

Rail Delivery Group



Country Profiles – Sweden

The Williams Rail Review

21st December 2018

Author – Rail Delivery Group

Submitting to the Williams Rail Review, rail.review@dft.gov.uk

As part of a series of comparative studies of international rail systems, this document profiles railways in Sweden. The document outlines how rail services are delivered in Sweden 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).

This document was produced by Rail Delivery Group.

All material is property of Rail Delivery Group Ltd.

Rail Delivery Group is a membership organisation representing rail companies operating in Britain, this includes; Network Rail, train operating companies, freight operating companies and other infrastructure companies. For more information about Rail Delivery Group and its members please visit www.raildeliverygroup.com.

This document is part of RDG policy development and contains commercial and industrial information. If you would like to share this document wider than the original distribution list or is requested under the Freedom of Information Act please contact Richard Evans, richard.evans@raildeliverygroup.com

Executive summary

Swedish railways were liberalised more than 25 years ago with the first government policy signalling deregulation coming in 1988. Railway companies compete for market access and a number of other functions in the sector have also been subject to competition¹. In 1996 the rail freight market was deregulated.

There is a vertically separated system with a mix of competitive tendering of franchises and open access. There is still a government-owned passenger operator and freight operator, however these must compete on a level playing field with private new entrants. This competition is assured by strong vertical separation rather than a holding company model.

There are many advantages to the Swedish system, and it is often regarded as highly successful. This may be because the system is very balanced. The public sector is balanced by private sector competition, the use of specified public service contracts is balanced by highly commercial open access, and the role of the regions is balanced with that of central government.

Contextual considerations

There are some contextual considerations to be taken into account when comparing Sweden with Great Britain (GB):

- Sweden has experienced a significant increase in population since 2005 when the population growth was 0.35%.² The peak of this growth took place in 2015 when annual population growth reached 0.78%. This has meant an increase from just over 9m to 10m in the aforementioned period, or approximately a total increase of 10% in 10 years³.
- Flat woodland and low population density mean that it is easier for Swedish railways' development. Research by the EU Commission has noted that the growth of the Swedish rail network has been aided in part by the characteristics of its geography.⁴
- Temperatures in Sweden can be very low. The average temperature in February ranges from -22 degrees C in the north to -3 degrees C in the South. Snow can be on the ground for as much as six months of the year. These conditions create operational challenges.
- Taxes are higher in Sweden so there may be a more general acceptance of public subsidy⁵.
- Fully-fledged competition is in the relative early days where the immediate gains are largest.

Conclusions

We would offer the following observations from the Swedish model:

- Balancing interests and models have been successful in Sweden.
- High levels of subsidy mean that fares are low in Sweden. This policy is largely associated with wanting to encourage modal shift to rail on environmental grounds.
- Open access competition is widely regarded as successful in Sweden and pushed down prices further on intercity routes.

¹ Swedish Government, P1, <http://www.sou.gov.se/wp-content/uploads/2014/11/0ee17288.pdf>

² <http://www.worldometers.info/world-population/sweden-population/>

³ <http://worldpopulationreview.com/countries/sweden-population/>

⁴ P34: <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2015-09-study-on-the-cost-and-contribution-of-the-rail-sector.pdf>

⁵ OECD, <http://www.oecd.org/tax/workers-in-oecd-countries-pay-one-quarter-of-wages-in-taxes.htm>

Rail Delivery Group

- A strong role for regions has meant that public service contracts meet regional needs and have resulted in growth, it also means that non-cost covering services can be negotiated into open access operations.
- Vertical separation has meant that even though there is a state incumbent, new entrants in both the freight and passenger market have been able to thrive, bringing with them the associated benefits of competition.
- Sweden finds a good balance of public and private involvement; private sector competition has kept the public-sector operator competitive.

Contents

Introduction to international comparators	5
RDG's Approach to the Williams Rail Review	5
Introduction to Swedish railways.....	8
Swedish rail in numbers	11
Context	11
Strengths	12
Open access hybrid system	12
Capacity and track utilisation.....	13
Growth	14
New entrants.....	15
Weaknesses.....	15
Performance during poor weather	15
Other observations	16
Fares and subsidy.....	16
Low track access charges	16
Conclusions.....	18
Success against the RDG principles	18
Glossary	19

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 Williams 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 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

Rail Delivery Group

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.

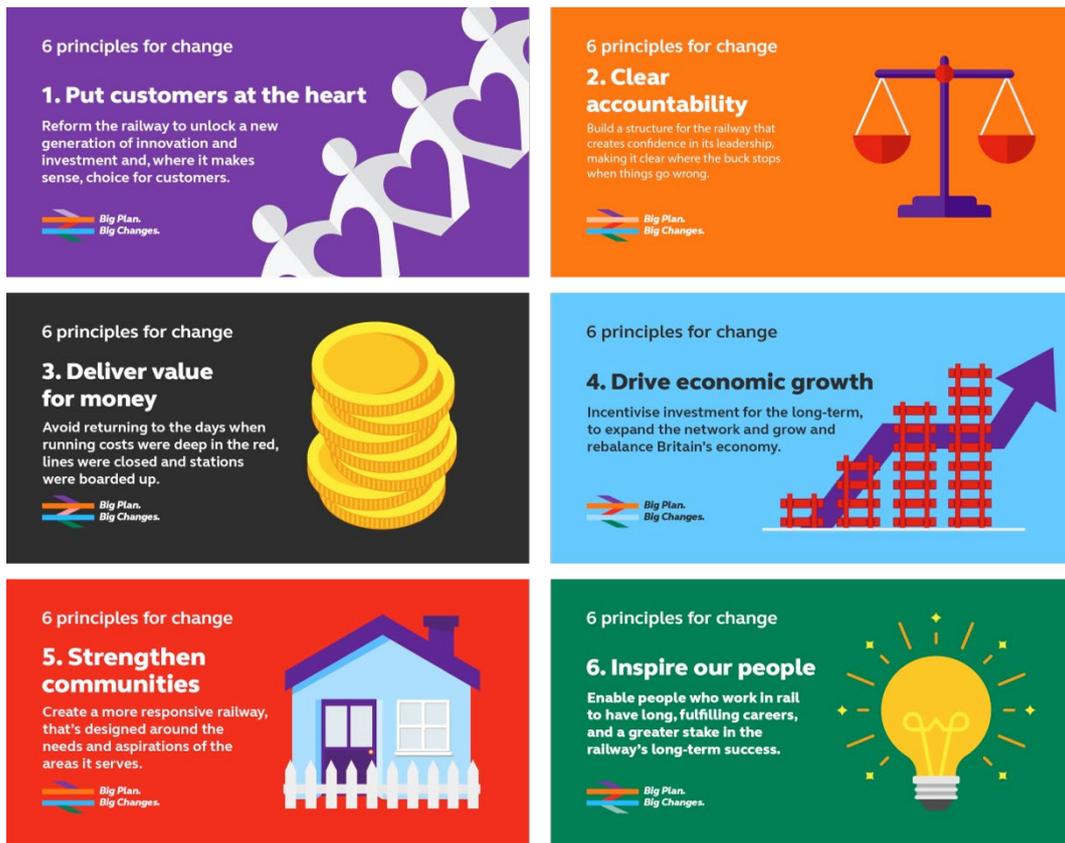
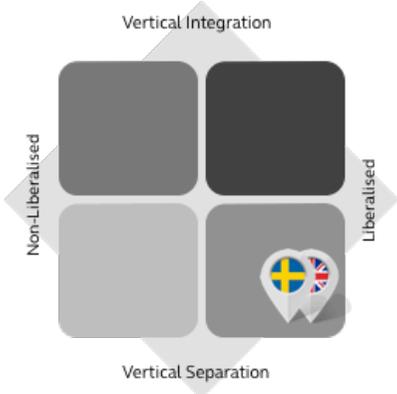


Figure 1, RDG's six principles

-  **Population:** 9.995m
-  **Network:** 10,881km
-  **% Network Electrified:** 75.2%
-  **Passenger modal share:** (9.3%)
-  **Freight modal share:** 29.4%
-  **Regional punctuality:** 92.5%
-  **Long distance punctuality:** 89%
-  **Passengers killed in last five years:** 0



- Geography**
- Sweden is flat making network development easier.
- Population**
- The population of Sweden has grown but there is low population density.
- Stage in deregulation**
- Fully-fledged competition is in the relative early days where the gains are largest, there may be some diminishing returns in the future.

factors that enable

Weaknesses

Sweden

Strengths

factors that contribute to

- Climate**
- Temperatures in Sweden can be very low. The average temperature in February ranges from -22 degrees C in the north to -3 degrees C in the South. Snow can be on the ground for as much as six months of the year.



- Open access hybrid system
- Capacity
- Growth
- New entrants

Introduction to Swedish railways

Swedish railways were liberalised more than 25 years ago with the first government policy signalling deregulation coming in 1988. Railway companies compete for market access and a number of other functions in the sector have also been subject to competition⁶. In 1996 the rail freight market was deregulated. The system is vertically separated and is shown below.

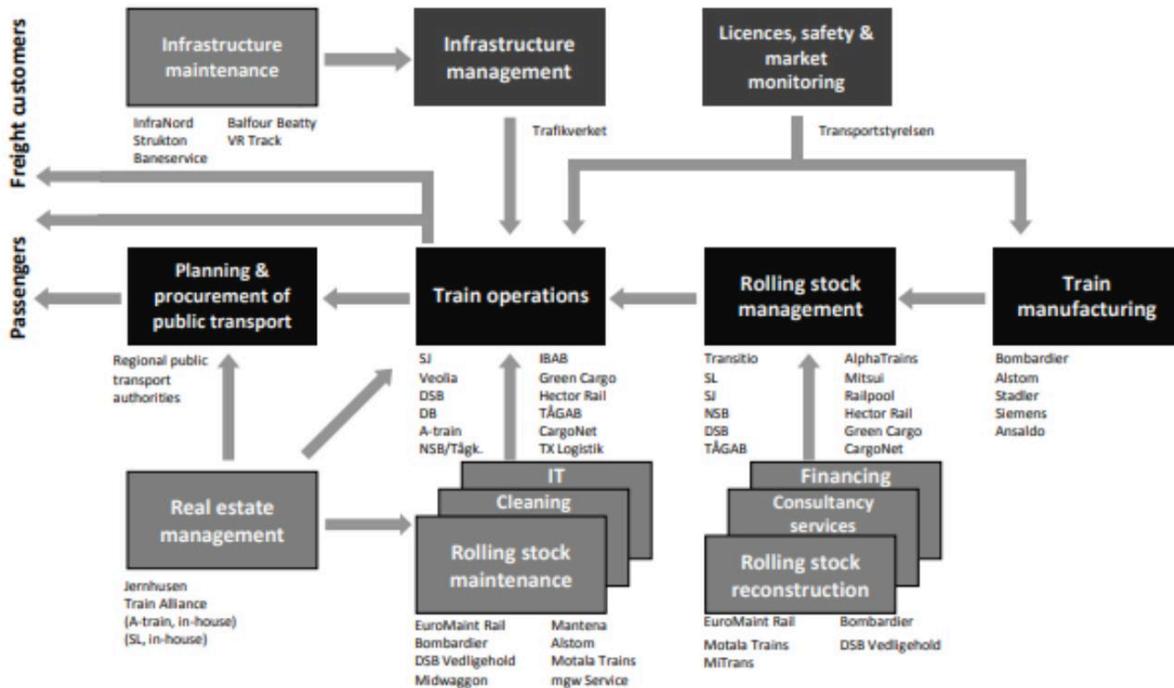


Figure 2, Organisation of Swedish Railways⁷

Trafikverket is the state-owned infrastructure manager and is responsible not only for Sweden's railways but also its roads. It is also partially responsible for sea and air transport. One of Trafikverket's primary functions today is planning the construction and maintenance of rail infrastructure, while the actual work is carried out by contractors. The functions were previously held in-house but were divested in 2010. Stations and property are managed by Jernhusen. Jernhusen is wholly owned by the Swedish Government.

There is a state-run passenger operator, SJ, however it must compete via tenders or open access. The last direct award to SJ finished in 2011⁸. Franchising decisions are made on a country or regional authority basis by Public Transport Agencies (PTAs). These contracts last for between four and 11 years and most contracts have extension clauses and gross cost contracts are common⁹.

Just under 50% of Sweden's passenger km are part of a franchise or public service contract (PSC)¹⁰. SJ runs 60% of the country's passenger km which are under a PSC and only 11% of its 'commercial' services¹¹.

⁶ Swedish Government, P1, <http://www.sou.gov.se/wp-content/uploads/2014/11/0ee17288.pdf>

⁷ Swedish Government, <http://www.sou.gov.se/wp-content/uploads/2014/11/0ee17288.pdf>

⁸ Swedish Government, P2 <http://www.sou.gov.se/wp-content/uploads/2014/11/0ee17288.pdf>

⁹ CERRE, https://www.cerre.eu/sites/cerre/files/161206_CERRE_PassRailComp_CaseStudy_Sweden.pdf

¹⁰ EU Transport Statistical Pocketbook, <https://ec.europa.eu/transport/sites/transport/files/pocketbook2018.pdf>

¹¹ EU Transport Statistical Pocketbook, <https://ec.europa.eu/transport/sites/transport/files/pocketbook2018.pdf>

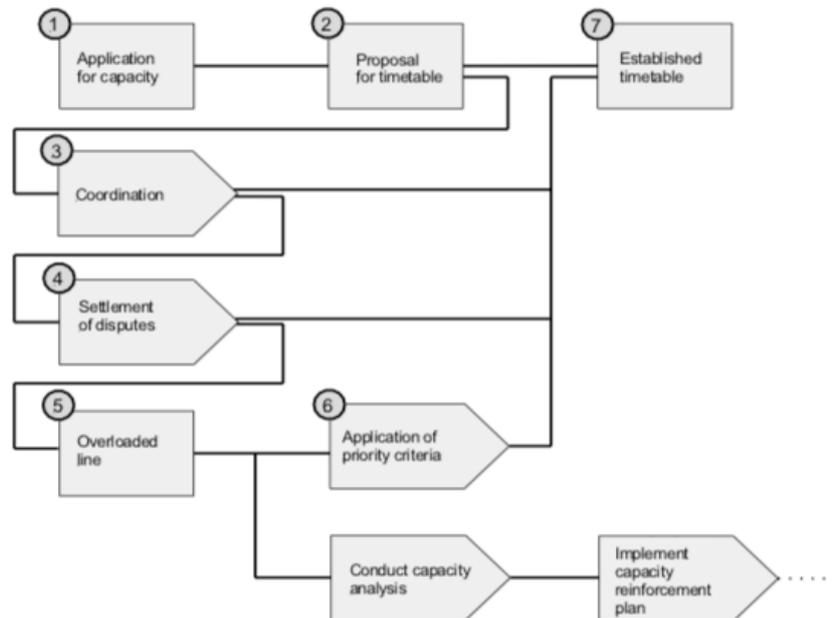


Figure 3, Path allocation process¹²

There are more than 20 freight operator licences held in Sweden. Originally freight was a state monopoly. However, this was deregulated in 1996 with the State incumbent still operating but as Green Cargo. For freight services, the share of the entrants in Sweden has gradually grown from about 21% to 28% between 2000 and 2010¹³.

Swedish railways have set up an association- similar in some respects to RDG. Tågoperatörerna (commonly known as the Association of Swedish Train Operating Companies or ASTOC in English) has the following mission statement:

“to meet the need for a strong trade association representing commercial railway undertakings active in Sweden, thereby actively promoting interests common to commercial railway services in respect of transport policy and infrastructure in matters related to the Swedish Government and Parliament, public authorities, other principals, the media and other interested parties, both national and international.”¹⁴

ASTOC has a range of passenger and freight members as well as other parties with a commercial interest in the railways such as ticket vendors.

¹² Trafikverket, https://www.trafikverket.se/contentassets/22ed43b4ca874899a2ca5fe777f4e693/ns_2018_rev_20170119.pdf

¹³ Rail liberalisation in Sweden. Policy development in a European context, <https://www.sciencedirect.com/science/article/pii/S2210539512000971>

¹⁴ <https://www.tagoperatorerna.se/in-english/>

List of Swedish operators:

- Nobina Sverige AB
- Grenland Rail
- Transdev Sverige AB
- Tågåkeriet i Bergslagen AB
- Tågfrakt AB
- Svensk Tågkraft AB
- Svenska Tågkompaniet AB
- Real Rail Sweden AB
- MTR Nordic AB
- LKAB Malmtrafik AB
- Keolis Sverige AB
- Inlandsbanan AB
- Hector Rail AB
- DB Cargo Scandinavia
- Nordiska Tåg AB
- DVVJ Stiftelsen Dal-Västra Värmlands Järnväg
- CFL Cargo
- CargoNet AS
- Skandinaviska Jernbanor AB
- Baneservice Skandinavia AB
- Arriva
- A-Train AB
- Captrain

Swedish rail in numbers

Comparator ¹⁵ unless noted otherwise	Sweden	UK*
Population (million) 2017	9.995	65.809
GDP (Nominal) bn € 2016	465.2	2395.8
Network Employees (UK includes direct supply chain)	8,900	240,000
Network KM (electrified %) 2016	10,881km (75.2)	16,253km (33.7)
Passenger km per year 2016 (modal share)	12.8bn (9.3%)	68bn (8.7%)
Number of stations	563	2317 ¹⁶
Regional and local punctuality % on time ¹⁷	92.5% (5 minutes)	89.7% (5 minutes)
Long distance punctuality % on time ¹⁸	89% (up to 15 minutes)	91% (10 minutes)
High and Good Satisfaction % ¹⁹	56%	75%
Freight tonne km per year 2016 (modal share)	21.4bn (29.4%)	17.1bn (4.7%)
All train km (% passenger/freight) ²⁰	157.7 (77/23)	565.6 (94/6)
Infrastructure investment €bn (enhancements) ²¹	2164 (54%)	9018 (41%)
Maintenance and enhancement spend thousand € per km	90	327
% Farebox revenue ²²	52%	92%
Passengers killed in railway accidents 2013, 2014, 2015, 2016	0,0,0,0	0, 0, 0, 0

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

Context

There are some contextual considerations to be taken into account when reading the strengths and weaknesses outlined below.

- Sweden has experienced a significant increase in population since 2005 when the population growth was 0.35%.²³ The peak of this growth took place in 2015 when annual population growth reached 0.78%. This has meant an increase from just over 9m to 10m in the aforementioned period, or approximately a total increase of 10% in 10 years²⁴.

¹⁵ EU Transport Statistical Pocketbook, <https://ec.europa.eu/transport/sites/transport/files/pocketbook2018.pdf>

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

¹⁷ RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

¹⁸ RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

¹⁹ RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

²⁰ 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

²¹ RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

²² RMMS 2016, https://ec.europa.eu/transport/modes/rail/market/market_monitoring_en

²³ <http://www.worldometers.info/world-population/sweden-population/>

²⁴ <http://worldpopulationreview.com/countries/sweden-population/>

- Flat woodland and low population density mean that it is easier for Swedish railways development. Research by the EU Commission has noted that the growth of the Swedish rail network has been aided in part by the characteristics of its geography.²⁵
- Temperatures in Sweden can be very low. The average temperature in February ranges from -22 degrees C in the north to -3 degrees C in the South. Snow can be on the ground for as much as six months of the year.
- Taxes are higher in Sweden so there may be a more general acceptance of public subsidy²⁶.
- Fully-fledged competition is in the relative early days where the gains are largest, there may be some diminishing returns in the future.

Strengths

Open access hybrid system

Sweden's rail market has been open to open access operators since 2009 – up until then, state incumbent SJ operated commercial train services under a monopoly franchise. Open access operators entered the market from there on in, with weekend services between Stockholm and Malmo operated by Transdev starting in 2010 (which later extended to include weekdays)²⁷.

Open access operators currently compete on the three main long-distance routes (Stockholm-Gothenburg-Malmo). Only 2% of the long-distance market is served by PSCs (supporting subsidised operations), with open access operators able to increase their market shares²⁸. The strategy of open access operators has tended towards a slower and cheaper offer than the incumbent SJ, also providing more stops.

The Swedish model allows for flexibility. PSCs and commercial open access services aside, there also exists a hybrid contractual arrangement in which commercial open access operators agree with regional public authorities to provide some public service obligations (PSOs).

A regional PTA may not always be willing or able to plan and supply a complete passenger train service of its own, regardless of how it is subsequently procured. Instead it may seek to reach an agreement with a commercial operator of a (usually) long-distance line running through its region. Such an agreement may include extra stops in localities which otherwise would not be served or only served with limited frequency. Alternatively, or in addition, the agreement could make the commercial operator accept a PTA-issued travel card as a valid ticket on certain trains and for certain origin-destinations.

Before the widespread development of PTA-planned railway services in the 1990s and onwards, these kinds of arrangements were much more common than today, but they still exist and can have an important role in Sweden avoiding excessive costs for subsidised services which could otherwise also have undermined some commercial initiatives. Most of these agreements have been the result of bilateral negotiations rather than tenders. More recently some PTAs have made efforts to arrange tender-like procedures for this, and for some tendered services, typically where the compensation is based on net costs rather than gross costs, the contract may include conditions similar to the hybrid arrangements.

²⁵ P34: <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2015-09-study-on-the-cost-and-contribution-of-the-rail-sector.pdf>

²⁶ OECD, <http://www.oecd.org/tax/workers-in-oecd-countries-pay-one-quarter-of-wages-in-taxes.htm>

²⁷ Page 12 http://www.cerre.eu/sites/cerre/files/161206_CERRE_PassRailComp_CaseStudy_Sweden.pdf

²⁸ CMA report, https://assets.publishing.service.gov.uk/media/56ddc41aed915d03760000d/Competition_in_passenger_rail_services_in_Great_Britain.pdf

Intercity open access operations in Sweden have been a success. Significant efficiency gains have been unlocked due to the liberalisation of the Swedish rail sector²⁹. Benefits have also been evident for passengers who have seen a reduction in fares. Note that further investigation would be required to determine to what extent fare reductions were possible due to efficiency gains as opposed to competing away any monopoly rents of the incumbent.

The introduction of services between Gothenburg and Stockholm by MTR Express has led to a reduction in fares for consumers due to the competition by MTR and its incumbent, SJ.³⁰ For example, the cheapest on-the-day ticket for an MTR train was approximately half that of SJ.³¹ The introduction of competition between MTR and SJ was the first case study of competition on one of the core services provided by the incumbent, SJ.³² In light of this, SJ reduced its prices by 13% on average between March 2015-June 2016.³³ All the while, the Stockholm-Gothenburg route (lasting approx. 3 hours) on which they compete is widely perceived to be highly profitable³⁴.

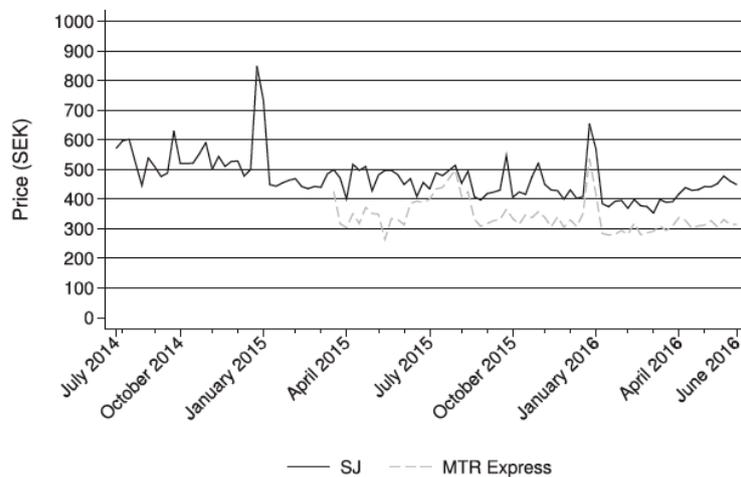


Fig. 2. The weekly average prices of SJ and MTR, ranging from June 2014 to June 2016. 1 SEK \approx 0.1€.

Source: sj.se and mtrexpress.se, compiled by the author.

Figure 4, SJ and MTR prices on Gothenburg Route³⁵

Capacity and track utilisation

Sweden reports a significantly higher level of satisfaction with the availability of seats on trains than the EU average with 78% being 'totally satisfied' compared to the EU average of 68%.³⁶ This may be due to the sparse population relative to the surface area as well as the relative lack of urbanisation compared to European counterparts.³⁷

Although Sweden is more sparsely populated than many of its European counterparts, academics note that the track utilisation rates are higher than expected.³⁸ Researchers attribute this to geographical

²⁹ P82: <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2015-09-study-on-the-cost-and-contribution-of-the-rail-sector.pdf>

³⁰ P113: <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2016-04-price-quality-rail-pax-services-final-report.pdf>

³¹ P115: <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2016-04-price-quality-rail-pax-services-final-report.pdf>

³² P12: https://www.cerre.eu/sites/cerre/files/161206_CERRE_PassRailComp_CaseStudy_Sweden.pdf

³³ P12: https://www.cerre.eu/sites/cerre/files/161206_CERRE_PassRailComp_CaseStudy_Sweden.pdf

³⁴ Page 13 http://www.cerre.eu/sites/cerre/files/161206_CERRE_PassRailComp_CaseStudy_Sweden.pdf

³⁵ Competition in Swedish passenger railway: Entry in an open access market and its effect on prices, <https://www.sciencedirect.com/science/article/abs/pii/S2212012217300977>

³⁶ P2 Factsheet: <http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/survey/getsurveydetail/instruments/flash/surveyky/2172>

³⁷ P34: <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2015-09-study-on-the-cost-and-contribution-of-the-rail-sector.pdf>

³⁸ P34: <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2015-09-study-on-the-cost-and-contribution-of-the-rail-sector.pdf>

characteristics and the relatively high use of single-track infrastructure. Moreover, the Swedish Railway network is generally focused on linking urban centres and do not serve the sparsely populated northern regions. The trade-off here is that while Sweden may achieve surprisingly high levels of track utilisation, it is done at the expense of connectivity in the Northern parts of Sweden.

Growth

Sweden has been one of the Western-European countries which have seen the most significant increase in train kilometres with a more than 15% increase between 2007-2012³⁹ and 3.6% in year 2015/16⁴⁰. Growth is forecast to continue⁴¹.

Swedish growth is in part due to major infrastructure enhancements⁴². Sweden has doubled the amount of infrastructure investment during the past decade⁴³. One such major infrastructure enhancement is the Olskroken project⁴⁴. The Olskroken project will create an underground rail service running beneath Gothenburg, the second largest Swedish city.

Some growth is attributed to an expansion of regional traffic following the decentralisation of responsibility to regional transport authority in the late 1980s. The rollout of faster and more convenient train services between the major cities is another contributing factor⁴⁵.

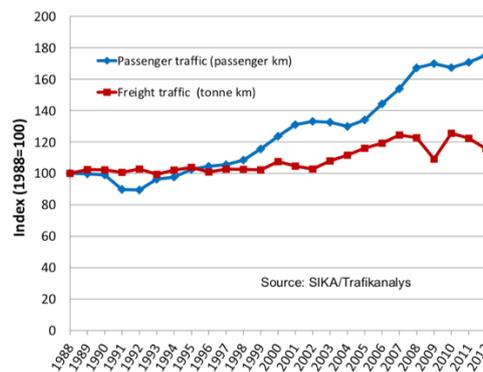


Figure 5, Passenger and freight growth trends⁴⁶

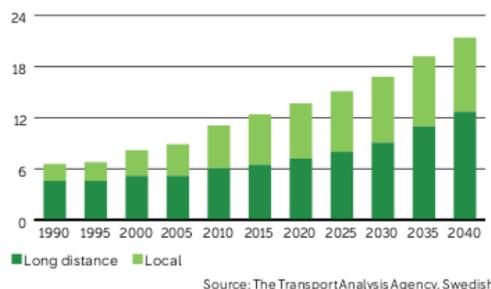


Figure 6, Projected Growth (passenger)⁴⁷

³⁹ P14: <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2015-09-study-on-the-cost-and-contribution-of-the-rail-sector.pdf>

⁴⁰ European Commission, <https://ec.europa.eu/eurostat/statistics-explained/pdfscache/7066.pdf>

⁴¹ Rail Journal, https://www.railjournal.com/in_depth/sj-builds-on-domestic-growth-with-international-ambitions

⁴² P14: <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2015-09-study-on-the-cost-and-contribution-of-the-rail-sector.pdf>

⁴³ Rail liberalisation in Sweden. Policy development in a European context, <https://www.sciencedirect.com/science/article/pii/S2210539512000971>

⁴⁴ <https://www.trafikverket.se/contentassets/46d201b089d842efb233daeb43eb2aba/infolder-eng-vastlanken-och-olskroken.pdf>

⁴⁵ Rail liberalisation in Sweden. Policy development in a European context, <https://www.sciencedirect.com/science/article/pii/S2210539512000971>

⁴⁶ <http://www.sou.gov.se/wp-content/uploads/2014/11/17f8b36f.pdf>

⁴⁷ SJ, <https://www.sj.se/content/dam/SJ/pdf/Års-och-hållbarhetsredovisningar/Engelska/SJ%20Annual%20and%20Sustainability%20Report%202017.pdf>

New entrants

Although a strong state incumbent remains in Sweden new entrants have been able to access the market to contribute to the growth. SJ runs 60% of the country's passenger km which are under a PSC and only 11% of its 'commercial' services⁴⁸. For freight services, the share of the entrants in Sweden has gradually grown from about 21% to 28% between 2000 and 2010⁴⁹.

It is interesting to contrast this with Germany which, in many respects has a similar set up of regional PSCs and longer distance open access but have not achieved the same balance of state-owned and private operators. German state operator Deutsche Bahn's (DB) passenger arm still runs 88% of regional train km⁵⁰ and on long-distance routes it's 99%⁵¹. In freight, DB cargo has approximately 72% market share⁵².

Sweden's success is often attributed to strong vertical separation with SJ being completely independent from Trafikverket; they are even headquartered in different cities. This separation means SJ- whilst inevitably having an incumbent advantage- has no preferential treatment, direct or indirect, by the infrastructure manager.

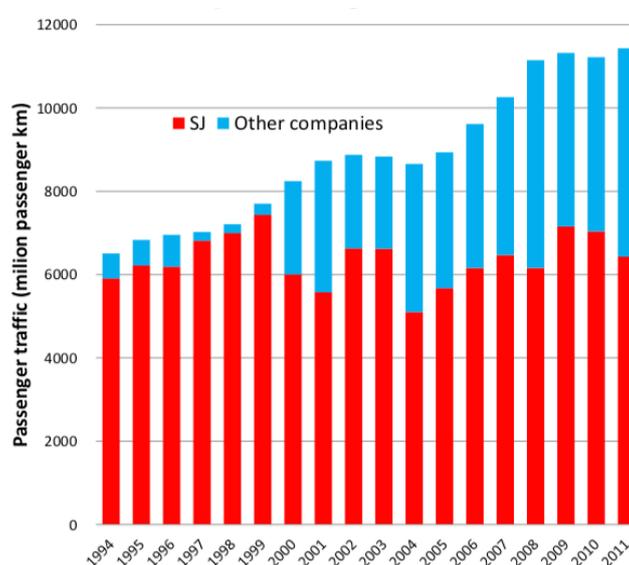


Figure 7, New Entrants to the passenger market⁵³

SJ notes in their annual report that they welcome competition as it is: “good for society, customers and the industry, since wider offerings and free competition drive market growth and force us, as operators, to be even more customer- focused and competitive.”⁵⁴

Weaknesses

Performance during poor weather

The harsh weather in Sweden can disrupt services. Particular attention was paid to the winters 2009-10 and 2010-11 which highlighted the sensitivity of the infrastructure and the lack of specialised snow removal

⁴⁸ EU Transport Statistical Pocketbook, <https://ec.europa.eu/transport/sites/transport/files/pocketbook2018.pdf>

⁴⁹ Rail liberalisation in Sweden. Policy development in a European context, <https://www.sciencedirect.com/science/article/pii/S2210539512000971>

⁵⁰ House of Commons Library, CBP 7992

⁵¹ CERRE, https://www.cerre.eu/sites/cerre/files/161206_CERRE_PassRailComp_CaseStudy_Germany.pdf

⁵² European Commission, <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2012-06-ia-support-study-era-appendix-a.pdf>
<http://www.sou.gov.se/wp-content/uploads/2014/11/17f8b36f.pdf>

⁵⁴ SJ, <https://www.sj.se/content/dam/SJ/pdf/Arsoch-hallbarhetsredovisningar/Engelska/SJ%20Annual%20and%20Sustainability%20Report%202017.pdf>

equipment.⁵⁵ This also brought into the open the lack and quality of information provided to customers during the disruption. The consequence of these winters sparked a number of initiatives focused on increasing grants to Trafikverket and improving the readiness for harsh winters by focusing on maintenance and reinvestment.⁵⁶

Additionally, Swedes report significantly lower satisfaction scores for punctuality and reliability than the average European customer with only 49% expressing ‘total satisfaction’ compared to the EU average of 59%.⁵⁷

Other observations

The issues included in this section are neither strengths or weaknesses as they represent policy choices where the outcome would be considered differently depending on whether the trade-off is considered as worth it.

Fares and subsidy

One might expect that fares increase in high-income Western European countries; however, Sweden is a notable exception to this.⁵⁸ Fares in Sweden are roughly half those in its neighbouring countries, Denmark and Finland, however this is in part due to higher levels of subsidy.⁵⁹ The trade-off from higher levels of subsidy is that taxpayers are subsidizing the usage of rail users.

The high focus on linking urban centres combined with higher levels of tax subsidy means the people living in the relatively poorly connected northern parts of Sweden are effectively financing the transport of the urban Swedes that use rail services to a greater extent.⁶⁰ This is a policy decision.

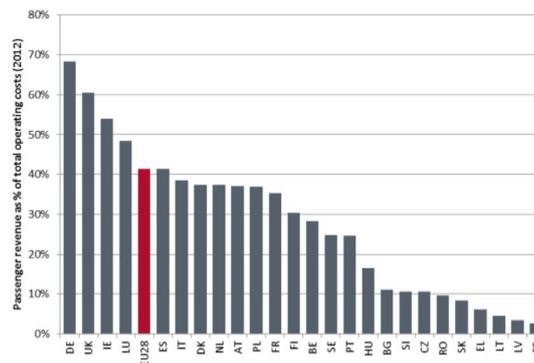


Figure 8, Passenger rail revenue as a proportion of total rail operating costs⁶¹

Low track access charges

Some of this subsidy is effectively made to both passenger and freight operators through low track access charges in Sweden- again a policy choice.

⁵⁵ P5: <http://www.sou.gov.se/wp-content/uploads/2014/11/0ee17288.pdf>

⁵⁶ P5: <http://www.sou.gov.se/wp-content/uploads/2014/11/0ee17288.pdf>

⁵⁷ Swedish Factsheet P2: <http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/survey/getsurveydetail/instruments/flash/surveyky/2172>

⁵⁸ P18: <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2015-09-study-on-the-cost-and-contribution-of-the-rail-sector.pdf>

⁵⁹ P18: <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2015-09-study-on-the-cost-and-contribution-of-the-rail-sector.pdf>

⁶⁰ P34: <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2015-09-study-on-the-cost-and-contribution-of-the-rail-sector.pdf>

⁶¹ P34: <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2015-09-study-on-the-cost-and-contribution-of-the-rail-sector.pdf>

The infrastructure charges in Sweden are considered too low to cover the marginal cost of running services on the network.⁶² Many infrastructure costs are common costs and are not allocated to passenger or freight services based on usage.⁶³

This policy decision in Sweden was an environmental one to encourage modal shift and to compensate for challenging geography⁶⁴.

However, track access charges have doubled in the five years to 2018⁶⁵. In addition, Trafikverket has indicated that they aim for track access charges to reach an equal level to the marginal cost of operations, maintenance, and investment⁶⁶.

⁶² P24: <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2016-04-price-quality-rail-pax-services-final-report.pdf>

⁶³ P24: <https://ec.europa.eu/transport/sites/transport/files/modes/rail/studies/doc/2016-04-price-quality-rail-pax-services-final-report.pdf>

⁶⁴ Rail liberalisation in Sweden. Policy development in a European context, <https://www.sciencedirect.com/science/article/pii/S2210539512000971>

⁶⁵ The Swedish railway freight sector and opportunities for cooperation between Latvian and Swedish transit and logistics industry, <https://www.ldz.lv/sites/default/files/Westerberg%20ASTOC%2011-09-2018.Final.pdf>

⁶⁶ Track access charges for increased customer and societal benefit, https://www.trafikverket.se/contentassets/12630001dc90456ebd48649333a8b978/2014/banavgifter_slutrapport_publ_2014_074.pdf

Conclusions

Success against the RDG principles

Principle	Commentary
<p>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</p>	<p>Customers have high satisfaction for some measures and low for others. Customers are able to get a seat and are very satisfied about that.</p>
<p>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</p>	<p>There is insufficient public evidence to draw a conclusion.</p>
<p>Deliver value for money managing costs for passengers, freight customers and taxpayers, with a sustainable supply chain</p>	<p>There is an interesting policy discussion to have around the balance of taxpayer and fare payer contribution and for whom this delivers value. Fares however have been significantly reduced as a result of open access competition.</p>
<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>The railway is growing, and freight has a strong modal share. Both of these factors are linked to economic growth.</p>
<p>Strengthen communities ensuring communities across the country benefit from a vibrant, growing railway</p>	<p>Competitively tendered PSCs mean that rural services are still provided, and the role of the PTAs has ensured this. The focus on modal shift has been positive for the environment.</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 evidence on employee satisfaction.</p>
<p>Performance</p>	<p>Average regional performance is very good and long-distance performance is good. There are some concerns about poor weather performance, but in the context of Sweden's snowfall and temperatures it is understandably challenging.</p>
<p>Capacity</p>	<p>Passengers can often get a seat and the network is not crowded.</p>
<p>Fares</p>	<p>Fares are low. This is partially associated with subsidy and partially competition.</p>

Glossary

Abbreviation	Definition
ASTOC	Association of Swedish Train Operating Companies
BN	Billion
CEO	Chief Executive Officer
DB	Deutsche Bahn
ECML	East Coast Mainline
EU	European Union
GB	Great Britain
GWML	Great Western Mainline
KM	Kilometres
KPH	Kilometres per hour
MML	Midland Mainline
MPH	Miles per hour
NI	Northern Ireland
NTV	Nuovo Trasporto Viaggiatori (Italian passenger operator)
PSC	Public Service Contract
PSO	Public Service Obligations
PTA	Public Transport Authority
RDG	Rail Delivery Group
SJ	Statens Järnvägar (Swedish national passenger operator)
UK	United Kingdom
WCML	West Coast Mainline