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Achievements and challenges

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The year 2014 will be the twentieth anniversary of the German rail reform and the foundation of Deutsche Bahn AG. Deutsche Bahn AG took this opportunity to commission Roland Berger Strategy Consultants with a study on the development of the German railmarket.

Summary

In 1993, several factors increased pressure on politicians to act and reach a **cross-party consensus** on the introduction of a rail reform. From 1950 to 1990, Deutsche Bundesbahn's share in the intermodal market had decreased markedly, from 37% to 6% in passenger transport and from 56% to 21% in freight transport. With the opening up of the borders Deutsche Reichsbahn's rail traffic volumes began to drop drastically, too. The earnings situation of both Bundesbahn and Reichsbahn was desperate. According to the Bundesbahn government commission, the public financing requirement for the two railways would have increased from DM 27 billion in 1991 to DM 64 billion in 2000, presenting a huge budget risk. Attempts at introducing a rail reform up to this point had achieved very little success. Both railways were paralysed by influence exerted in the political arena and by the principles of budget law, civil service law and public service law. In the course of reunification, the Bundesbahn and the Reichsbahn had to be merged. The Unification Treaty provided for a majority of the Reichbahn's workforce being granted civil service status by 1 January 1994, which increased the time pressure. The growth in traffic anticipated as a result of the opening of the borders to Eastern Europe and European integration made having a high-performance rail transport system essential, not least in view of the environmental awareness that was developing. At the same time, EU Directive 91/440 was adopted in Brussels, which aimed to make railways more independent of governments, create a healthy financial structure and separate accounting for infrastructure and transport services.

Due to the nature of this initial situation, the rail reform was implemented by changes to the German constitution (Grundgesetz), the passing of seven new laws and more than 130 further legislative changes. This took place very quickly within around ten months following the resolution of the Federal Cabinet of Bundestag and Bundesrat with a majority of 97% and 92% respectively.[1]

The rail reform had two objectives:

- **Increasing rail traffic**: one aspect was to "increase the effectiveness of the railways and put them in a position to participate more strongly in the traffic growth that is anticipated for the future."
- **Relieving the federal government's budget**: the rail reform was also to "reduce the budget pressure that has accrued for the government through holding the Deutsche Bundesbahn and Deutsche Reichsbahn special federal property until now and keep it within calculable limits."[2]

The vital instrument in implementing the rail reform was the conversion of the Bundesbahn and the Reichsbahn into a **joint stock company with a strict entrepreneurial approach to business**. This limited the influence of government on the company's corporate governance.

Further important instruments of the rail reform were:

- Debt relief and the assumption of the inherited financial burden by the government: debts amounting to the equivalent of EUR 34 billion and property

[1] Preliminary work on the reform had begun as early as 1989, when the Bundesbahn government commission was set up.

[2] Statement by the federal government on the drafting of the law for restructuring the railways, Bundesrat official document 131/93, 26 March 1993, page 57.

and assets belonging to the Bundesbahn and the Reichsbahn that were not necessary for rail operations were transferred to the newly established Bundeseisenbahnvermögen (BEV), a special authority of the federal government charged with managing the assets.

- Responsibility for financing investment in infrastructure and all continuing duties of public administration, such as supervision of the railways and approval of vehicles by the newly formed Federal Railway Authority (Eisenbahn-Bundesamt), remained with the government.
- Transfer of responsibility for regional passenger rail transport services to the individual federal states: since the regionalisation of regional passenger rail transport services from 1996, the government has been providing the federal states with funds for this purpose, and the federal states organise the regional passenger rail transport services according to the purchaser/provider principle.
- Opening up of the rail transport markets to competition in order to increase rail traffic .

The two national railway companies were transformed into a business-led joint stock company under German law. Alongside the reorganisation and establishing of the accounting systems, the Management Board also set up a "Programme for Action for Deutsche Bahn AG", under which 180 separate projects were run. That the rail reform was accepted within the company was largely due to the fact that the majority of executives and employees believed that a joint stock company setup was the only solution for the problems that the two railways had. Another important factor for executives and employees was the ban on redundancies being made for operational reasons and the early and comprehensive involvement of the trade unions in the reform process. Inherited pension expenses remained with the BEV, while DB AG took on the future company-standard pension provisions. The new, market-aligned collective bargaining agreement guaranteed that employees would retain their established conditions of employment. More than 100,000 executives and employees were trained under the "Die Brücke" training programme.

Twenty years after the introduction of the rail reform, the **effects of the reform are positive**. A decisive factor for success was the consistent and concurrent implementation of all the instruments for reform described above. Each individual measure taken on its own would have remained a mere fragment – as was demonstrated by the numerous attempts at reform that failed prior to 1994. Between 1994 and 2012, rail traffic volume increased by 36% in passenger transport and by 58% in freight transport. In passenger transport the growth resulted principally from more local transport services (+69%); long-distance transport grew by 7%. The funds made available by the federal government for the railways dropped from EUR 20.5 billion in 1994 to EUR 16.7 billion in 2012 – excluding dividends and interest-free loans, which DB AG has paid back to the government. These amounted to approximately EUR 1 billion in 2012 alone. Although traffic was growing, absolute CO_2 emissions from rail transport sank by 16% in passenger transport and by 10% in freight transport.

Business has developed very positively at DB AG since the rail reform. While rail operations in Germany still form the focus of business activities today, DB AG has been able to expand its portfolio. Revenues rose from EUR 14.8 billion in 1994 to EUR 39.3 billion in 2012, partly as a result of organic growth and partly due to the acquisition of companies such as Schenker and Arriva. The annual result increased fivefold, from EUR 0.3 billion to EUR 1.5 billion. The return on capital employed

(ROCE) as a measure of operative profitability also improved considerably, reaching 8.3% in 2012. The current return on capital employed is thereby approaching the level required to cover the cost of capital, which currently stands at 8.9%. The productivity of infrastructure and rolling stock increased.

Employee productivity rose noticeably thanks to the collaboration between the company and its social partners. The number of employees at DB AG decreased from 372,000 (1 January 1994) to 299,000 (31 December 2012). In the core business of rail in Germany (the business comparable to that in 1994) the number decreased to today's figure of approximately 155,000 employees, while at the same time transport volumes are considerably higher than in 1994. It has been observed that productivity in the restructuring phase to 2008 rose constantly and labour productivity in transport operations tripled (passenger-tonne-kilometre /rail employees). This productivity indicator has not increased further since the end of financial crisis in 2010. Reasons for this include the increase in employee numbers resulting from a change in the company's human resource strategy. The proportion of female employees and of people working part-time increased, reflecting general labour market trends. The average salary rose by 37%, a rise higher than the increase in inflation (cumulative 32%), which puts additional pressure on competitiveness.

The organisation of DB AG has been successively refined over time. It meets the unbundling requirements set out in European and German legislation. Infrastructure and transport companies are separate companies with their own balance sheets, profit and loss accounts and accounting systems. Functional unbundling ensures that the network operator takes independent decisions on infrastructure access and charges.

DB AG and its competitors have clearly improved the rail services on offer to customers in passenger and freight transport in the last 20 years. The infrastructure has also been modernised. These improvements have, however, not yet been comprehensively reflected in **customer satisfaction levels**. Customer satisfaction is at a medium level in almost all market segments, making further progress necessary in this respect.

The federal government is fulfilling its duties under the German constitution, particularly in its commitment to maintaining and upgrading the infrastructure and its provision of regionalisation funds (Regionalisierungsmittel) for the federal states. The **regionalisation of regional passenger rail transport** is an obvious success because, alongside the growth in traffic, increased funding efficiency can be demonstrated, in that today 21% less fees for running the service (Bestellerentgelte) are being used per passenger kilometre than was the case in 1994. Problems are, however, presented by the increasingly heterogeneous design of the regional passenger rail transport authorities' (Aufgabenträger) transport service contracts. For example, various requirements regarding timetables, pricing policy and rolling stock are stipulated, often in great detail. This increases the complexity of procedure and restricts the entrepreneurial freedom of the railways, which was such an important concept in the rail reform.

One of the **infrastructure**'s strengths is a clearly improved level of equipment and facilities in ever smaller volumes. The total length of the network has shrunk by 17% to 33,505 kilometres, while the electrified network has grown by 16% to 19,826 kilometres. Gross investment in infrastructure has increased by 16% since 1994. Of this, capital expenditure by DB AG has grown by around 60% (average for the last three years EUR 1.0 billion), by considerably more than the construction grants from government and third parties, which have increased by 9.7% (average for the last three years EUR 4.7 billion). In an international comparison, however, public investment in rail infrastructure is relatively low, both per capita and per track kilometre.

The **regulation of rail transport** has undergone continuous development since the rail reform. With the third amendment to Germany's General Railway Act (AEG), in 2005 the requirements of the EU's First Railway Package of 2001 were implemented and the Federal Network Agency (Bundesnetzagentur) was set up as the regulatory body for the promotion of competition in rail transport. To this end, the authority was equipped with extensive competences and granted powers of intervention that extend way beyond the stipulations of the First Railway Package. The market study conducted each year by the Federal Network Agency shows that the railway undertakings (RUs) are increasingly satisfied with many aspects of the non-discriminatory network access that has been created.

Accordingly, **intramodal competition** has experienced positive development since the rail reform, with a focus on freight transport and regional passenger rail transport. DB AG's competitors in freight transport currently have a market share of 29% of transport volume, while in regional passenger transport competitors claim a market share of 25% in terms of train kilometres– and an upward trend is discernable. In long-distance transport there is currently very little competition on the rails; here intermodal competition is stronger, for example from air traffic and increasingly also from long-distance bus services. Alongside Sweden and the UK, Germany has one of the highest levels of rail market liberalisation internationally. German RUs inevitably come up against less favourable infrastructure-access conditions in the neighbouring European markets than the RUs from these neighbouring countries do in Germany.

In recent years, considerable delays have been encountered in the **approval of vehicles** by the Federal Railway Authority, which has led to shortages in vehicle availability for passenger rail transport. This supply shortfall is exacerbated by additional requirements imposed in operations following vehicle failures.

Against the background of the developments described here, this study recommends that the central instruments of the rail reform be retained and the achievement of objectives facilitated by several measures. In specific terms, **six aspects** should be focussed on in order to ensure that the rail reform continues with success and that rail as a mode of transport is further developed.

1. It is paramount that sufficient **financing of investment in the existing network** is guaranteed, above all through the renewal of the Service and Financing Agreement (Leistungs- und Finanzierungsvereinbarung – LuFV) to allow for a larger infrastructure contribution by the government. A "financial circularflow" for rail, in which the government reinvests dividends paid out by the infrastructure operators back into the infrastructure, could play a role here. For **renewals and extension projects**, building grants should be made available by the government in a manner that meets demand. The Federal Transport Plan (Bundesverkehrswegeplan – BVWP) is to be further enhanced in order to accelerate the expansion of the major traffic corridors and the elimination of bottlenecks. In infrastructure projects considered to present potential drawbacks for the general public, people should be involved at an early stage and the benefits communicated more clearly.
2. The **intermodal framework conditions** for rail transport should be improved. Energy costs as a result of regulation, which are higher in Germany than in

other European countries, should be lowered through the abolishment of electricity tax for railways. New expenses arising from the planned reform of the Renewable Energy Act (EEG) are to be avoided. Furthermore, tickets for cross-border passenger rail transport services should be exempted from value-added tax, as is the case in international air traffic.

3. The stable and adequate **financing of regional passenger rail transport** is to be ensured, and the key for distributing funds across the federal states is to be reviewed. To this end, regionalisation funds are to be carried on from today's level and made more dynamic allowing for adjustments to cost development of railways. Coordination between the regional passenger rail transport authorities, e.g. in relation to vehicle requirements and tendering schedules, is to be further developed. Procedural complexity is to be reduced and entrepreneurial freedom in regional passenger rail transport is to be emphasized once more. This would not only do justice to one of the most important concepts of the rail reform, but would also increase market attractiveness and thereby achieve more competition in the long term.
4. **Europe-wide equality in terms of infrastructure access** should be ensured through complete market liberalisation for commercial transport operations ("open access"), through access to essential facilities and through non-discriminatory and foreseeable train path and station charges. In addition, transparent and fair tendering conditions in regional passenger rail transport in all member states and EU-wide harmonisation of technical standards are necessary. Overregulation, which hinders entrepreneurial commitment, is absolutely to be avoided in line with the main concept underlying the rail reform. The infrastructure should continue to be managed by private companies belonging to the DB Group.
5. The **vehicle approval process** is to be reformed. The memorandum of understanding signed by the Federal Ministry of Transport, Building and Urban Development (BMVBS), the Federal Railway Authority, industry representatives and the railways on 26 June 2013 is to be implemented as soon as possible. Type approvals should be introduced gradually and the European Railway Agency (ERA) should be strengthened as the examining body. Regional passenger rail transport authorities, railway companies and manufacturers should pay heed to realistic deadlines during vehicle procurement. At the same time, the technical requirements for vehicles in regional passenger rail transport as defined in tenders should be widely standardised in order to allow the rail industry to produce larger series, which would have a positive effect on both costs and quality.
6. Rail companies must react flexibly to the current challenges in the environment in order to enjoy sustainable success. As part of its DB2020 strategy, DB AG should continue to improve its **customer and market orientation** in particular. Initiatives that have already been launched for the recruitment of young, well-qualified specialist employees should be continued and in light of the current shortages possibly intensified. Given that rail transport and infrastructure benefit from public funds, the government, federal states and rail companies should create more transparency for the general public. DB AG should counter criticism that it demonstrates a lack of transparency, despite providing state-of-the-art reporting as a joint stock company, by continuing its information campaign and thus strengthening its relationship of trust with its stakeholders.