed by the literature on the subject, Gerschenkron stresses the character of the ‘French family farms’ and an ill-advised tariff policy (Gerschenkron 1968:268).

The ‘spurt’ of the 1850s is linked by Gerschenkron to a number of factors that include a very liberal tariff policy and an ideological climate stressing the advantages of industrialization created by the followers of Saint-Simon (Gerschenkron 1962:11–26). Moreover, ‘French industry received a powerful positive impetus from... the development of industrial banking under Napoleon III’ (Gerschenkron 1962:12). At the same time, ‘the French failure to reimport the French innovation in banking in the creatively adjusted form of the mixed bank’ (Gerschenkron 1968:391) seems to Gerschenkron to be partly responsible for the fact that the ‘spurt’ was exceptionally short-lived.

In the last twenty years or so, research on the process of early French industrialization has made substantial progress both at the macro and micro levels. As a result of research at the macro level, neither the periodization proposed by Gerschenkron nor his overall impression of sluggish growth, particularly during the first half of the century, seem tenable today (Table 8.1).

*Table 8.1* Growth rates of French real output and capital formation, constant boundaries (% per annum)

	<i>Agriculture</i>	<i>Non-agricultural sector</i>	<i>GDP</i>	<i>GDCF</i>	<i>Investment level (%)</i>	
	<i>industry</i>	<i>total</i>				
1826–46	0.7	1.8	1.6	1.3	2.0	8.1
1846–56	1.1	2.0	2.3	2.0	2.0	8.2
1856–66	2.5	1.3	1.3	1.6	1.1	7.4
1866–75	2.0	1.3	1.5	1.7	1.0	5.4
1875–82	–0.7	2.6	3.1	2.0	4.9	9.1
1882–92	0.2	0.8	1.0	0.8	–1.3	6.4
1892–1900	2.4	1.4	1.9	2.1	2.2	8.2
1900–13	0.4	2.5	2.2	1.7	2.5	8.8

*Source:* Lévy-Leboyer and Bourguignon (1985: app. A-IV); and Lévy-Leboyer (1978: table 60) for column 5. The 1866–75 rates, if uncorrected for the 1871 change in territory, would have been 1.7 per cent, 0.8 per cent, 1.1 per cent and 1.3 per cent. Investment levels in terminal years (1846, 1856, and so forth) are the ratios of net domestic capital formation to NNP.

Industrial output grew on average by 1.9 per cent a year up to 1860. During the first half of the century new industrial structures were developed in various parts of the country by merchants and local manufacturers. The two central decades of the century witnessed major technical and organizational progress that slowed down in the late 1860s. Between 1860 and 1890 the rate of growth of industrial output fell to a yearly average of 1.2 per cent because of sluggish demand for consumers' goods, exports and investment.

Moreover, recent research has strengthened whatever doubts Gerschenkron himself seems to have had in applying his analytical framework to the French case. The resource endowment of France was not that of a backward country. Unlike other countries, it could not draw a significant impulse from the use of large and indivisible investments, the borrowing from abroad of the most modern and efficient equipments, with their skilled labour-saving effect, and from the setting up of banking institutions expected to bring about forced saving by their money-creating activities. The labour force was neither scarce nor uneducated in France when the industrialization process was starting. The widespread use of the domestic system in the rural districts of the country (some 75 per cent of total population lived outside the cities) gave an opportunity for merchant-manufacturers to use a well-trained and rather abundant work force. Further, in order to raise labour's technical level and make it more suitable for employment in factories, some of the large manufacturing enterprises, especially in the east and the centre of the country, set up technical and elementary schools that took in workers and their children. These schools improved the level of literacy in the country (30 per cent of men among married couples were able to read by 1860).

Similar improvements were registered in the field of savings, as one could guess by taking into account the fact that real income per head rose by more than 1.2 per cent per annum from 1840 up to 1880 (Table 8.2).

In the countryside the fall in birth rates coupled with a substantial increase in real agricultural prices provided for a rising standard of living for rural people, especially in the 1840–80 period. And even though there were important groups that did not share in the general prosperity (particularly the working class up to the 1850s), most of the people in the cities saw their situation improve. The rise in wealth-holding per inhabitant was 3 per cent per annum in Lille during the first half of the century and 2 per cent in Paris. Coming along with the growth of the National Debt (to some 20 billion francs in 1875–9, i.e. ten times the figure of 1815–19), these developments were to modify the allocation of funds by savers. The shares of real and personal property in Paris, according to a sample of estates, were in a ratio of 52:48 in 1820, and of 45:55 in 1847. To some extent, the holding of public bonds (as high as 37 per cent among financial assets) was a preliminary step toward a greater diversification of private savings. In France, therefore, the need for institutional arrangements to make up for a deficiency in skills and savings cannot be considered so stringent a precondition for growth as in other countries.

However, this is not to deny any utility to the account Gerschenkron gave of the key factors that bear on industrial development. Backward countries were not the only ones that could expect to benefit from the impact of the railroads and the setting up of large universal banks. We agree with Gerschenkron that these factors were important in the case of France, but we think that his analysis and interpretation of the French evidence has to be modified in the light of recent research. Therefore, we shall review the findings of this research and reinterpret the role of French railways and banks.

## THE STATE AND THE RAILROADS

Even though one would not find a special section devoted to French public works in any of Gerschenkron's writings, those who heard his lectures will recall that he

*Table 8.2* Real income per head in England and France (US dollars)

	<i>A. Maddison</i>					<i>P. Bairoch</i>		<i>N. Crafts</i>	
	1840	1860	1880	1900	1912	1860	1913	1870	1910
England	612	863	1051	1366	1455	600	1070	904	1302
France	467	605	747	949	1149	380	670	567	883
Ratio	76	70	71	69	79	63	63	63	68

The estimates are either in 1970 US dollars, as in the case of Maddison (1979) and Crafts (1983), or in 1960 dollars in that of Bairoch (1981).

drew attention to the importance of Napoleon III's railroad policy: First, France needed to enlarge its market base—the high cost of transport being as detrimental to growth, in Gerschenkron's account, as the French tariff, which by contrast he discussed at length. Second, railroad construction required heavy capital investments and the need to develop a producers' goods sector, which, Gerschenkron thought, was to play a major role in the initial stages of any industrialization process. It is obvious that on both accounts the building of French railroads answered these purposes. The deficiencies in the density of the network were swiftly overcome. Rail tracks (measured on a per capita basis), which were in a ratio of 1:5 in 1840 (France: Belgium, England and Germany), levelled off to near equality, at 1:1.25 in 1869 and 1880. By 1913, the positions came to be reversed with 104 km of tracks (per 100,000 inhabitants) in France, against 89 km in the three other countries and 54 km in Italy, equivalent to the French position in the 1860s.

The diversification of industries followed in step. Building up from Walther Hoffmann's findings, Gerschenkron used estimates showing that the ratio of consumers' to producers' goods moved in a steady fashion in favour of capital equipments. According to him, modern industry was limited in France before the 1820s, but the ratio was already at about 4:1 in 1860–5, obviously as a result of the boom in railroad construction. It fell to 2.3:1 in 1896, and 1.5:1 in 1921, bringing France to parity with England and other industrial countries. One should also add that these figures are broadly in line with more recent estimates (Table 8.3).

Further, in conformity with Gerschenkron's 'big spurt' concept, growth accelerated twice, with railroads and the state both acting as moving forces. In fact, French national income and capital formation series, now available for the nineteenth century, present two long waves of 20–25 years, with peaks in 1856 and 1882 that coincide with those of railroad investments. At each of these upper turning points, the amount invested in new tracks and rolling stock amounted to some 20–29 per cent of the net capital formation; and the capital flow fell back at the end of the downswing, to 16 per cent in 1867–74 and to 12 per cent in 1894–7, a fact that confirms the importance of railroads in accelerating and retarding the growth process.

France, moreover, was spared the many crises that often plagued railroad construction in other countries, very much because of the state's numerous initiatives. From the very start, public engineers supervised the concessions and in some cases the material building of the lines. They sketched out the first national network that received parliamentary sanction in 1842, and also the two next systems that were planned in response to economic slowdowns in 1857–9 and 1876–8. Financial aid was granted for the building of some of the main lines and also to subsidize companies in difficulty; eventually, some twelve railroads were taken over and amalgamated into a state company in 1876–8 and in 1908. In short, public funds allocated to the whole system increased over time from 1.4 billion F in 1823–75 to 4.5 billion F in 1876–1913, i.e.

Table 8.3 Industrial production: value-added (%)

	1840	1860	1880	1900	1910	1922	1930
Consumers goods	65.3	61.7	64.7	61.0	58.9	56.7	53.2
Producers goods	9.1	12.0	16.9	22.2	24.5	29.2	31.2
Basic industry	7.5	10.1	12.6	16.3	17.8	18.5	22.1
Mechanical engineering	1.6	1.9	4.3	5.9	6.7	10.7	9.1
Building, etc	25.6	26.3	18.4	16.8	16.6	14.1	15.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio (consumer: producer)	7:1	5:1	4:1	3:1	2:1	2:1	1.7:1

Source: Markovitch (1966: appendix, table 4).

All data are ten-year averages (1835–44), 1845–54, and so forth, except 1910 (1905–13) and 1922 (1920–4). As in Gerschenkron's calculations, producers' goods include basic industries, machinery and engineering (lines b and c).

one-third of the 18.5 billion F that were required to open up the roads (what is called *les dépenses de premier établissement*) throughout the country.

But even if the French case seems to give validity to Gerschenkron's general account, one may still question the extent, the duration, and the ultimate results of a policy that moved so many resources for the benefit of a single sector. Early in the century, transports occupied a strategic position to create a market, and the massive investments they required could have only positive results for the economy during some 10 or 20 years. But the analysis of their longer-term effects is lacking. In spite of the interrelatedness that is said to exist between industries, it is a fact that French mechanical and engineering industries were slow to reach maturity: as may be seen from Table 8.3, the sector did not contribute more than 20–25 per cent of the value added by producers' goods up to the 1880s, their share increasing only after the turn of the century, conspicuously under the impact of war demand. In 1913, French production of machinery represented only 6 per cent of the combined output of England and Germany, and less than 5 per cent of that of the United States. Obviously, the backward linkage did not operate in the way Gerschenkron suggested.

Similarly, in the forward sectors, the effects of a more unified market are still uncertain. Jean Toutain has made estimates showing that transport activity, over the 1840–1913 period, increased at a rate of 3.3 per cent per annum, almost twice the 1.4 per cent registered for commodity output. But there are no criteria to assess the value of such a performance, and, for instance, no way to determine whether the state controls that were imposed upon the companies as a substitute for their outright purchase in 1848 and again in the 1870s, had positive or negative effects. Thus, it is necessary to re-examine Gerschenkron's hypothesis to give more specific answers to the three problems raised by the

advent of the railroads: Did they contribute to improving the integration of the French market? Its capital equipment? And, as a side aspect, the quality of French business management?

### **Market integration**

The first major lines that were built up to 1856, from the borders to the capital, and some of the feeder lines added in the 1860s had beneficial effects. With the fall in freight rates, remote agricultural regions, among others, were given access to Paris and northern export markets, and, with it, the possibility to break in new lands, increase their grain and wine crops, and improve their terms of trade. There was a consensus in 1876–8, when a state network of 17,000 km of low-traffic lines (a near doubling of the existing system) was being contemplated by Freycinet, that the social profit coming from the railroads had been substantial. According to L. Marchal, an engineer writing in 1880, the extra cost of using railroads instead of waterways (a difference of some 1 billion F, or 4 per cent of current production) was more than made up for by the speed and regularity of the new transport, by the reduction in the volume of stocks, and by the rise in prices and output. It was often held that the opening of new local lines at a cost of some 150,000–200,000 F per km would necessarily bring returns, since that had been the case in the past with the trunk lines that had required three times that amount to build.

But some civil servants and company managers were more sceptical. They highlighted the poor design of the first networks, and the fact that they had been drawn to cover equally the different regions without due attention to the inequalities of their traffic potential. As early as 1869, only 5,380 km out of a total of 15,480 km, and only one single company out of six brought some profit; as much as 72 per cent of the lines were operated at a loss by the Eastern, the Western and the PLM companies. Further, even if many railroad directors had displayed commercial skills in the 1850s, for instance, by opening branch offices to by-pass other shippers and control the market-traffic expansion was at its peak in 1846–56 (Table 8.4)—the trend quickly turned around: (1) Travelling by rail remained of limited use; at the end of the 1860s, with networks of equal length, British companies had three times more third-class passengers and 25–30 per cent more gross income, all categories included, than the French ones; and (2) freight shipments became scarcer—in the 1860s probably because the substitution effects due to the railroads were almost exhausted, and from the 1870s because coal and primary metals, cash crops and building materials were hit by the general depression that slowed down activity. Competition also worked in reverse, as water transports, which had the benefit of free way, new government subsidies, and a greater flexibility in pricing, were able to attract a greater share of the traffic. They handled 24 per cent of the combined shipments by water and rail in 1895, against 16 per cent in 1880.

Table 8.4 Main transport indicators, 1826–1913

	Transport volume growth rates (% pa)			Freight rates c. per t/km		Railroad product 1000 F p. km		
	Total	Canals	Rail	Canal	Rail	Gross	Net	Ratio %
1826–46	2.5	–	–		11.4	39.3	20.7	52.7
1846–56	4.5	–	20.6	–	7.6	54.7	30.7	56.1
1856–66	3.7	2.3	9.7	6.4	6.0	44.8	23.9	53.4
1866–75	2.7	–1.2	3.7	6.6	6.1	44.6	21.9	49.1
1875–82	3.7	2.0	4.4	7.1	5.9	44.1	20.9	47.4
1882–92	2.2	4.6	1.3	5.7	5.4	33.9	14.9	44.0
1892–1913	2.3	2.4	3.8	5.3	4.1	50.5	18.4	36.4

Source: *Annuaire statistique* (1947); Toutain (1967); Merger (1979).

Data for freight rates and railroad product are those of the terminal years (1846, 1856, 1866, and so forth).

Eventually, a revival set in during the 1890s, bringing increased activity on the roads, new shipments (more diversified products from southern agricultural, iron ore from Briey, and so on), and a definite improvement in the financial position of the Eastern, the PLM, and some other companies.

In spite of these more favourable developments, however, the French network could not overcome its major weakness, namely the fact that it had been overbuilt almost from the start. Whatever the reason, public constraints or unrealistic expectations, railroads receipts in 1869 were 59,700 F per km, against 75,130 F for the British railroad lines. And the gap kept increasing with the construction of the third network, so that average products, still on a per km basis, were some 42,600 F and 78,060 F in the two countries in 1908, and 60,100 F in Germany. On social or moral grounds, extension of the network may have been justified, but it proved harmful for the companies because it lowered the net product—to 4,350 F per km in the pre-war years on the third network, against 51,000 F and 14,000 F in Britain and Germany. It also penalized the country as a whole, since people living in remote regions were offered artificial marketing conditions that saved them the trouble of moving to the cities. The near stoppage of internal migrations in the 1880–1905 period—of which railroad policy was only one factor among others—contributed in a major way to slowing down the growth of the economy. France at the end of the century was still a rural country, with 65 per cent of its population living in small villages, 15 per cent in sixteen large cities (of more than 100,000 inhabitants), and 20 per cent dispersed in some 700 towns. It was still without the densely populated urban base that was required to make a modern market economy viable.

### Industrial Capacity

When the first railroads were constructed, some major advances were realized in the basic industries. Obviously, the negative expectations that had hampered investments in earlier periods were no longer justified. Actually, over the century as a whole, track construction and replacement required some 15 million tons of rails, one-fifth of France's metal output, hastening the use of new technology: railroad orders averaged 40 per cent of the coal-processed iron in the 1850s, when British methods were coming into general use, 65 per cent of Bessemer and Siemens steel in 1866–75, and as high as 22 per cent of Thomas steel in the pre-war years, in spite of the greater diversification of demand. Similarly, French mechanical industries were developed with the financial aid and direct orders that locomotive builders received from railroad companies. Even if their production never matched that of their British colleagues, the five leading French firms were able to export in the 1860s as much as 40 per cent of their production, a real achievement in a country where, as a consequence of poor mineral resources, alternative markets were limited.

But the success was short-lived. Steel production, which had reached in the 1870s a level equivalent to 15 per cent of European output, fell to less than 10 per cent, and did not regain its past position until the pre-war years. French mechanical industries also lost ground, and, strange as it may seem, never managed to reassert themselves. Locomotive building, in particular, which had grown at a time of peak capacity at a rate of 500 engines a year, recovered somewhat, after a break, to only 150–200 units (of higher power standards) in 1900–4, and 600–700 on the eve of the war. This did not amount then to more than 5 per cent of the combined output of England, Germany and the United States, and only some 20–25 per cent of what a strong American firm could distribute in a year. To explain this loss in competitiveness and the industry's poor adaptation to market changes, one may be tempted to use what was said formerly of the conservative attitudes and values of French entrepreneurs. But business studies have brought a revision of such negative appraisals. It seems fair to say that the blame should be laid not with the firms that supplied railroad equipment but rather with the railroad companies.

The demand for metals in the 1850s had remained high because, apart from laying the tracks, railway engineers had to replace them frequently because of the poor quality of the materials used and the unanticipated increase in the traffic once networks entered service. But in the 1870s and early 1880s, the whole process grew out of proportion for three main reasons: (1) the need to repair damage on the lines after two periods of heavy traffic resulting from the Prussian War in 1870–2, and to the closing of canals during the winter of 1879–80; (2) a general policy applied simultaneously from 1872–3 to substitute steel for iron rails, the companies being led by the sharp fall in the price of steel and its greater durability to re-lay large sections of lines and give orders in advance of normal replacement so as to forestall shortages; and (3) in the early 1880s, after three

years of preparatory studies, the start of building operations on the new state lines under the Freycinet plan. All told, 4 million tons of rails were brought into the market in some thirteen years, one-quarter of the total production of that century. Abnormal industrial investments followed. Hence, in 1882 when a monetary panic broke out and imposed abrupt curtailments on all expenditures including those of the state, a sharp recession set in that almost destroyed the steel industry in central France where firms were too heavily indebted. In 1886, Terrenoire, the leading and most modern firm, was sold for scrap, and others followed. In fact, the whole episode slowed down production and technical progress in every region, including the new Lorraine Basin where Thomas steel reached its first million tons only in 1907. The mishandling of rail orders in a crucial period had cost the French industry 10–15 years of steady growth.

Firms that supplied rolling stock fared better in the crisis. Orders had been more evenly distributed over time and between countries (some 20 per cent to foreign industry in 1880–4), and a diversification of markets and products remained possible. But the fall in transport activity that ensued imposed new guidelines among railway managers, and their impact proved harmful in the long run for the French mechanical industries. First, reversing their past investment policies, the railways reduced all expenses, paying greater attention to labour productivity, train loads and turnover, and maintenance and repair, in order to extend the lifespan of equipment and postpone replacement expenditure. From almost 350 units a year in 1875–86, new orders for locomotive engines averaged less than 90 in the late 1880s and 1890s, a fall of 75 per cent. Further, since the state was called upon to assist the companies once they had taken charge of the Freycinet lines, its engineers brought pressure upon railway managers to exact lower prices from industry, to set higher standards, and also to divide orders between firms, a policy that hampered productivity gains in the mechanical industry sector.

In a way, all this proved successful; current expenditures on the French railroads were kept to a minimum, at 23,700 F per km in the pre-war years, against 42,000–49,000 F in England and Germany (or 56 per cent versus 63–70 per cent of current receipts). But this was achieved to the detriment of industrial performance: French exports of machinery were outpriced from the 1870s; and when new railroad orders for replacement and extension were at last issued in 1900, and with greater regularity after 1906, almost 30 per cent of the locomotives (and in fact more than half the machinery used in the country) had to be imported. There had been no spin-off from the gains that were secured earlier in the century.

### **Business management**

The railroads were the first large-scale corporations to operate at a national level. As such, they were used in many countries to teach how to build managerial hierarchies, control and coordinate operations, allocate responsibilities over

large territories, keep accounts, issue stocks and plan investments. These functions were performed effectively in France, a fact that should have built, in contemporary opinion, a positive image of the services railroads could achieve. In practice, however, the outcome was not favourable, probably because the public resented the assumption by profit-seeking individuals of a public service, against all past traditions. Further, there was resentment of the monopoly position railroads held once the twenty-eight existing railways were merged into six major companies, and of the many privileges that were granted them, including state guarantees of their bonded debt (as part of two agreements for taking over the construction of the second and third networks in 1859 and 1883). In short, public opinion was alerted by the fact that the private firms had assumed a power that could lead to abuse and ought to be regulated. Thus, instead of taking the emergence of railroad companies as a unique experience that could bring an improvement in business practices, a movement developed through the chambers of commerce and other local authorities requesting a reinforcement of public controls and disregarding the contra-productive effects these controls might have on the economy at large.

Among the questions that were submitted by statute to official commissions, tariff rates came up early as one of the most sensitive issues. At first, the railways adopted flexible schedules; they tried to apply favourable treatment to the large, regular, long-distance shipments so as to reach fuller utilization of their lines and to reduce prices. But this entailed some discrimination against the smaller shippers and a possible displacement of trade routes. Therefore, under the influence of local pressure groups, the advisory commission stepped in and imposed, from 1854 to 1857, a policy of strict uniformity; freight rates were made equal for all, whatever the volume, the distance, and the firm, under what was called 'the rule of the unspecified station' (any rebate on a line being immediately published and made the general case). But even if the principle seemed justified in equity, it probably neutralized some of the productivity gains that could have been expected from the fall in freight rates and an early redistribution of trade. The financial accounts also became a major issue once the state stepped in to cover the deficit. The problem raised was to improve control of railways and perhaps limit their spending. Thus, in the 1880s, the balance sheets and book-keeping methods used in the public sector were adopted, although they often ran against current accounting practices. For instance, industrial amortization ceased to be applied to the railroads, since the jurisprudence set by the Council of State was that all equipment should be written off in one lump sum the year it had to be scrapped or sold, and this at the price that had been paid for the equipment in the past.

Actually, the problem was not limited to the fact that market prices and normal accounting procedures could not operate in an efficient way. Risks and profit also lost their proper functions, in part because industry and foreign interests initially had supplied the equity capital (20 per cent of the 1.5 billion F in 1850 were British and Swiss). Later, once the state guarantee had generalized the use of

bonds for the construction of the track, and after 1883 for all current operations, there was no need to increase the capital at risk. In 1900, it did not amount to more than 1.4 billion F, while the bonded debt had been raised to 16 billion F, almost 30 per cent of the French securities listed on the stock market. And profits also were foregone because, as an offset for the public funds that were advanced to service the debt, the companies were compelled to set aside part of the expected incomes coming from the first network in order to finance the second and, eventually, the third networks. As a consequence, profits were capped, the shareholders renouncing their claim to increased dividends. From 1864 to 1908, some 5.1 billion F (or 3.6 billion in net terms when state advances are deducted) were 'diverted' internally between the three networks.

In other words, if the allocation of funds had functioned properly during the first decades of railroad operations, the change of procedure that was imposed upon the companies by the convention of 1858 blurred the issues. New stations, new lines, and new services were developed in the second half of the century at steadily reduced prices for passengers and shippers, giving the impression that there was no limit to demand and progress. The state itself received transport services at free or reduced rates that amounted over the century to 3.2 billion F of foregone incomes. But these developments also had their costs, namely, (1) excessive capital outlays—21.3 billion F of private savings were sunk in the railroads; (76 per cent in bonds, 6 per cent in shares, and 17 per cent in foregone dividends); (2) low earnings for the bond- and shareholders—they amounted in 1900 to some 650 million F a year, or 3 per cent of their market value; and (3) on the part of the railroads, some lack of response to market demand once growth had recovered: In the absence of true productivity gains, expenses on the lines increased after 1892 at a higher rate than receipts, leaving a net product per kilometre equivalent to 36.4 per cent of gross income in 1913, against 48.1 per cent in 1866–92, and 54.1 per cent earlier in the century.

## THE BANKS

Even more than railroads, Gerschenkron emphasized the role of the Saint-Simonian banks set up during the Second Empire period. 'Designed to build thousands of miles of railroads, drill mines, erect factories, pierce canals...', the new joint-stock industrial banks (Crédit Mobilier of the Pereires was the paragon) were said to have given 'a powerful positive impetus' to French industry.

Although there are few recent studies devoted to these banks, it is obvious that such an appraisal is in line neither with the views of many contemporaries nor with some major historical hypotheses. On the one hand, these banks have been charged with wasting national savings through urban speculations and foreign investments. As a result of the development of public works and the railroadization of the southern and eastern European countries in the 1850s

and the 1860s, most of the new universal banks turned to speculative urban ventures and looked abroad for investment opportunities. In the following decades, when the deficit in both the state budget and the balance of trade curtailed the range of these opportunities, banks were led to prospect more actively in the markets by setting up building societies and foreign branches, which made their role if not more important, at least more visible.

On the other hand, it has been argued that, along with these conspicuous activities, the domestic productive operations of the banks developed rather slowly. During a first period, running from the foundation years through the early 1880s, when most of the banks patterned on the Pereire bank were thought by Gerschenkron to have encompassed a wide range of operations, the business of these banks seems to have been confined to the narrow circle of the founders' groups (such as the companies of Talabot for Société Générale) or to firms and sectors spared from market constraints by concessions (transport businesses and public utilities), by positions of monopoly (in the case of Crédit Mobilier), or by patents (in that of Crédit Lyonnais). As a general rule, enterprises and sectors that were more exposed to the pressure of competition remained on the fringes of the large banks' interests. In the 1860s, for instance, less than 3 per cent of the manufacturers and merchants of Paris were customers of Comptoir d'Escompte de Paris. Although these banks progressively lowered the scale of their transactions in order to enlarge the scope of their business, the average size of the bills they discounted in the later 1870s remained 62 per cent higher than that of all bills issued at this time. In the ensuing period (1880–1914), when large joint-stock banks gave up their universal-bank pattern to be turned into deposit banks (designed to serve exclusively as a source of short-term capital), it has been argued that the search for liquidity was pushed too far. As demonstrated by several surveys, small and middle-sized manufacturing enterprises in financing their long-run investment needs as well as craftsmen and tradespeople in financing their short-term transactions did not make much use of the joint-stock banks.

The share of the largest banks in total lending provides further evidence that they did not succeed in expanding their relative position in the domestic market (Table 8.5).

Far from increasing their sway over the corporate banking sector, the largest banks tended to lose ground at the turn of the century. This was a rather unexpected result. These banks had been launched by the most important financial and industrial groups of the country and with state involvement, which enabled them to be large corporations from the start. In the following, we shall discuss the reasons for the large banks' failures to attain their destinies.

### **Universal banks as substitutes for the lack of investment opportunities (1850–80)**

Rather than playing a central role in processes of forced saving, French universal banks can be said to have attempted to overcome the deficiency of home

*Table 8.5* Four largest banks' advances and deposits as percentage of banks publishing their balance sheets

	1891	1901	1911
<b>Total assets</b>	60.2	65.8	51.5
<b>Securities holding</b>	50.4	42.5	22.3
<b>Advances</b>	57.5	65.2	45.2
<b>Commercial portfolio</b>	66.3	70.7	64.5
<b>Deposits</b>	68.4	72.1	57.6

*Source:* J.L. Billoret, 'Système bancaire et dynamique économique dans un pays à monnaie stable, La France de 1816 à 1914', doctoral diss., Université de Nancy, 1969.

The four largest banks are Crédit Lyonnais, Société Générale, Comptoir National d'Escompte de Paris, Crédit Industriel et Commercial.

productive investment opportunities. As often recalled, these banks came into being when growth slowed down after a thirty-year period of economic progress. The buoyancy of the early railroadization period was gone. Gross domestic investment as a proportion of GNP remained stable at 12–13 per cent from 1845–54 to 1875–84. Relative economic stagnation along with the growing integration of firms curbed the growth of commercial transactions: growth in the issue of bills of exchange from the late 1850s was much lower than in the previous period.

New factors, however, were at work on firms' side. The period running from the 1860s to the early 1880s experienced a major shift in the process of industrialization. Operating as driving forces, the rise in real wages (from the 1850s), market integration (from the 1860s), and the growth of external competition (in the 1870s) compelled firms to reduce their costs both to maintain their profit levels and to make their products more suitable to international demand. Certain types of investment goods also received powerful impulses from these circumstances. The rate of growth of gross domestic investment in tools and machinery (as a proportion of GNP) rose to 3.3 per cent annually from 1845–54 to 1875–84; this is 2 1/2 times the rate reached during the thirty previous years. But these developments were not to provide many additional opportunities to new large banks for three reasons:

(1) Long-term investment came not so much from banks as from firms themselves or from private persons with money available. In the northern woollen industry, for instance, the mechanization of combing from 1852 was partially financed by local trade; that of the silk-weaving in Lyon after 1876 was provided by the 'Fabrique'. Even in the most capital-intensive industries, self-reliance through retained profits remained a general rule. As shown from the example of metallurgy in the centre of France, which spent large sums from 1860 to 1873 in order to develop coke equipment and set up Bessemer

converters, the call to the banks to provide financing was rather meagre. And to meet any serious emergencies resulting from the shortage of liquid funds (a frequent problem with self-financing practices), firms could rely on the large current accounts of the partners or staff (39 per cent of the floating debt, for instance, at Société de Terrenoire in 1884) or they could require more financing facilities from their suppliers or from their customers. Railway companies, for instance, offered large instalments and advances to their contractors (for raw materials and sometimes for new equipment), especially when demand for rails or locomotives tended to exceed supply.

(2) The rise in stock market operations provided new financing opportunities for large firms. As the French capital market became more mature, the corporate sector of the economy tended directly to discharge its debts and to do without financial intermediaries. In the six years from 1867 to 1872, Schneider et Compagnie, a top-ranking enterprise, issued 14 million F of securities in order to be less dependent on its bankers.

(3) This is not to deny that banks played a role in the process of economic growth. Rather, it is to affirm that local banks, not the large national banks, were to have the more important role. By contrast with Saint-Simonian views, the French banking system was not underdeveloped at mid-century. According to a recent survey (Plessis 1987), there were 2,000 or 3,000 unit banks by 1870; this is four or six times more than Cameron (1967) estimates. Some of these banks date back to the first half of the nineteenth century, but encouraged as they were by economic growth and the setting up of numerous branches by Banque de France (which carried benefits for local bankers), many banks came into existence during the Second Empire period. Most of them were small local private banks, but as they had been launched by merchants and manufacturers to respond to local needs, they enjoyed advantages in meeting competition from the new large banks. Until the latter extended their branch networks (by 1872, Société Générale had less than thirty-seven permanent offices throughout the country and Comptoir d'Escompte had no more than five), the local banks were able in their decentralized positions to draw the custom of local enterprises. They offered these enterprises facilities to buy raw materials and to meet the cost of holding the finished goods; they cashed their cheques and they discounted their bills. They were so successful that many branches of Banque de France (such as in Lyon or Grenoble) complained that discount was lacking. Large corporations themselves resorted to them; Chatillon-Commentry, the fourth largest metallurgic firm in France in 1880, financed its several plants through half a dozen local bankers led by Moussy and Armetz of Montluçon.

Local bankers were not merely suppliers of short-term self-liquidating credits. The intimacy of the relationship between banker and local industry and trade allowed more significant commitments from the banks. In the north, for instance, banks such as L. Dupont or Caisse Commerciale du Nord provided sugar and textile industries with long-term capital. As shareholders or managers,

local bankers in Lyon (Aynard, Guérin, Veuve Morin-Pons) were present in all the regional activities (mining, metallurgy, textiles), and their influence spread far beyond the city. Where industrial and financial traditions were not so ancient, local bankers supported regional development by taking up parcels of shares in new companies and by channelling local savings to enterprises. In Lorraine, for instance, the iron and steel industry began with an active role of banks such as Weill Levy et Compagnie, Banque Lenglet or Banque Thomas.

All things considered, a banking system based on local units proved quite adequate for economic structures in which small and middle-sized enterprises were the prominent figures. This made the role to be played by the new large joint-stock banks less crucial than Gerschenkron, among others, implied.

### **The universal banks at the regional level (1880–1914)**

The balance between national and local banks was not immutable. By 1880 or so, both supply and demand factors ought to have enlarged the role of national banks.

During the late 1870s and the early 1880s, the national banks considerably extended their branch networks (the number of offices increasing, for instance, by about 34 per cent at Société Générale), and their resources rose by some 44 per cent between 1872 and 1882. Furthermore, a more efficient banking system as a whole could be expected from the new guidelines followed by large banks, which served to increase the specialization of financial institutions. Three waves of bankruptcies that took place in 1867, 1876 and 1882, with their harmful effects on the economy, had enlightened banks' managers on the difficulties of matching the two sides of the mixed banks' balance sheets, especially when industrial production turned down. As a result of both the growth of their branch networks and the disappointing performance of the French economy, large banks severely curtailed their illiquid transactions. Crédit Lyonnais in the 1880s, Comptoir d'Escompte in the 1890s, and Société Générale in the 1900s cut off their investment portfolios and checked their long-term lending activities. Credits were divided up and shortened (discounts and advances rising from 56.9 per cent of the banking assets in the 1870s to 69 per cent in the closing decade of the nineteenth century), and financial expenses cut down by reducing savings accounts. More significant industrial commitments were left to the 'Old Banks' (particularly active in petroleum and electrical industries) and to new financial corporations specially designed to provide long-term loans and to control industrial operations through shareholdings and 'participations' in other firms. In 1913, for instance, the investment portfolio of Banque de Paris et des Pays-Bas, an investment bank launched by private bankers in 1872, amounted to 160 million F (more than 20 per cent of its assets), which allowed the bank to be related with 120 large companies.

On the firms' side, the second stage of industrialization in France, from the 1880s, was to provide new opportunities to the banking system. For historical reasons (such as the loss of the Alsatian pole of mechanical industries) as well as for economic ones (such as the overcommitment of many ancient corporations with unprofitable investments), new enterprises in France assumed a larger role than in other countries in the start of new industries such as motor cars and steel. Even though capital requirements remained generally modest, fast-growing young firms were likely to turn to banks for financial facilities.

Nevertheless, it was the country banks rather than the large national banks that appear to have been more successful in taking advantage of these new opportunities. Changes were also under way on their side. From the crowd of local unit banks some regional joint-stock banks progressively emerged; the shift went along with the change of scale in economic structures. Some of these banks which had been launched with the support of Parisian banks (namely the *Crédit Industriel et Commercial* group) now went their own way and made their status more suitable to local needs. By doing so, banks such as *Crédit du Nord*, *Société Lyonnaise de Dépôts* or *Société Marseillaise de Crédit* steadily moved towards favouring regional industrialization. Furthermore, country joint-stock banks benefited by the decentralization of economic initiatives allowed by the emergence of new regional industries (such as hydroelectricity in the Alps), the new wave of urban equipment (electric lighting and tram), and the narrowness of the new liquidity rules followed by national banks. While the commercial portfolio/advances ratio rose from 0.87 in the 1880s to 1.3 in 1913 at the four largest banks, it fell from 2 and 3 at *Crédit du Nord* and *Société Marseillaise de Crédit* in the 1860s to 0.62 in 1910–13. In the north and the east of the country as well as in cities such as Lyon, Grenoble, Marseilles and Bordeaux, current account loans (most of them without any security) and credits, even though they were disguised as short-term advances, were in fact often long-term loans. The basic nature of country banks was the rolling over of formerly short-term advances. When designed to serve new investments, advances were usually coupled with further securities issues. Country banks were in charge of connecting firms' demands for capital with the regional supply of loanable funds. A broad indication of their efficiency in this business is provided by the fact that Stock Exchange transactions increased by 68.3 per cent in the country between 1897–1901 and 1909–13, but only by 54.8 per cent in Paris.

The involvement of the country banks with local trade and industry was the consequence of the growing worry of the large banks over their liquidity and that of the policy of *Banque de France*. Just like regional banks, *Banque de France* faced serious competition from large banks for discount. The growing amount of their deposits made these banks more reluctant than before to discount their bills at *Banque de France*. Their commercial portfolio increased by six times from 1884 to 1906, while that of *Banque de France* fell behind by 1,000 million F. As an attempt to overcome this decline in traditional business, *Banque de France* turned to the country banks. By discounting their bills,

Banque de France enabled the country banks to extend their long-term current account credits without their liquidity being threatened. In order to increase the amount of their transactions, several branches of Banque de France (especially in Lorraine) began to discount bills issued for long-term loans. Thus, far from being the prelude to the death of the country banks, the emergence of a branch banking system enhanced their position. Through a new division of banking work (now a technical division rather than a geographical one), the country banks tended to enlarge their share within the banking system, particularly in the opening decade of the twentieth century.

Some distinctive features of the regional banking system, however, are consistent with Gerschenkron's hypotheses. Three kinds of regional banking practices can be distinguished that to a considerable extent can be regarded as reflecting the specific conditions of regional industrialization. The first pattern, illustrated in Table 8.6 by *Crédit du Nord*, is that of the old industrial regions. In the north of France, but also in Rouen or Lyon, regional banks gave the same extent to their commercial portfolio as to their advances (the ratio was 48:52 for the seven main northern banks in 1900). As securities-issuing houses, it was only for bonds that these banks played a part of some account. The relative passiveness of these banks was the result of the early start of industrialization in their regions, the small-scale size and the family character of most of the enterprises, and the importance of the textile industry with its relatively high requirements for cash funds rather than for fixed capital.

Quite different were the functions that banks were expected to fulfil in the new industrial areas such as in Lorraine or in Dauphiné. Discount remained an important business for banks (at *Société Nancéienne de Crédit*, its amount rose

*Table 8.6* Assets and resources structure of corporate banking sector, 1900–9

	<i>% of total assets</i>				
	<i>Four largest banks</i>	<i>Other banks publishing their balance sheet</i>	<i>Crédit du Nord</i>	<i>Société Nancéienne de Crédit</i>	<i>Société Marseillaise de Crédit</i>
<b>Commercial portfolio</b>	47.6	30.3	43.5	11.3	32.5
<b>Advances</b>	38.5	46.9	41.6	82.1	45.8
<b>Securities</b>	3.0	9.0	2.1	2.8	9.6
<b>Capital and reserves</b>	15.6	24.3	15.0	19.9	30.5

The four largest banks are *Crédit Lyonnais*, *Société Générale*, *Comptoir Nationale d'Escompte de Paris* and *Crédit Industriel et Commercial*. Data are ten-year averages (1900–9) except for columns 1 and 2, where data are two-year averages (1901 and 1911).

from 100 million F to 1,000 million F between 1884 and 1908), but bills were promptly rediscounted at Banque de France. As a result of the specific needs brought by the process of industrialization, the heavy nature of the industries, and the youth of the firms, advances and current account loans represented, for instance, 62 per cent of the total banking assets in Lorraine in 1909 against 37 per cent in the north. The consequence was that an important share of deposits (42.5 per cent at Société Nancéienne de Crédit against 10.7 per cent at Crédit du Nord) had no liquid counterpart. The flotation of industrial securities was another means of supporting regional development, an all the more helpful means, as stock exchange facilities were lacking in Lorraine; the issue of bonds and shares amounted to 152 million F from 1899 to 1908 (35 per cent coming from metallurgy, 22 per cent from banks, 13 per cent from electrical industries). The intimacy between banks and industry was both a reason for such an involvement of banks with securities flotations and its consequence. Manufacturers and merchants accounted for 60 per cent in the boards of the four banks of Nancy, so that industrial representatives played a major part in banking behaviour. Similarly, bankers were present on the management boards of 143 firms, so that banks acquired an important degree of ascendancy over industrial enterprises.

These close relationships, however, never turned into 'commandite' from the banks. Ample supplies of savings in their regions allowed these banks to limit their role to that of an intermediary. 'Commandite' was reserved to a third kind of regional bank, illustrated by Société Marseillaise de Crédit. In addition to an important lending activity, this bank held a considerable amount of securities (14 per cent of its assets in the 1890s). Through advances and 'participations' the bank helped to finance the modernization of old industries (such as the sugar industry) and promoted the start of new ones (e.g. public utilities, electrical industries).

This deliberate policy on the part of the bank reflected the scarcity of capital available for industrial purposes rather than the specific conditions of a relatively backward economy. Savings were not lacking in Marseilles, but as a reaction to the speculative character of the local economy (which prevented the bank from making advances without security), savers there were prone to invest in the most secured way (Table 8.7). Houses and public securities represented two-thirds of the private investment in Bouches du Rhône against half in North and in Rhône. By holding shares and bonds of regional (and other) companies, the banks came to be a substitute for the lack of dynamics in local savings.

If the differences within banking practices can be said to have reflected several stages and specific patterns of industrialization, it should be added that they were also to influence further regional banking developments. In contrast to the active role of the eastern and southern banks of the country, most of the regional banks in Lille or Lyon were absent when new industries were launched. Their overcommitment with ancient industries (75 per cent of the board of Crédit du Nord, for instance, came from textiles by 1890) coupled with their role as short-term credit suppliers did not predispose these banks to take a

Table 8.7 Distribution of private investments in 1898

	<i>France</i>	<i>Rhône</i>	<i>Nord</i>	<i>Meurthe et Moselle</i>	<i>Bouches du Rhône</i>
% of total wealth					
Real estates	46.7	38.9	46.1	35.4	57.5
Personal property (securities only)	53.3	61.1	53.9	63.6	42.5
	30.0	32.9	23.6	42.0	22.1
% of securities					
French securities	77.8	69.3	85.9	82.5	76.4
Foreign securities	22.2	30.7	14.1	17.5	23.6
Shares	28.1	33.9	40.5	27.1	20.8
Bonds	37.7	36.8	41.3	39.6	40.3
Public bonds	34.2	29.3	18.2	33.3	38.9

Source: L. Salefranque, 'La fortune privée en France', Congrès international des valeurs mobilières, 1900

leading part in the start of new industries. Because their practices were not so different from those of large banks, country banks in old industrial regions had little choice but to meet the competition from the large banks by using their methods and to turn into deposit banks. The northern country banks had twenty-four branch offices as early as 1900 and ninety-nine in 1914.

Two factors, however, increased the tendency for passiveness in country banks: (1) The renewal of the extension of their branch networks by national banks after 1894 (the number of offices rising from 258 in 1890 to 1,519 in 1912 for the three largest banks) urged every kind of regional bank to preserve its further development possibilities (particularly with regard to the amount of deposits) by setting up its own branch network. Through amalgamations with small local banks or creation of branch offices, Société Nancéienne de Crédit launched twenty-three branches from 1894 to 1910. But the consequence was the same as for national banks and an increase in cash ratios followed in step. At Société Nancéienne de Crédit, for instance, the amount of short-term current account credits, a new item published in the balance sheet from 1893, usually exceeded that of long-term loans after 1907. (2) Speculative excesses, frequent problems resulting from the tendency for raw materials import prices to rise disproportionately in periods of prosperity, and the magnitude of short-term fluctuations that marked the twenty years of French economy recovery (1895–1913) had similar effects on the banks' behaviour. Facing the same difficulties as those encountered by large mixed banks in the last decades of the nineteenth century, regional mixed banks were included to reverse their policy and become more passive. As a reaction to the important losses registered in 1907–12 on some large advances and financial operations, Société Marseillaise de Crédit, for instance, decided that any further growth of its investment portfolio was to

be checked (this item dropping from 14 per cent to 8 per cent of its assets from the 1890s to the 1910s); thereafter, a merger with two local banks brought a welcome twenty-nine offices.

Thus, in France, it was not only the growing influence of national banks over the banking system that led banking away from significant industrial commitments, it was also the successful endeavour of regional banks to defend their liquidity and to slacken their links with regional industries. On the other hand, their rise involved the decline of the private local bankers who remained active through the end of the century. Restrained as they were by the branch network of *Caisses d'Epargne* from 1875 to 1881, that of national banks from 1894, and that of *Banque de France* (trying from the late 1890s to increase the number of its direct discounters), local banks had fallen back on 'commandites' and other entrepreneurial functions. The lowest rated in terms of liquidity, these high-risk operations enabled the local banks to find a good return for the deposits they could not afford to lose. Many of them went bankrupt in the 1900s when regional banks joined the ranges of their competitors. These developments were to give new impetus to the debate on the ability of the French banking system to promote economic growth.

## CONCLUDING REMARKS

It would be unfair to conclude without mentioning that, beyond the details of his historical account, Gerschenkron's lectures and most of his writings were delivered in the postwar years when the future of Europe, the reconstruction, and the possibility of a new depression such as that of the 1930s were at stake. His ideas and the audience he managed to command had a special value. It came from the fact that he was able to call upon history, as he wrote it, to fit in with ideas prevalent in those days, in particular about investment, as a means not simply to maintain full employment, but also to retrieve backward (or war-damaged) economies and put them back on the path of growth. He addressed himself to problems that were the real concern of the time, and his ideas seemed to be confirmed by contemporary achievements.

But with the passing of time, and a better and more quantified knowledge of the past, it is quite natural that some of his hypotheses, when applied to the French case, should require amendments. First, Gerschenkron's concept of a 'big spurt' provides a good narrative, but has too short a horizon. It is not enough for an economy to begin to industrialize. Industrialization once under way, may go astray. Poverty, inadequate consumption patterns, misguided allocations of capital and labour, slow adaptations to technical change and international competition are issues that were sometimes left out of the picture. They require further analysis.

Moreover, his idea of a 'central push', and the emphasis he laid on Saint-Simonian élites and state bureaucracy, even if they are consistent with French tradition, should not lead to oversimplifications: the state did assist major

projects and big banks, but innovations were often carried on by small entrepreneurs who gave flexibility and drive to industry.

And last, one should not take the state as a neutral entity, dedicated solely to the public good—an idea Gerschenkron developed in his treatment of the eighteenth-century enlightened despots. Public works such as the railroads were overextended in the latter part of the nineteenth century under the influence of local interests, and they became themselves a major pressure group when they had to face in the interwar period the competition of air-carriers, trucks and other coal-saving devices. Obviously missing from Gerschenkron's account beyond the initial stages of industrialization is an appreciation of the uncertainties of history that give rise to differences among industrial societies that are almost as great as the differences they exhibited before their industrializations began.

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