

Rail Delivery Group



Country Profiles – Germany

The Williams Rail Review

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As part of a series of comparative studies of international rail systems, this document profiles railways in Germany. The document outlines how rail services are delivered in Germany and provides an analysis of strengths and weaknesses of the system. This analysis is also contextualised so the reader can make appropriate comparisons with Great Britain (GB).

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Executive summary

Germany has a large railway which is often used as a positive comparator to Britain's railways. Over the years there has been plenty to envy including good regional punctuality and high-speed services.

However, the reality is mixed with weaknesses in the system balancing the strengths. As with all comparisons, there is a context in which to read the numbers and consider the root causes for both the successes and challenges.

Demography and Economy

Germany's economic activity and population is one contextual factor that should be borne in mind with this comparison. Germany is the most populous country in Europe and has the 17th largest population in the world. Divided into 16 states (Länder), Germany has relatively few large cities with only four having a population of more than 1 million. This demographic make-up is reflected in Germany's economic make up with a spread of economic activity across the country rather than with a single city focus like London or Paris.

This distribution of people and economic activity has a positive effect for Germany's railways and its ability to be efficient moving people in "both directions" rather than peaks moving into a single centre in the mornings and away in the evenings as we experience in London. This contributes to Britain's higher 'network utilisation' rates¹- with a densely used network coming with its own resilience challenges.

Culture

Passenger satisfaction in Germany is amongst the lowest in Europe, and inexplicably low when the relative performance and quality of the network is considered. Some attribute this weakness to a greater cultural likelihood for Germans to complain; a German National newspaper, identified "whining, bitching and moaning" as a national pastime!². Any consideration of satisfaction should definitely be examined with this in mind.

Conclusions

We would offer the following observations from the German model:

- Public service contracts (PSCs or franchises) are regarded as fit for purpose and attractive for bidders, they vary in length and balance of risk/reward depending on the market and local client body.
- Despite the contracts being attractive, it is not always easy for operators to enter the market. Vertical integration in Germany has distorted the market with a dominant incumbent and barriers to entry for competitively tendered PSCs.
- The mix of liberalisation and vertical integration creates a complexity for the passenger with a lack of interavailable and through ticketing. Although a dominant vertically integrated incumbent will give the passenger a single point of accountability 88% of the time, but not in the more complex situations that involve multiple operators.
- There is mounting political pressure to reform DB after a recent drop in punctuality and increasing debt, which some are attributing to a siloed mentality within the vertically integrated structure.
- Although passenger satisfaction is low compared with Britain, this is partly attributed to a German love of complaining, whilst German passengers are right to grumble about their low comparative rights and compensation if things go wrong.

¹ RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

² Spiegel, <http://www.spiegel.de/international/the-german-national-pastime-whining-bitching-and-moaning-a-417958.html>

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Introduction to international comparators

There is no templated model for organising railways in an optimally efficient, customer-focussed and safe way. Indeed, all structures are made up of a series of policy choices and trade-offs. Furthermore, the comparative statistics alone only tell us one part of the story; there are lies, damned lies and statistics. Fantastic comparative punctuality tells you nothing of the cost of achieving it. In the same way, it is impossible to say that a particular industry structure is a direct causal factor in achieving efficiency.

As such, these profiles are intended to paint a picture of possibilities and the strengths and weaknesses of the plethora of systems operated internationally. However, they cannot be understood in isolation. The social, geographical, financial and political context are critical to understanding why some systems work well and their limitations when adopted overseas with different counter-variables.

Where possible, this context has been provided, but all comparators should be viewed with an appropriately critical eye. Furthermore, overlaid on this is the issue of an appropriate model for the appropriate market segment.

The rail industry in Great Britain (GB) is made up of many different markets. The intercity market operates between major cities and is typically related to the East Coast, West Coast, Midland and Great Western mainlines (ECML, WCML, MML, GWML respectively). The urban, suburban and regional markets are for commuters or middle-distance railways with a mixture of cost covering and non-cost covering services. A typical route for this category would be Southern, serving commuters into and out of London. Finally, there are relatively self-contained markets, like in Scotland where there is a single dominant operator providing the majority of services.

This mixture of markets exists in other countries. Some have tailored their structures and commercial models accordingly, whereas others have applied a single model to the whole system. Some of the examples presented in this document are not always suited to different market segments, geographies or demographic contexts. For example, the successful open access route run by Nuovo Trasporto Viaggiatori (NTV) in Italy might be unsuited to the London commuter market. Equally, the single operator model running on the highly saturated Dutch market would not be able to reap the benefits of competition on our long-distance commercial mainlines.

In this context, RDG is approaching the rail review by examining the markets contained within the industry as well as cross-cutting issues. Where possible these markets and horizontal workstreams and themes will be cross-referenced.

RDG's Approach to the Williams Rail Review

RDG has developed six principles to measure success against for the Williams Rail Review. These will be used to assess the country comparisons. The principles are as follows:

1. **Put customers at the heart:** ensuring that all parts of the railway, including the supply chain, work together to deliver for customers now and for generations to come
2. **Increase accountability:** building on the solid safety record, deliver a structure for the railway that creates confidence in its leadership, improving coordination in the way

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services are delivered and decisions are taken, and making it clear where the buck stops when things go wrong

3. **Deliver value for money:** managing costs for passengers, freight customers and taxpayers, with a sustainable supply chain
4. **Unlock economic growth:** boosting innovation with private investment enabling the railway to expand; growing and rebalancing Britain's economy, and be environmentally sustainable
5. **Strengthen communities:** ensuring communities across the country benefit from a vibrant, growing railway
6. **Inspire our people:** ensuring that people working in rail have fulfilling careers and a greater stake in the railway's long-term success

Underpinning all of this is a focus on getting the basics of performance, capacity and fares right.

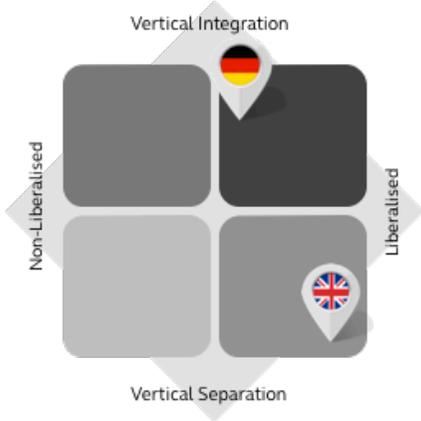


Figure 1, RDG's six principles

-  **Population:** 82.522m
-  **Network Length:** 38,990km
-  **Passenger km per year:** 95.4bn
-  **Passenger modal share:** 8.5%
-  **Freight tonne km per year:** 116.2bn
-  **Freight modal share:** 18.2%
-  **Passenger satisfaction:** 45%

Culture

- Germans are far more likely to complain than British people



Demography

- The population is spread over many medium-sized urban centres

Economy

- Economic activity is spread evenly across the country

factors that contribute to

Weaknesses

- Passenger rights and complaints
- Long distance punctuality
- Barriers to a *de facto* competitive market

Germany



factors that enable

Strengths

- Regional punctuality
- Deployment of renewable energy
- Attractiveness of franchises

6 principles for change

3. Deliver value for money

Avoid returning to the days when running costs were deep in the red. Sites were closed and stations were bricked up.



6 principles for change

1. Put customers at the heart

Before the railway to select a new generation of innovation and investment and, where it makes sense, choice for customers.



6 principles for change

2. Clear accountability

Apply a structure for the railway that makes it clear who is responsible for what in order to build trust when things go wrong.



6 principles for change

1. Put customers at the heart

Before the railway to select a new generation of innovation and investment and, where it makes sense, choice for customers.



6 principles for change

3. Deliver value for money

Avoid returning to the days when running costs were deep in the red. Sites were closed and stations were bricked up.



6 principles for change

5. Strengthen communities

Create a more inclusive railway that's designed around the needs and aspirations of the areas it serves.



6 principles for change

4. Drive economic growth

Invest in the backbone for the long term, to support the railway and give real resilience to Britain's economy.



Introduction to German railways

Germany is the most populous country in Europe and has the 17th largest population in the world. Divided into 16 states (Länder), Germany has relatively few large cities with only four having a population of more than 1 million:

1. Berlin, 3,439,100
2. Hamburg, 1,769,117
3. Munich, 1,330,440
4. Cologne, 998,105
5. Frankfurt am Main, 671,927
6. Stuttgart, 600,068
7. Düsseldorf, 586,217
8. Dortmund, 581,308
9. Essen, 576,259
10. Bremen, 547,685

There are 82 cities with a population of more than 100,000 people. To contrast this, the distribution of urban populations in Great Britain is markedly different with a strong London-centric population:

1. London, 10,236,000
2. Manchester, 2,639,000
3. Birmingham/Wolverhampton, 2,512,000
4. Leeds/Bradford, 1,893,000
5. Glasgow, 1,222,000
6. Southampton/Portsmouth, 883,000
7. Liverpool, 875,000
8. Newcastle, 793,000
9. Nottingham, 755,000
10. Sheffield, 706,000

The distribution of activity is also different. In a Eurostat list of Gross Metropolitan Product (GMP) Great Britain features two cities whilst Germany features five. The economic activity is spread more evenly too with three German cities delivering the GMP of London³.

Metropolitan area	Gross Metropolitan Product BN Euro
Greater London	665
Manchester	74
Rhine-Ruhr	310
Frankfurt	173
Munich	147
Hamburg	132
Stuttgart	120

³ Eurostat, <https://ec.europa.eu/eurostat/web/gisco/geodata/reference-data/administrative-units-statistical-units/urban-audit>

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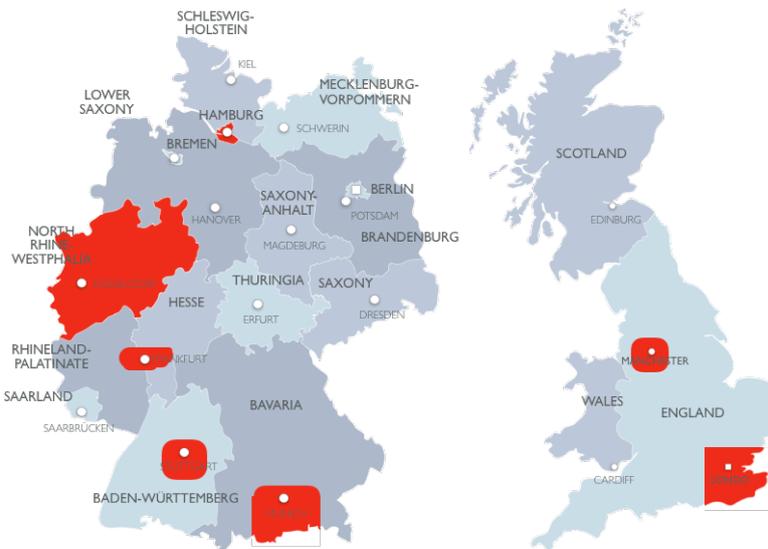


Figure 2, Graphical representation of GMP hot-spots

This distribution of people and economic activity has a positive effect for Germany’s railways and its ability to be efficient moving people in “both directions” rather than peaks moving into a single centre in the mornings and away in the evenings as we experience in London. This contributes to Britain’s higher ‘network utilisation’ rates⁴- with a densely used network coming with its own capacity resilience challenges.

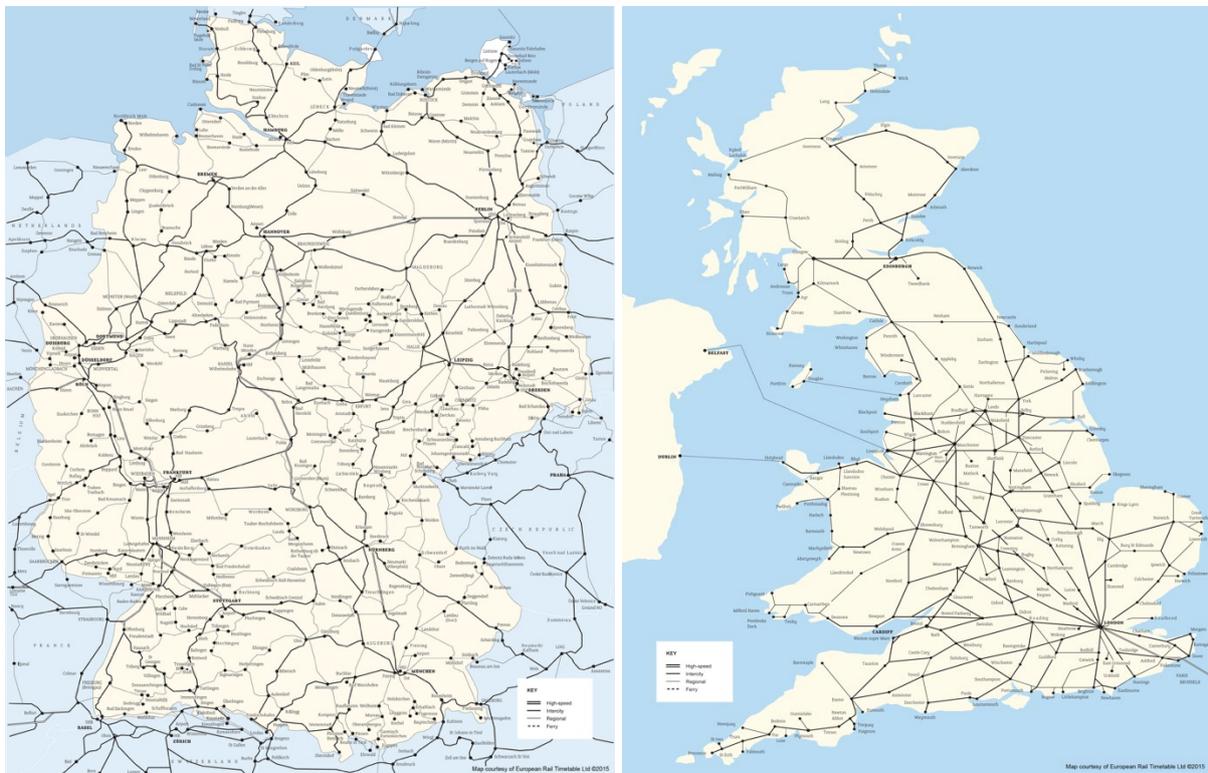


Figure 3, Rail networks compared⁵

⁴ RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

⁵ Project mapping, <http://www.projectmapping.co.uk/Reviews/qbrailmapsschema.html>

German rail in numbers

Comparator ⁶ unless noted otherwise	Germany	UK*
Population (million) 2017	82.522	65.809
GDP (Nominal) bn € 2016	3144.1	2395.8
Network Employees (GB number includes direct supply chain)	151,000 ⁷	240,000
Network KM (electrified %) 2016	38,990 (52.8%)	16,253km (33.7)
Passenger km per year 2016 (modal share)	95.4bn (8.5%)	68bn (8.7%)
Number of stations	6561	2317 ⁸
Regional and local punctuality % on time ⁹	93.3% (6 minutes)	89.7% (5 minutes)
Long distance punctuality % on time ¹⁰	74.2% (up to 15 minutes)	91% (10 minutes)
High and Good Satisfaction % ¹¹	45%	75%
Freight tonne km per year 2016 (modal share)	116.2bn (18.2%)	17.1bn (4.7%)
All train km (% passenger/freight) ¹²	1076.3	565.6 (94/6)
Infrastructure investment €bn (enhancements) ¹³	5894 (16%)	9018 (41%)
Maintenance and enhancement spend thousand € per km	128	327
% Farebox revenue ¹⁴	44%	92%
Passengers killed in railway accidents 2013, 2014, 2015, 2016	0, 0, 0, 11	0, 0, 0, 0

* European Union (EU) Commission stats include Northern Ireland (NI) but excludes the Channel Tunnel

Structure and organisation

German railways are vertically integrated in a holding company structure called Deutsche Bahn (DB). This means that whilst the infrastructure manager, freight and passenger operations have their own accounts and board they report into a holding company but are strictly speaking not allowed to confer an advantage on the other. Despite this vertical integration, there are non-DB companies operating in the open freight market and competitively tendered passenger market.

⁶ EU Transport Statistical Pocketbook, <https://ec.europa.eu/transport/sites/transport/files/pocketbook2018.pdf>

⁷ Bundesnetzagentur,

https://www.bundesnetzagentur.de/SharedDocs/Downloads/EN/BNetzA/PressSection/ReportsPublications/2017/MarketAnalysesRailway2017.pdf?__blob=publicationFile&v=1

⁸ RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

⁹ RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

¹⁰ RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

¹¹ RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

¹² Train km in themselves do not always denote success. British freight operators have reduced train km by increasing length and payload, making more efficient use of scarce capacity. https://www.raildeliverygroup.com/files/Publications/2018-06_rail_freight_working_for_britain.pdf

¹³ RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

¹⁴ RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

Infrastructure management

DB Netz, is a subsidiary of the DB holding company and is responsible for the railway infrastructure and operation in Germany. The infrastructure manager has a number of business units itself:

- DB Netze Fahrweg – System operator
- DB Netze Energie - Energy
- DB Netze Projektbau – Large projects
- DB Station&Service AG – Stations service

Passenger operations

The German passenger rail market is dominated by the state-owned DB. However, a considerable number of rail companies, either subsidiaries of internationally operating private companies, foreign national rail companies or smaller German rail companies, compete with the incumbent in the regional passenger rail market and in the freight market. There are 135 active railway undertakings in Germany.

Germany has introduced a franchising system for unprofitable subsidised regional passenger rail services. Other (long-distance) rail services are operated on a commercial basis and are not subject to such competitively-tendered public service contracts (PSCs). British companies have been active in the German passenger market with National Express and Go-Ahead achieving particular success.

German high-speed railways (ICE) were first introduced to the market in 1991. Unlike in France, the German high-speed network is more tightly integrated with conventional lines. This means that some areas are more limited with speed restrictions of 100 miles per hour, slower than British mainline line speeds of 125mph.

Freight operations

The main market players in the German rail freight market are principally subsidiaries of European incumbent rail operators. The most important groups are the German incumbent DB Cargo, SNCF (France), SBB Cargo (Switzerland) and FS Trenitalia (Italy). Again, the vertically integrated DB massively dominates the market.

Group	Companies	Market Share (2009)
DB Schenker	DB Schenker Rail	72.3%
SNCF Geodis	Captrain, ITL	5.5%
SBB Cargo	SBB Cargo Deutschland	2.7%
FS Trenitalia	TXL, OHE	2.6%
Häfen und Güterverkehr Köln	Häfen und Güterverkehr Köln	2.0%
Others		14.9%

Source: Holzhey, M. et al. 2011

Figure 4, Main rail freight operators in Germany¹⁵

¹⁵ European Commission, <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2012-06-ia-support-study-era-appendix-a.pdf>

Strengths

Regional punctuality

Regional punctuality is high with more than 93% of trains arriving within the 6-minute scheduled time¹⁶.

Sustainable power

42% of power used for rail operations in Germany comes from renewables, and there is an objective to further increase this. DB is committed to reducing its carbon footprint and aims to reduce CO2 emissions by 50% by 2030. It already achieved a 25% reduction in 2016¹⁷. Germany has also rolled out the first hydrogen train¹⁸.

Contract attractiveness

Public service contracts (PSCs) – or franchises – are handled by 27 regional authorities in Germany. The regions often tender their services in different packages: service contracts have different contractual forms and different degrees of service specification. They also vary with respect to contract duration and network size, ranging from single lines up to whole regional network bundles, and between gross and net cost contracts. Contract duration varies considerably and ranges between two and 20 years, with a mean of 10.6 during the period from 1996 to 2014¹⁹. A 2016 report showed a tendency of a declining percentage of net contracts with 98% in 1996 to 95% in 2003 and 72% in 2014²⁰. Transport agreements do not entail any exclusivity so that in principle, open access is also possible²¹.

In 2017, the National Express Group CEO, Dean Finch, highlighted how much more attractive the PSCs in Germany were than franchises in Great Britain. Finch has said:

“German contracts are smaller and lower risk than UK franchises, with relatively low capital investment required. Germany also provides ‘an emerging opportunity for entry in to other, complementary markets nearby’”

Finch also said that the costs of bidding for the competitive tenders are also a lot lower in Germany²².

Weaknesses

Barriers to real competition

There are many reasons why, despite having *de jure* competition, *de facto* competition is more challenging in Germany.

The holding structure hampers competition. Independent research found, “the companies belonging to the concern are not completely independent due to their holding company

¹⁶ RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

¹⁷ Clean Energy Wire, <https://www.cleanenergywire.org/news/german-rail-ratchets-climate-ambition-morals-climate-policy/german-rail-company-ratchets-climate-ambition-ahead-un-climate-conference>

¹⁸ The Guardian, <https://www.theguardian.com/environment/2018/sep/17/germany-launches-worlds-first-hydrogen-powered-train>

¹⁹ CERRE, https://www.cerre.eu/sites/cerre/files/161206_CERRE_PassRailComp_CaseStudy_Germany.pdf

²⁰ CERRE, https://www.cerre.eu/sites/cerre/files/161206_CERRE_PassRailComp_CaseStudy_Germany.pdf

²¹ House of Commons Library, CBP 7992

²² Railway Gazette, <https://www.railwaygazette.com/news/single-view/view/german-contracts-more-attractive-than-uk-franchises-says-national-express-ceo.html>

implementing control and maintenance rights and duties with regard to their subsidiaries”²³. Some critics go further:

“[t]he holding structure of Deutsche Bahn is very labyrinthine, which makes it difficult to monitor flow of cost items. This results in a possibility to transfer costs and revenues within companies inside the holding in such a way, that besides affiliated companies, increased expenses would be borne by competitors, too, whilst expenses would be made equal with corresponding revenues internally, within the holding structure. This mechanism thus leads to a raise of competitors’ operational costs and does not reflect itself in aggregate account balance of the holding.”²⁴

Despite the contracts being relatively attractive, DB’s passenger arm still runs 88% of regional train km²⁵. On long distance routes it’s 99%²⁶. Indeed, in 2015 Germany’s Monopolies Commission criticised the structure and said DB “continued to hamper competitors in no small way.”²⁷ The Commission recommended that DB vertically separated in order to realise the benefits competition can bring. More recently the German Federal Cartel Office has called for greater competition, particularly on long-distance routes²⁸.

Tender challenges by DB are also commonplace when they do not win passenger contracts. For example, the Hannover suburban railway contract was awarded to Transdev in May 2018 but put on hold to November 2018 as DB appealed the decision by the Lower Saxony Transport Authority and the Westphalia-Lippe Local Transport Group²⁹. This slows the process and incumbent advantage makes the process costlier and less attractive for new entrants.

There is no through or interavailable ticketing system in Germany. New entrants argue that this gives the incumbent an unfair advantage, not only in brand recognition but also as competitors have to find space for a separate ticket office and vending machines³⁰.

Finally, according to the European Commission there are also issues with the national safety agency (NSA) not being fully independent and holding up authorisations. It identifies the process of granting safety certificates as expensive and time-consuming (for new entrants)³¹.

There are also unofficial reports of anti-competitive behaviours by DB Netz such as prioritising DB and DB Cargo services and preventing access to essential service facilities. However, these go largely unreported as new entrants do not have the time or ability to complain or fear this may hamper their future bids.

All of this considered, new entrants are getting a foothold and more competitive services are being introduced.

²³ The Models of Management of Railway Companies in the European Union: Holding, the German Experience, https://ac.els-cdn.com/S187770581600045X/1-s2.0-S187770581600045X-main.pdf?_tid=ff9d3698-a76e-45fb-b513-d7d33d586bc2&acdnat=1544009733_65dff1165ebd1345e79636fd0099a3a0

²⁴ Review of Economic perspectives, https://is.muni.cz/do/econ/soubory/aktivity/obzor/6182612/47540864/2014_1_2_Nigrin.pdf

²⁵ House of Commons Library, CBP 7992

²⁶ CERRE, https://www.cerre.eu/sites/cerre/files/161206_CERRE_PassRailComp_CaseStudy_Germany.pdf

²⁷ DW, <https://www.dw.com/en/deutsche-bahn-structure-hampers-fair-competition/a-18603211>

²⁸ Bahnblogstelle, <https://bahnblogstelle.net/2018/06/06/kartellamtschef-will-mehr-wettbewerb-im-schienerfernverkehr/>

²⁹ Rail Journal, <https://www.railjournal.com/passenger/commuter-rail/north-west-rail-wins-hannover-s-bahn-contract/#.W-QwyxEz-MU.twitter>

³⁰ Transdev, <https://www.transdev.de/de/neuigkeiten/fairen-wettbewerb-auch-beim-fahrkartenvertrieb-transdev-fordert-im-sinnde-fahrgaeste-das-recht-alle-bahntickets-ohne-einschraenkungen-verkaufen-zu-duerfen>

³¹ European Commission, <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2012-06-ia-support-study-era-appendix-a.pdf>

Long distance punctuality

Only 74% of long-distance trains in Germany arrive within 15 minutes of schedule; a 30% increase since 2009³². Some of this has been attributed to a wave of overdue repairs and modernisation of the network and German commuters see around 850 different construction sites around the country. Speed restrictions have also been put in place due to poor rail maintenance³³.

Passenger rights and satisfaction

Passengers have fewer rights in Germany than in GB. The lack of a through ticketing system means that delayed passengers may have to buy a new ticket rather than be accommodated on the next service. Delay repay rates are also significantly less generous in Germany; 25% refund for delays of more than 60 minutes and 50% for more than 120 minutes. In GB, these rates are 20% for 15 minutes, 50% for 30 minutes and 100% for 60 minutes. Furthermore, payments are not made if the incident was not the fault of DB or because of an ‘act of god’ such as poor weather.

Reduced passenger rights may also have an impact on satisfaction. Germans are the least satisfied with their journeys in Europe³⁴. Domestic surveys back this up, with the German equivalent of Transport Focus surveys finding that satisfaction with regional and long-distance journeys was 77% and 68% respectively³⁵. The equivalent scores for British passengers in the same period were 83% and 86% respectively³⁶. Some attribute this weakness to a greater cultural likelihood for Germans to complain; a German National newspaper, identified “whining, bitching and moaning’ as a national pastime!³⁷

Other observations

Ticket prices

Ticket prices are neither a strength nor a weakness. Sometimes they are cheaper than other countries, sometimes more expensive. Peak fares on regional and long-distance lines are cheaper than in GB but off-peak fares are more expensive comparably³⁸.

The “man at seat 61” undertook a brief comparison comparing London to Sheffield with Nuremburg to Kassel with the following results³⁹:

Journey	Pre-booked 1 month ahead 12:00 train	Pre-booked next day 12:00 train	Bought on day, immediate departure off-peak
London to Sheffield	£12.50 on the 12:03, £15 on 11:55, £19 on 12:55	£22 on the 11:55, 12:25; £41 on the 12:55	£69.50 one-way or £70.50 return on all off-peak trains
Nuremburg to Kassel	€35 (£29) on all departures around lunchtime	€73 (£61) on all departures	€73 (£61) on all departures

³² The Economist, <https://www.economist.com/business/2018/06/28/european-state-rail-firms-face-scrappy-new-competitors>

³³ The Guardian, <https://www.theguardian.com/world/2016/jun/11/why-german-trains-dont-run-on-time-any-more>

³⁴ RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

³⁵ City Metric, <https://ib.deutschebahn.com/ib2017/de/konzern-lagebericht/qualitaet/kundenzufriedenheit-entwickelt-sich-stabil.html>

³⁶ Transport Focus Autumn 2017, <http://d3cez36w5wymxi.cloudfront.net/wp-content/uploads/2018/01/29201549/National-Rail-Passenger-Survey---NRPS---Autumn-2017---Main-Report.pdf>

³⁷ Spiegel, <http://www.spiegel.de/international/the-german-national-pastime-whining-bitching-and-moaning-a-417958.html>

³⁸ City Metric, <https://www.citymetric.com/transport/are-german-trains-really-better-british-ones-rail-nationalisation-deutsche-bahn-3972>

³⁹ Man at Seat 61, <https://www.seat61.com/uk-europe-train-fares-comparison.html>

It should be noted that the tickets are more heavily subsidised than in GB, with operators running PSCs receiving €9 per km subsidy as opposed to €2 per km premium in GB⁴⁰.

Potential reform

There is increasing political pressure on DB to reform the railways as its structures are not deemed to be fit for purpose in the context of worsening punctuality and increasing debt⁴¹. Despite DB being a vertically integrated company, politicians have criticised it for being siloed with thinking in “boxes and front gardens”⁴². There have also been strikes as the DB workforce are increasingly discontent about pay⁴³. The situation is developing at the time of writing, but it is highly likely that politicians will push for reform.

Conclusions

Success against the RDG principles

Principle	Commentary
Put customers at the heart ensuring that all parts of the railway, including the supply chain, work together to deliver for customers now and for generations to come	Customers are not satisfied in Germany and do not have strong passenger rights. However, some of the satisfaction levels may be down to cultural propensity to complain. Regional services are punctual but longer distance services are not so. It's a mixed bag.
Increase accountability building on the solid safety record, deliver a structure for the railway that creates confidence in its leadership, improving coordination in the way services are delivered and decisions are taken, and making it clear where the buck stops when things go wrong	DB, in a single holding structure and running 88% of train km provides a board single point of accountability for passengers. However, the lack of through and interavailable ticketing hinders a single offer to the customer.
Deliver value for money managing costs for passengers, freight customers and taxpayers, with a sustainable supply chain	Although not explored in this review DB has been experiencing financial problems, including a reduction in profits and a reduction in investment ⁴⁴ .

⁴⁰ RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

⁴¹ DW, <https://www.dw.com/en/deutsche-bahn-flaws-prompt-calls-for-basic-railway-reform/a-46763372>

⁴² DW, <https://www.dw.com/en/deutsche-bahn-flaws-prompt-calls-for-basic-railway-reform/a-46763372>

⁴³ DW, <https://www.dw.com/en/german-rail-strikes-cause-widespread-delays/a-46648618>

⁴⁴ Verdict, <https://www.verdict.co.uk/deutsche-bahn-investment-cut/>

Rail Delivery Group

Principle	Commentary
<p>Unlock economic growth boosting innovation with private investment enabling the railway to expand; growing and rebalancing Britain's economy, and be environmentally sustainable</p>	<p>There is limited publicly available evidence in this area.</p>
<p>Strengthen communities ensuring communities across the country benefit from a vibrant, growing railway</p>	<p>DB's progress on renewables and environmental focus is positive for communities.</p>
<p>Inspire our people ensuring that people working in rail have fulfilling careers and a greater stake in the railway's long-term success</p>	<p>There is limited publicly available evidence in this area.</p>
<p>Performance</p>	<p>Strong regional performance but poor long-distance performance.</p>
<p>Capacity</p>	<p>There is limited publicly available evidence in this area.</p>
<p>Fares</p>	<p>Comparable with GB although they are subsidised to a greater degree.</p>

Glossary

Abbreviation	Definition
BN	Billion
CEO	Chief Executive Officer
CO2	Carbon Dioxide
DB	Deutsche Bahn
ECML	East Coast Mainline
EU	European Union
FS	Ferrovie dello Stato (Italian National Railways)
GB	Great Britain
GMP	Gross Metropolitan Product
GWML	Great Western Mainline
ICE	InterCity Express (German high speed trains)
KM	Kilometres
MML	Midland Mainline
NI	Northern Ireland
NSA	National Safety Authority
NTV	Nuovo Trasporto Viaggiatori (Italian passenger operator)
PSC	Public Service Contract
PSO	Public Service Obligations
RDG	Rail Delivery Group
SBB	Schweizerische Bundesbahnen (Swiss Federal Railways)
SNCF	Société Nationale des Chemins de fer Français (French National Railways)
UK	United Kingdom
WCML	West Coast Mainline