INTRODUCTION

The question of state and railway is one of the most important in Germany’s history. Many scholars have contributed to this topic. New research shed light on this field in the last decade. Initiated and financed by the Deutsche Bahn AG (German Railway Company) and the Gesellschaft für Unternehmensgeschichte (Society for Entrepreneurial History), an extensive research project took place from 1994 to 1998. The outcome of this project was summarised in a study by Lothar Gall and Manfred Pohl, Die Eisenbahn in Deutschland (The Railway in Germany), which appeared in 1999.1 The perspective of the present article follows the argumentation of Gall and Poll’s study of the long and winding road of Germany’s state railway.

1. PREVIEW: STATE AND RAILWAYS IN THE NINETEENTH CENTURY

The beginning of the railway age is characterised mainly by private investors and private companies, with only minor involvement from some German states. At that time Germany was divided into 32 states and four free cities. State action started when raising private capital for the construction of lines was difficult, for example in Palatine and Württemberg in the 1840s. Prussia, which next to Austria was the largest state of the German Confederation, favoured a mixed system from the 1840s onwards. At that time, the Prussian state planned a railway for the eastern –and economically underdeveloped– parts of the country. The Ostbahn (Eastern Railway) was planned to initiate economic improvement of this part of the monarchy in order to counterbalance the powerful, wealthy and politically liberal departments in the West. But the state itself did not have the money for railway construction at that time. On the one hand, debts from the Napoleonic Wars still burdened the state budget. On the other hand, the potential private investors, wealthy merchants and bankers in the Western provinces, were reluctant to support the government plan, because the project of an Eastern Railway collided with their own ambitious investment project to develop the coal regions between the Rhine and Ruhr rivers, which later became Germany’s industrial heartland. So the connection to Belgium and the industrialisation of the Ruhr region had absolute priority for their investments.2 David Hansemann, a leading Rhenish railway financier and entrepreneur, complained that the areas in the East were underdeveloped and not very densely populated, and that trade with Russia was hindered by the government...
its. All in all, in the opinion of the financiers, this was not a place for a profitable railway.

The hotly debated question of financing the Eastern Railway ended up in a political clash between the state government and the Rhenish bourgeoisie. Hansemann complained: “When the subject of money comes up, the Gemütlichkeit (congeniality) stops”. Indeed, the problem of financing the Eastern Railway was closely connected with the unsolved question of a constitution for Prussia, and a national constitution in total; the plans for an Ostbahn ended in the upheaval of the Revolution of 1848. During the Revolution, Germany got its first national parliament, and there, the discussion about railways went on. Although the question of private versus state railway systems played an important role in the discussion about the German constitution, the national parliament left the question undecided, and permitted both private companies and state-owned railways. During the economically difficult years around the revolution, some private railway companies needed to ask the state for help. At the same time, the Prussian state tried to nationalise other private railway companies that were profitable, forcing their owners to sell them to the state. This attempt was unsuccessful because, as soon as Germany had overcome the economic crisis of 1857, the call for a renaissance of private companies increased and turned into an important cause for the liberal movement. Greater hope was directed at new railway lines, because an upturn in the economy would increase rail traffic and vice versa. This concerned above all the industrial regions in Western Germany, but many suggested also that there would be an upturn of the more rural areas in Germany’s East. Indeed, the railway network of Germany was limited in its coverage, leaving out numerous regions from the service of the railway companies. At this time liberals began to fight against the conservative government for the reform of the Prussian constitution. This period of history was referred to as the ‘New Era’. The first thing the liberals managed to achieve was an end to the Prussian railway policy. By the end of the 1850s, the liberals had cleared the way for a second period of private engagement in the railway sector. At this time the railway king Bethel Henry Strousberg started his career. Strousberg and an English finance committee won the concession for a railway line from Tilsit to Insterburg in the East of Prussia and showed that private investments in railway construction could once again be profitable. Strousberg had heralded a second decade of private investments. It was then private companies that enlarged the railway system of Prussia and of Germany as a whole in the decade before the unification and building of the Deutsches Kaiserreich (German Empire) in 1871. Strousberg also established the first vertical trust in Germany and achieved this in only three years. This trust included ore and coal mines. Additionally, he bought furnaces, rolling mills for the production of rails, and machine and locomotive factories, where locomotives were produced on an assembly line – a long time, in fact, before Ford. For a while Strousberg employed 100,000 workers and was the largest entrepreneur in Germany.

Up to that time state action in the field of railways only concerned the question of concessions, of the creation of a legislative framework for the railway system via railway laws of the 1830s and 1840s, and some interventions for military reasons.
The construction of railways itself and the running of railways were dominated by private companies. This was not the end of the story. The foundation of the German Empire was accompanied by an enormous economic outburst, the so-called Gründerjahre (years of foundation) a period when many industrial firms were founded. But these years were followed by a harsh crisis, the so-called Gründerkrise, starting in 1873, which was to a great degree caused by the breakdown of the Strousberg railway empire. Moreover, parliamentary discussions and commissions discovered a system of corruption by civil servants and railway companies that led to a flourishing trade in concessions for new railway lines. The debate poured oil into the fire of the demand for a state-run railway system. The second argument for nationalisation came from the Chancellor of the German Empire, Otto von Bismarck. Bismarck's idea was to make use of the railways to finance the new Empire, because the Deutsche Kaiserreich was not then an empire in the normal sense. It was a union of independent states. These states were above all sovereign in state finance, i. e., taxation. That meant the German Empire was poor. It had no really independent source of income, and depended on subsidies from the German states.

Bismarck's plan was to make use of the profit from state railways and in this way establish an independent source of finance for the Reich. He offered this project to the Reichstag, the German Parliament, and to the Bundestag, the Chamber of the States, in 1873, and failed. The representatives of the states fiercely opposed his plan. Bismarck did not lose his temper, but tried it again and again, though still without success. It was not in the interest of states like Bavaria and Saxony to provide the Empire with such a strong source of finance. In 1879, Bismarck gave up his plan of a national railway, the projected Reichsbahn, and in his function as Prime Minister (Ministerpräsident) of Prussia, started the "nationalisation" on the level of the state of Prussia. In this way he created the State Railway of Prussia, known as the Königliche Preußische Eisenbahn. It was a repetition of a policy promoted by Alfred von der Leyen, the Prussian Minister of Trade and Public Works, in the years between 1848 and 1852. But in Bismarck's time, the strategy was not to do this step by step, but in one coordinated action, founded on a law and supported by large amounts of money for buying off all the private companies. In this way Bismarck was successful. The other German states copied his policy and so every German state got state-run railways in the 1880s. After this period of nationalisation, instead of one imperial railway, a Reichsbahn, as Bismarck had envisioned, Germany had many state railway companies such as the Königliche Preußische Eisenbahn, Königliche Bayerische Eisenbahn, the Königliche Württembergische Eisenbahn, the Königliche Sächsische Eisenbahn and so on. This system was called Länderbahnen (state railways).

The result of the nineteenth century railway policy could be summarised in the following way: First, the profit of the companies became part of the state budget. This was a good deal for the states because Germany's railways were mostly very profitable at this time. Second, the railways became part of the state administration, in most cases the Ministry for Trade and Public Work. Third, the state took over investment, planning, and (re)construction of old and new railway lines. Fourth, railway employees became civil servants, including the blue collar workers. Some railway historians have argued that the nationalisation of former private railways was accompanied by a militarisation of the officials and employees. These historians directed our attention to the uniforms of the staff, and argued that working as representatives of the state changed the workers' mentality. However, in this historian's opinion, the uniforms were probably not so important, because private companies liked uniformed staff very much too. But for the self confidence of the railway employees, it made a difference when they became civil servants. Beside uniforms and mentality, the civil servants of the railways were indeed more closely connected with the military system, especially in Prussia. Railways played an important part of the military defence strategy – with construction of lines for military reasons against France in the West and against

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Russia in the East. Indeed, the so-called Schlieffen Plan, the most important German strategic system up to World War One, was based on superiority in railway mobilisation.\(^{10}\)

But it would be wrong to argue that the militarisation of the railways started with the nationalisation in the different states in the 1880s. One would even be mistaken to believe that the militarisation of railways started with the military reform in Prussia in the 1860s.\(^{11}\) Klaus-Jürgen Bremm has shown that there were serious debates on the role of railways as a military resource in Prussia beginning in the 1840s. And both Prussia and Austria were able to transport whole armies via railways around 1850. German military strategists realised the importance of railways for the mobilisation of military forces, especially for the purposes of beginning a war quickly. Not only that, from this time on the belief was spreading that one could precisely plan a war by paying attention to the transport capacities of the railway system. In this way, the German military planners became trapped inside their idea that they could plan a war minute-by-minute according to railway schedules.\(^{12}\) However, the lesson had to be learned that war still was something incalculable, and World War One ended up in a disastrous defeat. It was precisely this defeat that gave birth to the first real state railways in Germany, because in 1920 the Deutsche Reichsbahn Gesellschaft (German Imperial Railway Company) was founded.

2. STATE AND RAILWAY IN THE PERIOD BETWEEN THE WARS

Germany became a republic in 1919, and at the same time acquired a constitution. The first government under Chancellor Philipp Scheidemann and above all the ministers Matthias Erzberger, Otto Landsberg and Hugo Preuß successful incorporated the idea of a state railway into the constitution. Their main reason was a political one. They wanted to create a strong national government to counterbalance the power of the Länder, the former independent states – above all, Prussia. For them, it was clear that the railway with its 700,000 employees was a mighty force. Together with the Reichswehr (Imperial Army), a 100,000-soldier army, the ministers wanted the railway employees to bind together the new Republic, which had come to life in the chaos of a lost war and a revolution. They spoke of a ‘steel band of the German railway.’\(^{13}\) The ministers’ second reason was financial. Mathias Erzberger, the finance minister had to set up a reform that would solve the problem of reparations for the Allies. He also had to take into consideration that railway was supposed to play the role of a security (Pfand) for these reparations.\(^{14}\) But before the Deutsche Reichsbahn could serve as a security, the opposition of the states had to be surmounted. Especially the Southern states like Bavaria and Württemberg argued fiercely against the plan and spoke of a Transportdiktatur (transport dictatorship). But at the end they were isolated, and especially the industry leaders voted for a Reichsbahn, because their hope of a recovery for the German economy was closely tied with a centralised railway organisation. Indeed, the German railways were a mighty economic force. Many industries, including machines, coal mines and construction depended on orders from the railways. One example made this clear. Immediately after the end of the war, the Prussian Ministry of Trade and Public Works ordered 1,200 locomotives and 22,000 wagons priced at 550 million marks.\(^{15}\)

After the opposition of the states had been

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14 See article 248 of the Versaille treaty and on the debate inside the railways see Sommer, "Die Wirkungen des Friedensvertrages auf die Eisenbahnen". Verkehrstechnische Woche, 13 (1920), 193–198. On the background see Pohl, Manfred, “Von den Staatsbahnen zur Reichsbahn 1918-1924”, in Gall and Pohl, Die Eisenbahn in Deutschland, 71–107, here 76.
15 See Pohl, ibid. 78, 83 and 93.
German State Action and Railway Policy during the 20th Century

The newly created state company was confronted with two serious problems from the beginning on: first, there was wear and tear from the war period and from the periods of revolution and inflation, and second, the Allies had confiscated equipment as part of the reparation system. In the first years, the repair of the railway tracks and facilities had priority, and was an important part of the Republic’s recovery program. In this context the Deutsche Reichsbahn took advantage of the inflation that was happening at the time. The German Imperial Railway Company ordered as early as possible and paid when the goods were delivered, at which point they had only a fraction of their original value. Nevertheless, the Deutsche Reichsbahn was also a victim of inflation, because the inflation of prices caused ever higher personnel costs, resulting in shrinking income and a growing deficit. A reform of the railway’s budget became more and more necessary. But this was only the beginning. Germany’s political problems increased in 1922 and 1923. The Republic could not pay reparations anymore. French troops marched into the heart of the German industry, the Ruhr region. Government and trade unions reacted with an unlimited general strike paid by the government. As a consequence, the inflation turned into hyper-inflation. All these factors drove the railways into economic instability and uncertainty.

Up to the First World War, the success of German railways had been based on four factors: increase in transport demand, technical progress, reliable political relationships and stable currency. In the years that followed the foundation of the Deutsche Reichsbahngesellschaft none of these factors could be achieved. Transport stagnated, there was no technological innovation, no stable political relationships, and no stable currency. The German Republic was close to a collapse when the Allies came to their senses and admitted that the Treaty of Versailles and the reparation system had to be re-worked. This took place in 1924 with the implementation of the Dawes Plan, which was intended to enable the German economy to bear the burden of the Treaty of Versailles with investments and with the modernisation of Germany’s industry. The Deutsche Reichsbahn played an important role in this plan. Its role as a security for reparations had been taken seriously, and in case the reparations had not been paid according to the Dawes Plan, reparations would have been taken directly from the profit the German Imperial Railway Company made. This was why the Dawes Plan brought a serious change in the role of the Deutsche Reichsbahngesellschaft, because as a security for the reparation system, the railway had to be turned into a profitable company, and this opened the valve for the introduction of modern management principles into the administration of the company, and for investments in its facilities. For this reason, two leading railway experts, Gaston Lerverve of France and Sir William Acworth of Britain, analysed the administration, the economic situation and the future rentability of the German railway. They calculated the fixed assets at 26 billion gold marks and the turnover per year at 660 million gold marks. They presented some important suggestions for the modernisation of the state company so that it could meet the expectations. Some of these suggestions, such as ones for modern management principles and a market-oriented company with a distance to the state administration and state policy, were adopted in the reform of the Deutsche Reichsbahngesellschaft.

But to consider war, inflation, reparations and modernisation is not enough for a complete depiction of the situation of the railway in those years, because the railways lost their monopoly on land transport at that time. Some statistics make this clear. Whereas in July 1921, only 60,000 automobiles were registered, the number increased to 433,205 in 1929; in the same period, the number of motorcycles grew from 26,000 to 600,000. Furthermore, the length of the network of bus lines developed from 6,000 kilometres to 37,000. The number of trucks in 1932 was eight times as high.

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16 Ibid., 94–99.
18 See Kolb, Eberhard, “Die Reichsbahn vom Dawes-Plan bis zum Ende der Weimarer Republik”, in Gall and Pohl, Die Eisenbahn in Deutschland..., op. cit., 109–163, here 110.
as it had been in 1924\textsuperscript{20}. This was a totally new situation and the Deutsche Reichsbahn reacted a bit helplessly. On the one hand, they bought a private trucking company, the Spedition Schenker. On the other hand they asked the government to regulate the transport market. So on 6 October 1931, the state passed the Law of Long-Distance Transport with Motor Vehicles (\textit{Verordnung über den Überlandverkehr mit Kraftfahrzeugen}). Under this law, all shipments of goods over a distance of more than 50 kilometres had to be permitted by the state. This made it difficult for truck companies to compete with their cheaper services against the railway\textsuperscript{21}.

So, with the help of the state, the German Imperial Railway Company managed most of its problems, and this is the most astonishing result of the first decade of existence of Germany's national railway. One of the leading members of the Deutsche Reichsbahn, Theodor Knittel, put it this way: “It is an astonishing achievement of the German Imperial Railway Company in the years between 1924 and 1932 that it repaired the damages of war and inflation, that it contributed to reparation, and that it gathered reserve budgets which enabled the company's survival without a breakdown in the years of the crisis of 1930 to 1932”\textsuperscript{22}. But this successful time lasted only until 1933. Then the Deutsche Reichsbahngesellschaft became part of the Nazi regime. Again the German Imperial Railway was remodelled\textsuperscript{23}.

3. STATE AND RAILWAY IN THE NAZI PERIOD

The management reform of the early twenties was rejected when the NSDAP took power in Germany. The policy of independence stopped, and the Deutsche Reichsbahn again became part of the Ministry of Transport; the Minister of Transport became the director of the Reichsbahn. The price for a close relationship to the Reich would be high. At first, all “non-Aryan” and “politically unreliable” (\textit{politische unzuverlässige}) workers were expelled from the Reichsbahn. Then the tariff policy of the Deutsche Reichsbahn had to serve the goals of the regime, and not to make profit on the transport market. According to the Nazi understanding of Volksgemeinschaft (national community) and Gemeinwirtschaft (public economy), the Reichsbahn had to offer special social tariffs and these special tariffs caused the danger of a permanent deficit. At that time, the Deutsche Reichsbahn called itself the biggest company in the world. In 1935, 655,000 employees served the German railway. This was proudly mentioned in the jubilee report \textit{100 Years of German Railways} in 1935. Four years later, the number had increased to one million, and in 1943, at the peak of the expansion of the regime, no less than 1.5 million railway men worked for the Deutsche Reichsbahn\textsuperscript{24}.

But the old problems continued. The competition with new transport systems became more difficult as the role played by motor vehicles increased in state policy. Not only did the degree of motorisation increase, a gigantic network of highways was also built. More than the governments of the Weimar Republic, Hitler’s regime was fond of motor vehicles as the transport system of the future, and supported their development at the expense of the railways\textsuperscript{25}. Moreover, the regime forced the Deutsche Reichsbahn itself to build this huge highway network. According to a law passed on 27 June 1933, the German Imperial Railway had to found a subsidiary that would construct a network of highways, the Reichsautobahn. In return for developing its own competitor, the Reichsbahn re-


\textsuperscript{21} Kolb, \textit{Die Reichsbahn...}, op. cit., 161.


\textsuperscript{23} Hildebrand, Klaus, “Die Deutsche Reichsbahn in der nationalsozialistischen Diktatur 1933–1945”, in Gall and Pohl, \textit{Die Eisenbahn in Deutschland...}, op. cit., 165–243, here 165 and 167.

\textsuperscript{24} See ibid., 169, 185, 190 and 201–206, and \textit{Hundert Jahre deutsche Eisenbahnen. Jubiläumschrift zum hundertjährigen Bestehen der deutschen Eisenbahnen}. Berlin, 1935.

\textsuperscript{25} See Knittel, Theodor; Wehrmann, Wolfgang, \textit{Reichsverkehrsministerium}. Berlin, 1940, 27–28.
ceived the vague concession of control over the new transport system and toll income. But the Reichsbahn found that the Generalsinspektor für das deutsche Straßenwesen (Inspector General of German Roadways) Fritz Todt swiftly took control of the highway system26. Still, car, truck and bus traffic was not a serious competitor at this time for mass passenger and goods traffic via railways.

More important than the problem of potential competition was the military function of the Reichsbahn. The German railway mutated more than ever before into a military machine and a tool for the criminal policy of the regime. The railway supported the Nazi state in its military goals and was a pre-condition for the war. The motorisation of military units was increasing at this time, while the railway remained the backbone for all military activities in Europe. Some figures underline this statement. For the mobilisation of the German Army against Poland, the Deutsche Reichsbahn transported, within a few days, 3,000,000 soldiers, 400,000 horses and 200,000 motor vehicles in 185,400 wagons of all kinds27. The railway transported soldiers, wounded and Fronturlaubers (soldiers on leave), but also everyone within the labour force who had to move from one workplace to another, according to the obligations of an economy that had shifted from normal business into the necessities of war. In later periods of the war, many additional shipments had to be organised, for example the so-called Kinderlandverschickung, where children were brought from cities to rural villages; even later, the whole nation was set into permanent mobilisation. The Reichsbahn’s power peaked in December 1941 and then began to decline when the Blitzkrieg was stopped in the suburbs of Moscow. Afterwards the Reichsbahn became not only deeply involved in the extermination war against Russia, but also in the horrifying plans and realisation of the Holocaust and the depopulation of vast areas in Europe for German settlements in the East. There was also the transport of millions of forced labourers from all over Europe28. The deportation of Jews had started soon after the beginning of World War Two. The extermination campaign against the European Jews starting in 1941 could not have been carried through without the co-operation of the German Imperial Railway29. Up to the middle of the year 1943, 400,000 had been carried to Belzec, 200,000 to Sobibor and nearly 900,000 to Treblinka. In the summer of 1944, 400,000 were brought to Auschwitz. In total, half of the murdered Jews, around 3,000,000 were carried via railway to the death camps in the East30.

Gijs Mom has asked the question if the Holocaust could be imagined without centrally controlled railways, but with thousands of individual trucks. Such a Holocaust would have been known among a much larger part of the population, and might have led to a different outcome31. This could be. But half of the murdered Jews were not transported by railways, and it really did not make any difference. Moreover, one must take into consideration that the criminal energy of the Nazi regime seems to have known no borders. The Holocaust, whether or not it was backed by the Reichsbahn, was only to have been the beginning of the so-called Generalplan Ost (General Plan East) of the SS, which had foresen a depopulation of vast areas in Eastern Europe. And it was obviously of no importance for the regime how many people were aware of the dimension of this horror scenario. More important than the number of people who knew of it was probably the mentality of the civil servants who carried out the transports. In this respect, Alfred C. Mierzejewski summarised the period of the Reichsbahn under the Nazi dictatorship as follows: “Up to the end, the Reichsbahn was inventive, flexible and persistent in its attempt to carry out its economic tasks. The railway represen-
ted the best form of traditional German civil servants as, loyally, effectively and without reservations, they made an effort to serve the state. They represented also the worst in this old ideal, the unqualified support of authority, independent of which goals that authority might have. Without this kind of railway, and without this kind of mentality, it would not have been possible for the Nazi regime to realise its strategic and ideological goals, which included the conquest of Lebensraum (living space, or habitat) and the extermination of the Jewish race. But the war ended in the victory of the Allies in 1945. The Nazi regime and the war left a destroyed German nation as Germany had left a destroyed Europe.

4. STATE AND RAILWAY IN A DIVIDED COUNTRY

The capitulation of the Nazi regime on May 8, 1945, meant the occupation of Germany by four Allies which divided the country into four occupied zones (Besatzungszonen) and four separate railway administrations. All initiatives failed to restitute the former Reichsbahn and lay the ground for a central solution to the great traffic problems under which the destroyed country suffered. All that could be achieved was the establishment of a railway committee which was installed as a separate department of the Allied Control Council (Kontrolrat). The committee discussed the advice of the Control Council in so far as it was related to matters of railway transport, for example agreements on inter zone traffic, or fixing general tariffs.

Most railway men were convinced that the character of the Reichsbahn should be preserved. They saw their company not as an enterprise led by business values, but as a governmental institution or department which took on social responsibility from its national importance. The general director of the railway in the Bizone (the combined American and British zone) was of the opinion that the Reichsbahn must be the clamp that clips together the German people in times of need. Although the railway leaders failed to implement a mighty national railway in a destroyed and divided country, recovery started, at first in the American zone, at the level of the former states (Länder). There, the denazification campaign caused some delays, because, for example, in the Bizone alone, 55 per cent of the upper railway employees and 54 per cent of the middle level had to leave the Reichsbahn. This was even though the Allies were not very systematic, and Germans in the administration opposed and hindered the plans. The second struggle the still mighty railway organisation fought was against decentralisation. In this respect the railway administration successfully opposed the ambition of the states to make the railway part of their governments. It is well known that the four Allies became separated in two factions, and, like them, Germany was divided into West and East, into two republics called Bundesrepublik Deutschland (Federal Republic of Germany) and Deutsche Demokratische Republik (German Democratic Republic). Like the nation, the Reichsbahn had been divided into the Deutsche Bundesbahn for West Germany and the Deutsche Reichsbahn for East Germany. All this happened in 1949. In each of the two Germanys, the railway became part of the state administration. In West Germany, the provisional constitution, the Grundgesetz, precisely described the position of the railways in the new nation. The railway was to exist as an institution of the Federation with limited influence from the states. At the same time, the railway was not to dominate the transport ministry. But also it was not to be an independent enterprise of the state, as the Reichsbahnsgesellschaft had been during the Weimar Republic. Moreover, the Allies forced the railway in the Federal Republic to drop

33 See Die Deutsche Reichsbahn..., op. cit., 242.
35 Ibid., 249, 258–264 and 278.
Above all, the general framework for economic activities shifted toward integration with the West (Westintegration) and to co-operation within the growing European institutions. The law for the Bundesbahn foresaw an administrative council (Verwaltungsrat) led by a president. The members of the council were elected by the government via proposals from the Federal Council, or Bundesrat (the second chamber of the Federal Republic comprising representatives of the federal states), and via proposals by the most important organisations of the economy and trade unions. The council made its decisions independent of advice from the government. The board of the Bundesbahn had to follow the decisions of the council, although the board's employer (Dienstherr) was the Minister of Transport. Germany's railway was still a mighty force. It was one of the biggest customers for industry of the Federal Republic. In 1952 alone, the Bundesbahn ordered goods with a value of 2.3 billion marks and consumed 16 per cent of the coal taken that year from Germany's coal mines. But unlike to the situation at the end of the 19th century, the financial situation of West Germany's railway was not the best at this time. It suffered under a huge pile of old debts, and felt more and more the competition with motor vehicles. Also, it needed money for the rationalisation of business, administration and technical modernisation to become more attractive to customers.

One of the main tasks for the Ministry of Transport in West Germany was to set up a new traffic and transport policy that took into consideration the new situation in the traffic market. And this was why the future role of the railways had to be defined in a new way. In the 1920s and 1930s the competition between railways and trucks was regulated by the state, which protected the railways so that they could bear the burden of reparations and fulfil social tasks. The railway could handle this only from its own income by making enough profit in certain parts of its business, for example long-distance goods transport, and then using this profit to fill the holes in the budget caused by cheap regional passenger fares—a system of vertical subsidies. This system worked satisfactorily for the first half of the 20th century. But after the war it became imbalanced during the upsurge of motor vehicles in the 1950s. Some statistics illustrate this. From 1949 to 1989, the network of the Deutsche Bundesbahn shrank from 30,344 kilometres to 27,045, and the number of employees decreased from 539,000 to only 254,491. In 1949 the West German railway carried 1.3 billion passengers, and in 1989 only one billion—but over larger distances, on average. The goods traffic increased from 216 million tons to 273 million. The railway's portion of total goods traffic decreased from 56 to only 22 per cent, while the debts had increased to 44 billion marks at the end of the 1980s.

At first the Bundesbahn lost to its competition in short distance travel along the lines of secondary priority. Many of these lines were closed, and a bus service organised by the Bundesbahn was substituted. The monopoly in transport was finally lost at this time. Bus lines competed more and more with the railway for short distance travel customers. In goods transport, the railways were confronted with trucks; also, river and canal shipping gained a growing part of the transport market. Moreover, there
was a big shift in the market for the transport of mass goods. More and more, coal was converted to electricity by power plants in the direct neighbourhood of mines. Another substitute for coal was oil, which was transported in modern pipelines starting in the 1950s. So it became a necessity to define the role of railways in a time of the liberalisation of the transport market. The German national parliament, the Bundestag, debated these problems beginning at the end of the 1950s, and initiated several expert studies, for example the Brand-Gutachten of 1960 and the so called Leber-Plan of 1967/68. One must not forget the influence on the European level. The harmonisation of railways in Europe started in 1965 with the Harmonisation Decision of the European Economic Community.

So far we talked about the hard factor responsible for the decline of Germany’s railway – i.e., its financial situation. But the loss in all traffic segments was not only a question of hard facts but also of soft ones. The automobile appeared on the scene as a metaphor for freedom, independence, privacy, self-responsibility and individuality, while public transport was more and more seen as a transport system for the masses, associated with the idea of an economy centrally planned by the state, and with inefficiency, ponderousness and bureaucracy. With shrinking portions of the transport market, the financial problems increased, and exploding personnel costs also contributed to the general problem. Beginning at 8.8 billion marks in the 1950s, the salary costs increased to 20.7 billion marks in 1982, compounding a debt that reached 36 billion marks and continued to grow. These debts had to be balanced out by the state – a vicious circle. Because the growing deficit forced higher debts, the increase of loans increased meant increased interest payments, and this diminished the scope for financial actions, leading to new debts. So we have the phenomenon that all problems increased, even though there had been a period of tough modernisation and rapid change in infrastructure and technical innovations. Indeed, one could not find many similarities between the Deutsche Bundesbahn of 1949 and that of 1989. The Bundesbahn of 1989 were based on electric and diesel locomotives which drove up to 200 kilometres per hour and sometimes more. Many stations were attractive, featured modern architecture, and were functional. All were open for the public, and not closed up by gates and barriers, as had been the case earlier. The civil servants began to accept their role as providers of customer service. Despite these great strengths in modernisation, and the reduction of staff and administration, and the electrification, and more comfort in better trains, and a shrinking network with closure of non-profitable lines –despite all this, the formerly profitable system became a bottomless barrel for subsidies.

This was the situation in the Federal Republic of Germany. The situation in the German Democratic Republic were totally different, not only because of its incorporation into the Soviet bloc of states in East Europe. At the time of the foundation of the Democratic Republic, the Deutsche Reichsbahn stayed in poor condition. The Soviet Union had dismantled 4,000 kilometres of railway tracks, which led to a decrease in efficiency and safety, and an increase in wear and tear on the infrastructure. The cutoff of coal delivery from mines in West Germany caused additional problems. The loss in fuel was replaced by brown coal with a lower caloric value. Moreover, funding for investment in new railways was consumed by the project of building railway networks around West Berlin – a project that went on until 1963. Berlin had been a railway hub until the separation of the Germanys, and now part of it was off limits to the East. The Reichsbahn of the Democratic Republic became again –as in the Nazi period– part of the Ministry of Transport. But now the economic planners undertook the attempt to plan the transport demand, and to distribute it across the capacities of


41 Schulz, *Die Deutsche Bundesbahn..., op. cit.*, 341 and 347.


trains, ships and trucks. Unlike the market society in West Germany, in the East, there was a centralised and regional planning of transport. Instead of competition as a principle in traffic policy, the transport was regulated among the different transport systems organised as socialised enterprises (people-owned enterprises, Volkseigene Betriebe). This does not mean all competition between railway and trucks was abolished. Because short distance transport created relatively high strain on the railway, because it was labour-intensive working and costly, the Ministry demanded a reform of goods traffic starting in the late 1950s, a reform that was enacted in 1958. Compared with the traffic policy of the Federal Republic, the investments in the Democratic Republic undertook only relatively minor innovations and modernisations in tracks and facilities. Not only that, the investments decreased between 1960 and 1988 from 9.8 per cent of all investments in the Republic to only 6.5 per cent. Unlike West Germany, the Democratic Republic did not invest more than necessary, although the demand for transport increased. After 1965, the situation became a bit better for the Deutsche Reichsbahn. The railway was able to catch up in investments and modernisation. But compared with investments in industry, the neglect still continued. While in the Western parts of Germany electrification speedily made progress in the 1960s, the Democratic Republic did not start its electrification program until the 1980s. On 21 February 1980, the Minister of Transport, Otto Arndt, spoke about electrification as the most important measure for rationalisation of the Reichsbahn. Nevertheless, it took the state more than half a year to present a action plan for the far reaching use of electricity in the five year plan from 1981 to 1985. But because the total investments stagnated, while electrification was taking place, the Reichsbahn had to stop other investments, for example a fundamental modernisation and rationalisation of the Reichsbahn in total, the reconstruction of lines for higher speed, and the modernisation of the car stock. Also there was a lack of investment in automatic switching and signalling systems. Because of all this, the Reichsbahn could not make use of the whole potential that the electrification of the main lines offered.

All in all, in the Democratic Republic the competition with motor vehicles was much less harsh than in West Germany because of the state control of truck traffic. By law all persons wishing to ship goods more than 50 kilometres had to request the service of railways. The railway's portion of the transport market stayed stable longer and did not shrink as rapidly as in West Germany. There was no rapid loss of staff and no closure of lines. But the costs for this policy were tremendous and had to be borne by the whole society. Moreover, the delay in investments and the inefficiency of the transport sector were part of the problems that undermined the society of the Democratic Republic, and contributed to its collapse in the late 1980s.

5. STATE AND RAILWAY IN THE DECADE OF REUNIFICATION AND LIBERALISATION OF RAILWAY TRANSPORT

After the collapse of East Germany, the Bundesbahn and the Reichsbahn remained separate for a couple of years. Most politicians were very skeptical about the future of both companies, and about railways in general. The tremendous debts in the Western part, and the tremendous delay in technical and organisational modernisation in East Germany provided good reasons for that view. No one would have imagined that a commission called together in 1989 would deliver a reform concept that would lead to a fundamentally new organisation of Germany's railway in January 1994. No one would have foreseen a successful transformation of the two sick dinosaurs into a single shareholder company led by a management convinced of the advantages of a free market transport economy and convinced of the principle that the

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46 Kopper, ibid., 312.
money should not come primarily from the state but had to be earned on the market.  

The reform of both railway companies and the problems of German reunification were closely linked. The Eastern railway was an explosive topic of discussions around in the 1990 reunification treaty. Many billions of marks were foreseen for far-reaching and costly investments in the railway network in the East. Necessary projects included through-going lines and large investments into the railway hub of the formerly divided capital of Berlin. After reunification, it was necessary to decrease the staff of the Reichsbahn from 500,000 to 250,000 employees within four years, and to develop a concept of how the railways should be organised in the future. For all these problems, the commission had to find answers. Some figures shed light on the dimensions of the problem. The network of the Deutsche Reichsbahn was denser than that of the Bundesbahn – it was made up of no less than 14,000 kilometres of track, i.e., more than half of what the Federal Republic had, 27,000 kilometres. But this network was antiquated. Only thirty per cent had been electrified and not more than thirty per cent were extended to a two track or multiple track system. In West Germany, nearly 50 per cent was electrified and multiple tracked. On this old-fashioned network, twice as many people were transported per year as in the Federal Republic. One can imagine what this meant for the state of the tracks and facilities. And this gives an impression of the costs of a renewal. A closer look at the deficit shows how dramatic the situation had been. The Bundesbahn of the Federal Republic piled up a deficit of 9.4 billion marks each year, and the Reichsbahn of the former Democratic Republic contributed to this with an additional deficit of 6.1 billion. One could ask the question why it had taken so long for a fundamental reform and why the situation needed to escalate that way, although the problems were very well known. There were many examples of how other countries, such as the USA, Japan, Sweden and the United Kingdom, had treated this problem by taking drastic measures like deregulation and legislative conditions that allowed their railways to conform to the free market. One reason why this didn't happen in Germany was probably the good economic development in the 1980s, which covered the railway debts in the state budget for a while. But at the end of the 1980s, speedily increasing debt directed attention to the problematic trend again. In September 1987, the Minister of Transport received report by the US-based McKinsey management consulting firm which caused a sensation. One could clearly read that the market position of the Bundesbahn had permanently dropped, and had become worse since the 1960s. In the 1980s, it had reached only half of its former position in a growing transport market in passenger and goods traffic. The shrinking market position, according to the McKinsey report, resulted in principle in debt. Although the amount of debt was stable sometimes for a while, the railway budget had developed into a permanent burden of the state, with a dangerous potential for a rapid increase of the problem. The media characterised this part of the report as one of the worst dangers in the state budget. Under normal conditions, the railway would have had to declare bankruptcy at this time. And afterwards, in the following years, the state was confronted with additional burdens of the Reichsbahn – not to mention the costs of reunification. Some extrapolations of all these facts to the next decade led to horrifying figures up to a deficit of 180 billion marks in 2001, and that moved the debate forward. A deficit of 180 billion marks would have required a total of 400 billion marks for the debt itself, for the management of the debt, for additional subsidies from the state budget and for new lines of credit. Both railways caused further unsolvable problems. The staff of the Reichsbahn was more numerous than the staff of the Bundesbahn, although their network was only half as big. In total, both companies would have 500,000 employees. When officials of the government and members of the parliament calculated the costs for the salaries of all railway employees for


the next decade, a second shock wave ran through the whole political body of Germany.

Besides politicians of the ministry and the parliament, two other groups fostered the debate: the Railway Commission called together by the government in 1990, and both boards of the Bundesbahn and Reichsbahn, which became unified in 1991 under the leadership of the charismatic entrepreneur Heinz Dürr. Dürr was later described as the father of the railway reform of 1993/94. Other leading figures for the railway reform included the four ministers for transport in the years between 1987 and 1993, Werner Dollinger, Friedrich Zimmermann, Günther Krause and Matthias Wissmann. The installation of the Railway Commission in February 1989 was one of the first consequences of the McKinsey report and a second internal report on the situation of railways. In the following years, the Commission and the united boards of both railways worked closely together. Initial analyses showed the situation was worse than expected. The income of the Bundesbahn sank dramatically. The need for more money skyrocketed to an additional 25 billion marks and was extrapolated to 40 billion in 1995. This was why the Commission presented the concept of a metamorphosis of the German railways into one shareholder company at a very early point in time. The commission argued that only under that condition would entrepreneurial leadership be possible. The more the Commission and board analysed the situation, the more it became clear that fundamental reform was necessary so that the whole system would not break down. Two decades of reform debate without consequences were now resolved into practical activities in the years between 1991 and 1993. Within only three years, the German railways had been made ready for privatisation, a process that ended a tradition of state railways that had begun in 1879 (or 1920, the beginning of the national railway). An independent company was formed, named Deutsche Bahn AG. It was to be run like a private company, although the state owned it fully. But after a period of time and an 80 billion mark modernisation program, the company prepared itself to gather its investment capital from its own profit, and to attract capital for investment on the capital market, i.e. the stock exchange.

To go public, a lot had to be done in advance. Everyone could see the problems of the Bundesbahn and its railway stations, which were in serious need of modernisation, in contrast to the country’s modern, comfortable airports. So the goals for a “Renaissance of the Railway Station” were presented in an attractive catalogue combined with an exhibition that moved from city to city, expressing the vision of what 21st century railway stations should be, including comfort and shops like in airports. The advantage would be to offer both in the middle of cities. The renewal of railway stations was seen as one of the most important investments for both attracting new customers and presenting a new image of the railways. For that reason it was decided to organise the real estate function of both railways –their stations and land– as a special company, later named DB Immobilien.

The state railways ended on 31 December 1993. At the same time, both companies became unified and privatised, and started their career on 1 January 1994. The Deutsche Bahn AG is still owned by the state but is now managed independent from the state administration, like a private company. The process of privatisation had not been finished up to now. But the success of the reform can not be overlooked. The reform brought a solution for the speedy increase of deficits and debts. In 1997, the Deutsche Bahn AG made a profit for the first time, a profit of 245 million marks. This was not very much compared with the turnover of 30 billion and with a labour force of 230,000 employees, but the profits have steadily increased ever since. In its first three years, Deutsche Bahn AG invested 41 billion marks, and a further 81 billion were planned for the following years. Today the annual profit is around one billion euros. But more important than the profit is probably how the railway looks today. The Deutsche Bahn has become visibly more modern. Many stations have been reconstructed and some new ones have been built. They are modern and attractive locations. The image is no longer that of a bankrupt state company.

50 Ibid., 392–401.
52 Ibid., 416–417.
In 15 years the Deutsche Bahn AG invested in new, modern technology, and it modernised tracks and railway stations, trains and locomotives. The number of employees declined from nearly 500,000 to 230,000; they run service on a shrinking network. But at the same time, new strategic lines have been constructed for high speed travel. The Deutsche Bahn has transported an increasing number of passengers and an increasing amount of goods. Also one cannot overlook the international activities that lead to diversification of the staff, with ten per cent located outside Germany.