

ANNEX 8

CASE STUDY SWEDEN

CASE STUDY – SWEDEN

1. Scope

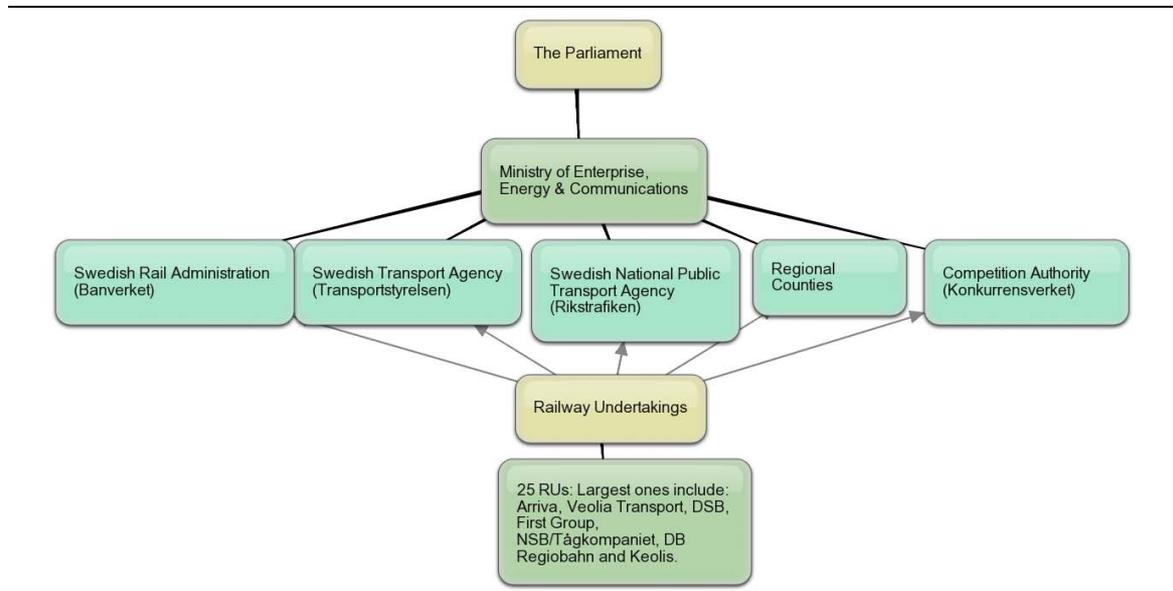
It has been agreed with DG TREN that in view of the fact that that the legislation for the full opening of the Swedish rail passenger market has only recently been enacted that the Swedish Case Study will be more limited in extent and depth than the other three case studies. The primary focus of this paper is therefore on the on the legal and regulatory framework developments which have lead to the current market conditions, rather than outcomes.

2. Regulatory Structure

2.1. Overview of current regulatory structure

Figure 1 below shows the relationship between the major players in the Swedish rail market.

Figure 1. Overview of Swedish Passenger Rail Market



Source: NTU

2.2. History & evolution of regulatory structure

Sweden has chosen to take an incremental approach to market opening, in that several smaller reforms have been introduced over time, with the ultimate goal of full opening of its passenger rail market. Having the distinction of being the first European country to provide a legal framework for passenger rail competition, Sweden has the longest track record of reforms. In 1988, the Transport Policy Act dictated that the state railways were to be divided into two: into an infrastructure manager (Banverket) and a railway undertaking (SJ AB). Funding for Banverket comes mainly from the State (90%), with the remaining 10% coming from fees charged for using the rail infrastructure.

Several years prior to the 1988 Transport Policy Act, SJ had been instructed to change its accounting policies to distinguish between train operations and infrastructure. This paved the way for regional rail transport to be opened up for other RUs. The main reason for reform was to find new ways of financing rail investment and to increase the efficiency of the railway industry through competition. The first attempt for full market opening occurred when the Swedish government attempted to open up the entire railway sector for RUs with the passing of a bill in 1994. This attempt failed when a new government took power in 1995. Instead the newly formed government created legislation that allowed county public transport authorities (CPTA) to operate inter-regional services themselves, procure them from SJ or to tender services out to other RUs. At this time, it also enacted legislation for the deregulation of the rail freight market in 1996.

The CPTAs were originally established in 1979 to manage regional bus networks, but their role has now changed to include passenger rail service as well. CPTAs are responsible for pricing and service levels in their region and they also coordinate activities with other regions via the NPTA. After taking the responsibility for rail service as well, some of the first CPTAs only chose to deal with SJ, while others sought new train operators. This was the start of Sweden's path to deregulation, as new entrants arrived to take advantage of opportunities to provide regional transport services.

Preparation for a full rail market opening continued in 2003 when all rail investment was opened for competition and followed by competitive tendering of maintenance activities in 2006. One year later, charter and special train services were deregulated and this saw Veolia (France) enter the market with special charter tours to the Swedish mountains. In the same year, 2007, several CPTAs were given permission by the government to operate longer distance regional routes, under their own management for a trial period. These services were given tax breaks (40-60%) which some see as undermining the idea that long distance routes should be free of subsidy.

The Swedish incremental approach has led to one of the most open passenger rail markets in Europe. New initiatives, such as the opening up of holiday and weekend traffic on 1 July 2009 and completion on international passenger routes on 1 October 2009 are the first moves by the government to fully open up the national rail market in October 2010. The only exception to this market opening will be the private Alandabanan between Stockholm to Arlanda Airport (except for cabotage on international traffic), which operates under guaranteed exclusivity until 2040 as a part of the private finance, construct and operate concession, let by Government. From December 2011, any RU can request any path on the Swedish rail infrastructure from Banverket.

As currently, the Swedish Railway Ordinance states that SJ AB is the only operator permitted to operate a national rail service on Banverket's rail network, the latent potential for new RUs to enter the Swedish market remains to be proven. At present, apart from PSO tendered services, new RUs have been able to operate night trains from 2007 and weekend and holiday train service has been opened up from 2009. Night operations must meet the requirement that at least 50% of passenger places are sleeping berths. International RUs who are registered in other EU states (and Switzerland) are permitted to operate international services into and out of Sweden. However, currently there is currently only a single a night train operating between Malmö and Berlin.

2.3. Role of the Regulator

The Ministry of Enterprise, Energy and Communication is responsible for passenger rail in Sweden. Provisions under the Railway Act are amended by additional regulations found in the Railway Ordinance (2004:526) plus other special regulations issued by the Swedish Transport Agency (*Transportstyrelsen*). These two statutes, along with special rules set by the Swedish Transport Agency, form the regulatory backbone of the passenger rail market, rolling stock and organisation of railway traffic in Sweden. The Railway Act is also how Sweden implements Directive 2001/14/EC. There are a several regulatory bodies each responsible for specific regulatory functions.

Major reforms occurred in the Swedish rail passenger market in 2004, when the European Commission introduced new railway legislation and a new rail agency, in response to which

the Swedish Rail Agency (*Järnvägsstyrelsen*) was formed. This new agency was given the responsibility with formulating regulations and ensuring other government authorities, private companies and citizens followed them. In addition, the Swedish Rail Agency was put in charge of railway safety, ensuring fees charged for using the railway infrastructure are equitable, ensuring that all competition rules are met, and for the issue of licenses to all RUs. Licences issued in other European Economic Area (EEA) states and Switzerland are also valid in Sweden. In order for a RU to obtain a safety certificate, its rolling stock must be approved and it must have adequate insurance (~30 M Euro/year). These rules are governed by the Railway Act and Railway Ordinance. It should be noted that on 1 January 2009, this agency changed name to the Swedish Transport Agency (*Transportstyrelsen*), when it merged with the former Road Transport Agency (*Vägverket*).

A further regulatory body is the National Public Transport Agency (NPTA), *Rikstrafiken*, which comes under the Swedish Ministry of Enterprise, Energy and Communications. NPTA is responsible for developing long distance rail travel in Sweden. The Agency's main task is to play a coordination role in fostering public transport throughout Sweden. Its other main task is to procure interregional public transport which has been deemed not to be financially viable by the State.

The Competition Authority (*Konkurrensverket*) is the other market regulator in the Swedish rail market, whose main role is to ensure that all competition rules are adhered to in accordance with the Swedish Competition Act¹. Complaints can be made to this authority when it is felt unfair market competition has occurred. In February 2000, the Competition Authority imposed their heaviest fine (8 million SEK) upon SJ Ltd., relating to predatory pricing measures linked to a bid SJ submitted to a regional transport authority (CPTA), undercutting another competitor. It was found that SJ had abused its dominant position and was in violation of the Competition Act.

¹ The Swedish Competition Act came into effect on July 1, 1993 and is mainly based on EU competition law.

3. The Rail Passenger Market

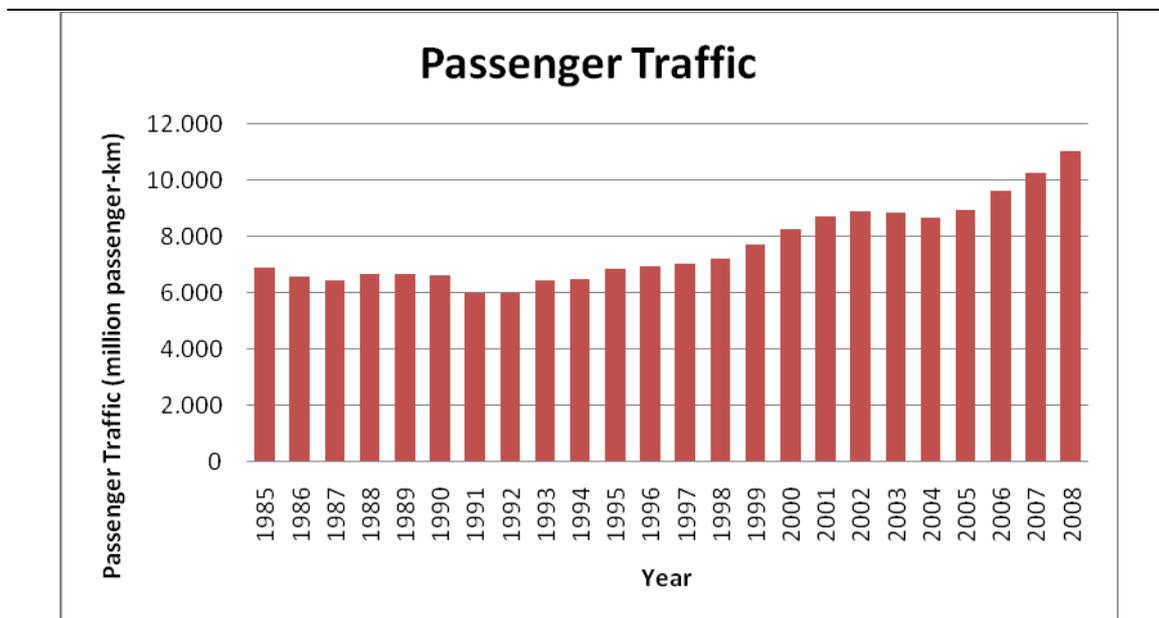
3.1. Overview

Sweden has a population of approximately 9.3 million residents with a population density of 20.6 per km², served by a 9786 km national rail network². As most of the population is concentrated around Stockholm, and in the south, this is also where most lines can be found.

3.2. Market trends

Since the Swedish market was opened up to competition, there has been a slow increase in the number of new operators entering the market. Before market opening, there was only one operator, SJ, while today there are seven RUs in operation (passenger and freight). This has corresponded to a steady increase in passenger numbers since 1988, which has accelerated in recent times: 2006 to 2008 seeing particularly high growth rates; see Figure 2.

Figure 2. Swedish Passenger Rail Traffic Operations and Performance



Source: SIKA

The introduction of competition has also put downward pressure on tickets prices and new pricing structures have been introduced which allow for cheaper tickets when purchased in advance. In addition to the rising passenger numbers shown above, there has also been a steady modal shift from car and air to rail, especially for journeys of over 300km between key cities³.

² 2009 Swedish Transport Ministry

³ SJ Annual Report, 2007

3.3. Passenger rail services

3.3.1 Competition for the market and competition within the market

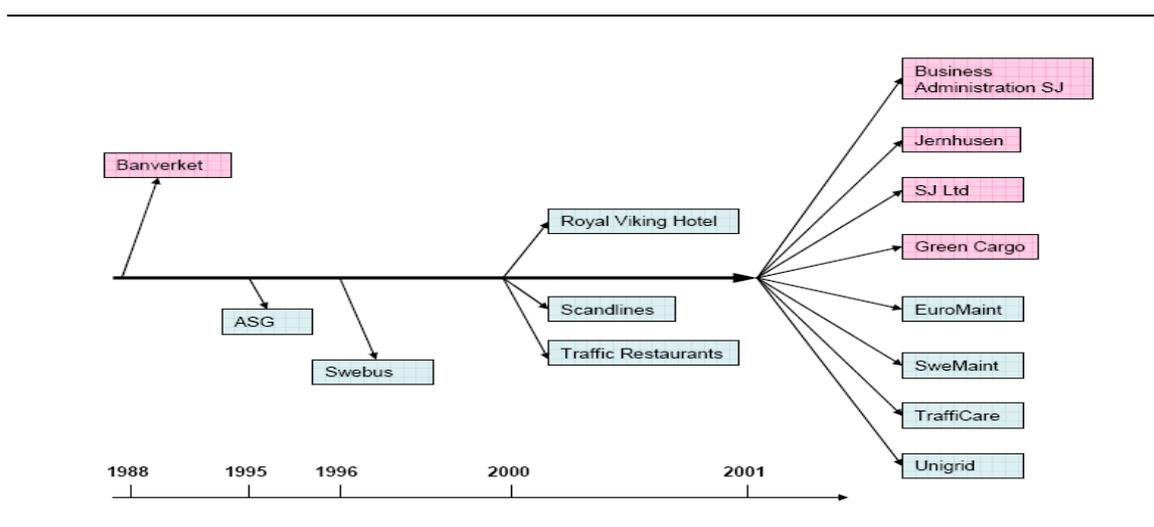
In 1992 all inter-regional passenger rail services were opened for public procurement by competitive tendering, with a few exceptions. A direct result of this was a reduction of approximately 20% in the cost to Government of the first public service contracts let, even though these remained with the incumbent RU⁴. SJ AB still retained some monopoly rights on several key long distance routes, mainly between Sweden's largest cities (Stockholm-Göteborg-Malmö). The monopoly enjoyed by SJ will end in October 2010 when all routes will be opened for tendering.

In terms of number, the four largest RUs (SJ Ltd., Connex, Arriva, and Tågkompaniet) control about 95% of all passenger rail services, with SJ Ltd. controlling about 65% of the entire market.

3.4. Commercial issues

In 1998 a new Transport Policy Bill was passed by parliament with the aim of making it easier for new entrants, particularly freight companies, to enter the market by reducing infrastructure charges. In addition a new national authority was created, the National Public Transport Agency (*Rikstrafiken*), to take over the responsibility for managing the competitive tendering process for unprofitable long distance inter-regional routes (except those which SJ AB held). To enable SJ AB to compete within the new framework administered by Riskstrafiken, SJ AB's organisational structure was spilt up into eight separate business units. *SJ Ltd* was now the unit responsible for operating passenger trains. See Figure 3 below for the structure of new business units created from the old SJ AB.

Figure 3. Separation of SJ's Business Administration, 1988 to 2001



Source: Alexandersson and Hultén 2008

⁴ Information from Swedish Transport Agency, Stakeholder Meeting 10 February 2010.

The breakup of SJ AB into several units proved to be an under financed reform when SJ Ltd had to ask to state for 1.8 billion SEK in 2003 to avoid bankruptcy. It was found that some of SJ's contracts with regional transport authorities (CPTAs) were highly unprofitable. SJ Ltd is currently profitable, reporting a post-tax profit of 543 million SEK in 2008 (SJ Annual Report 2008).

In 2007 the monopoly of EuroMaint, the company responsible for maintenance of railway vehicles, ended and to date Alstom and Bombardier have entered the market to provide both rolling stock and maintenance services. Currently, EuroMaint's share of maintenance has been reduced to about 50%. Other firms are considering entering the maintenance market, including Mantena (a subsidiary of NSB), DSB and DB.

Since 1998 there have been major increases in public spending on Sweden's rail system. When SJ was split up into SJ Ltd and Banverket, there were agreements that the Swedish government would provide at least 1 billion SEK a year in infrastructure investment. This amount rose in the 1990s to around 3 billion SEK, and is currently around 10 billion SEK a year. Over the 2004 to 2015 period, a total of 108 Billion SEK has been allocated for railway infrastructure. Banverket makes recommendations for major improvements and possible new infrastructure that is needed to make the system efficient. Some major projects currently underway are major works in Malmö (*City Tunnel* project), where the rails are being moved under the city centre to reduce congestion and add capacity.

3.5. Employment

Since the Swedish rail market has been opened, there has been a sharp decline in direct railway employment, although this has stabilised in recent years. During the mid-1990's there were over 20 000 people working directly for the railway sector, compared with approximately 15 000 today.

One critical voice of rail deregulation in Sweden has come from SEKO, a large trade union representing many rail workers. SEKO, in its report entitled *Regulate the deregulation* describes the deteriorating working conditions for rail workers as focus has shifted to price rather than quality of service. Other issues expressed by SEKO are the short term periods of tenders, resulting in a lack of investment in rolling stock and poor maintenance results. To counter this SEKO offers some solutions to address these concerns and they are worth noting here. These suggestions include:

- the government should set up clear target for public rail service (financial and assessment goals);
- the control systems in place must be free of political interferences and give priority to quality of service over profit;
- the Public Procurement Act needs to be revised to address the above mentioned points; and
- contract periods should be extended to ten years.

4. Potential Entry Barriers to the Rail Passenger Market

4.1. Access to infrastructure

Every year Banverket produces a network statement (NS) for applicants who are planning to operate or organise rail traffic on infrastructure managed by Banverket. This NS sets out the service conditions, the conditions that must be met in order to gain access to the rail network, and the fees charged to use the infrastructure. The NS has to follow the rules set out in the Swedish Railway Act (2004:519) and Banverket must draw it up in consultation with other interested parties who currently use or wish to use the infrastructure. In addition, Banverket follows the provisions of the Public Procurement Act (SFS 1992:1528) which spells out the rules and procedures for public procurement. The Swedish Transport Agency (*Transportstyrelsen*) is responsible for ensuring that Banverket meets all requirements in accordance with the various regulations.

While Banverket is the largest IM in Sweden, there are over 700 IMs holding permits. Most of these are small scale operations, mainly attached to individual industrial sites. Banverket consults with other IMs in order to produce the annual rail timetable. All RUs wishing to operate in Sweden must submit applications to Banverket, in turn Banverket requests capacity from all other applicable IMs, where required. Any disagreements with decisions can be directed towards the Swedish Transport Agency (*Transportstyrelsen*).

In addition to the above, Banverket also sets the fees for use of rail infrastructure. Two types of charges are defined in the Railway Act: marginal cost based charges, and special charges. Marginal cost based charges are calculated on the basis of the direct costs incurred through the operation of a particular train. In Sweden, these charges also include short term socio-economic marginal costs. Special charges are meant to correspond to the fixed costs of the rail infrastructure. Discounts can also be introduced, for example, on lines that are underused, for a fixed period of time.

4.2. Access to rolling stock and financing

There appear to be some issues with obtaining rolling stock suitable for use in Sweden. In the case of locomotives, the only viable supplier has been the incumbent SJ Ltd. and this has created a shortage of locomotives. New locomotives are very expensive and from order to delivery can take up to two years, making it challenging for RUs to access them and offer expanded services on such notice. This was the case with UnionsExpressen, who have had difficulties with obtaining sufficient locomotives for their trains. UnionExpressen had been leasing two locomotives from SJ Ltd, which were subsequently taken away after three months of use, and were replaced with older locomotives which, according to UnionExpressen officials, required repairs. Another RU, Tågåkeret I Bergslagen, did not experience the same difficulties, but they did recognize that they had to wait until a locomotive became available before they could begin passenger rail service in December 2009, hindering their earlier entrance into the market.

While the experiences of one RU cannot be used to rightfully judge the entire market, the example clearly demonstrates that smaller RUs can have difficulties if they are unable to supply their own rolling stock or finance acquisition of new rolling stock. In a Swedish Rail

Administration report⁵, the issue of lack of locomotives was also raised as a problem and it was suggested that the need to change the way in which locomotives and rolling stock can be purchased or rented will go a long way in improving the number of RUs and conditions of operation in Sweden. The same report even went one step further and suggested that the Swedish government look into ways of requiring SJ Ltd. (and Green Cargo) to shed some of their locomotives and rolling stock which would make it easier for new entrants and would allow existing RUs to expand.

4.3. Access to ancillary services

According to Banverket, there have been well known problems with *Jernhusen*, the division spun off from SJ AB who took control over all railway stations in Sweden. *Jernhusen* used their monopoly position to their own advantage. The example of UnionsExpressen who experienced difficulties with gaining full access to the railway stations they serviced, particularly with the selling of tickets and marketing their trains (putting up posters, signs, etc) demonstrates there still remains a need for more open and fairer policies. According to Banverket and *Jernhusen* these initial problems have now been solved. For example, a third party, JCDecaux, a multimedia firm is now responsible for marketing and selling marketing space at the train stations. According to Swedish law, all RUs can access the stations but must pay according to the services they use at each of the station. *Jernhusen* does, however, have control to accept or deny tenants in the stations.

In this context it should be noted that UnionsExpressen felt that although it was paying a high price for using the stations, it was also asked to pay a deposit of 5 million SEK if it wanted to sell tickets at the stations it serviced. Finally, the high level of insurance coverage needed to be able to access the rail system in Sweden can be seen as a hindrance for some RUs. Insurance coverage of at least 30 million Euro/year must be maintained, which some see as a high price, especially for smaller entrants to the market. These findings are again supported by the Swedish Rail Administration report cites the high cost for new insurances and lack of transparency from the incumbent RU, SJ Ltd., have been a barrier and is cited as one reason why more new entrants have not been seen in Sweden.

⁵ JVS – Sector analysis of railway undertakings 2006/07

5. Market Entry Strategies

The example of UnionExpressen attempt to operate in Sweden demonstrates the challenges a new RU can face when entering the market. Lack of sufficient locomotives, the scale of work required to get the permission needed to operate (safety and insurance) and the high costs of obtaining them were all perceived as barriers by this RU to market entry. On top of this are the financial aspects, i.e. obtaining long term financing, which is often a particular problem to smaller operators⁶. There is also the issue of experience in the marketplace: naturally the longer a player has been active in the market, the greater is its expertise of the nuances of the market and the better its contacts and visibility in the marketplace. It is therefore inevitable that long-established RUs have an inherent advantage⁷.

Avoiding some of the mistakes of UnionExpressen, Tågåkeret I Bergslagen decided instead to wait for a locomotive to become available before it went ahead with the process of obtaining a licence to operate. It also decided not to directly compete with SJ AB but instead approached SJ AB with an idea to run a new service on existing, yet previously unused rail tracks. This niche service was seen as a compliment to SJ AB's existing services as it did not directly compete with SJ AB. While this does not illustrate an example of the most liberal market, it suggests that smaller RUs can find successful niche services which complement the larger routes. This niche service has also made it possible for Tågåkeret I Bergslagen not to spend money on advertising for its service as they are the only RU currently operating on many of the stations they stop at. While the new service from Tågåkeret I Bergslagen, which operates between the cities of Gothenburg and Karlstad, is unprofitable, the owners expect a profit in one to two years time.

⁶ Macht, SA & Robinson, J., 2009. Do Business Angels Benefit their Investee Companies? *International Journal of Entrepreneurial Behavior and Research*, vol. 15, issue 2, pp. 187–208.

⁷ Pehrsson, A., 2004. Strategy Competence: a Successful Approach to International Market Entry, *Management Decision*, vol. 42, no. 6, pp. 758–768.

6. 'Network' Issues

6.1. Timetabling

Banverket is responsible for preparing the Swedish national timetable. Timetables are determined in consultation with existing and new RUs. RUs are allowed to share or switch their assigned time slots with each other if they need to. There are, however, certain rules for this and changes need to be verified by Banverket first. According to officials from Banverket, there is a capacity issue in Sweden, especially in the urban areas. One way that will be attempted to ease this problem will be the introduction of a new rail congestion charge, to be implemented in 2011, in urban areas. It should be noted that 24% of all goods are shipped via the railway, compared with the EU average of 8%. While this is a positive development, it does create capacity issues for passenger rail services.

6.2. Ticketing inter-availability

Tickets can be booked at train stations, yet most are sold over the internet via one of the four large RUs webpages– SJ, Tågkompaniet, Veolia and Oresundstag. All train services can be purchased using the above RUs webpages as they are sold on equal terms, although special discounted and limited time fares from specific RUs must be direct purchased from the RU offering the special price.. Tickets are printed according to the RU, i.e. if the journey requires changing trains once, and with a different RU, then two tickets will be issued. The exception to the above is the privately run train between Stockholm and Arlanda Airport (Arlanda Express). Tickets for this service must be purchased directly from the RU and requires a separate ticket. Sweden's two largest cities, with their extensive network of trains, trams and busses offer a separate ticketing system, which is based on zones.

The CPTA in each of Sweden's counties regulates intra-regional tickets prices while SJ AB sets inter-regional fares. Pricing decisions for CPTA are based on local political processes with the aim that fares should remain low. Current subsidies for train tickets are of around 50%⁸. While there is no price regulation in place for SJ AB, it aims to maintain a steady financial rate of return on operations and is in direct competition with busses and airlines between Sweden's largest cities, which indirectly imposes a degree of restraint on fare levels. SJ AB offers a variety of ticketing options and discount fares for youth and seniors. SJ AB is obliged to accept all tickets from CPTAs, for shorter distances, and revenue allocation for this is based upon a two-week passenger survey conducted every year.

6.3. Consistent conditions of carriage

There are no consistent standard conditions of carriage for RUs. In terms of accessibility, however, most trains (with the expectation of older ones) have the ability to accept wheelchairs and prams. Almost all stations in Sweden are equipped with lifts for wheelchairs and passenger requiring special assistance must make arrangements 24 hour before hand (i.e. wheelchair assistance). Where possible, prams are allowed on inter-city and intra-regional trains, but they must be booked in advance as there is limited place. Prams which fold down can always be taken aboard and stored in storage areas on the train. Guide dogs for the blind are allowed on all trains in Sweden.

⁸ *Comparisons between fares and ticketing in Great Britain and continental Europe*, Steer Davis Gleave, February 2009, London.

As each RU issues their own tickets, there may be different condition attached to each leg of the journey based on the different policies of the various RUs. For example, some smaller train services do not offer 1st class services and thus a first class ticket bought for one journey will only be valid on that particular leg of the journey. Also, some CPTAs issue tickets for combined bus and rail travel, however, not all RUs will except this type of ticket due to the fact that the fares for bus travel are lower than the fares for train travel.

6.4. Lost property

Each of the CPTA's and other RUs operate their own separate lost and found department and persons wishing to locate an item must call or visit the specific RUs office. Lost articles left on one of SJ AB's trains are handled by a private company, called Bagport Sweden AB. They have offices at Stockholm's Central Station, plus an office at Arlanda and Bromma Airport.

6.5. Passenger information systems

All RUs operate their own webpage's where information such as time plans, services and tickets can be purchased. There is also a webpage, called "Resplan" (www.resplus.se), which is a partnership with most RUs that offers schedule, station and ticketing information for all RUs. *Resplan* is managed by *Samtrafiken*, which is owned by 30 carriers, included 21 CPTA's. It also includes information about connecting busses, ferries and trams. When tickets are purchased, the RU operating that service will be written on the ticket.

Specific station information is made available on the web at www.stationsinfo.se. This is a partnership between government bodies such as Banverket, Jernhusen and the National Public Transport Authority. At the station, Banverket is responsible for all digital information displayed to passengers in the stations while *Jernhusen* manages and controls all the signage in the stations.

7. Additional Remarks

While rail service will be opened up in October 2010, some rail services will still need to be heavily co-financed by the National Public Transport Agency, *Rikstrafiken*, as they are deemed to be important for the regions they serve (i.e. in Northern Sweden, where the population is low population and there are long distances between centres of population). This will make it challenging for these lines to be tendered out and the new Transport Agency will have to look at ways to make it more attractive for RUs.

In addition, some issues still remain about how best to distribute allocated paths to the RUs. Banverket is considering introducing an auction or another allocation process which might address some of the current challenges with path allocation. Currently, specific network access applications by RUs have to be submitted 15 months in advance: officials at Banverket are examining either how this time might be reduced, or other means of providing access. Currently, the impediment to changing the current allocation system is the present lack of network capacity, particularly in urban areas. In addition, many tracks in Sweden are still single line tracks, which lead to delays and congestion during certain peak times. Investment to provide additional capacity could alleviate some of these problems, and is understood to be under consideration.

8. Summary & Conclusions

The Swedish government considers that the greatest achievements in Sweden have been to create a “level playing field” for all actors. The success of the Swedish model has created a more equal playing field for road and rail users, where users pay for actually using the infrastructure. Demonstrating this belief has been the recent (April 2010) merger of the Swedish Rail Agency and Swedish Road Agency, into one, the Swedish Transport Agency (*Transportstyrelsen*). What is still missing are stronger regulations and legal framework to create an efficient rail system to address some of the problems previously described above.

While the Swedish freight market has experienced a larger number of new entrants, the passenger rail market is still dominated by SJ AB, which holds 65% of all rail traffic in the country. SJ AB still maintains a monopoly on all inter-city routes between all large Swedish cities, although this will end in October 2010. Irrespective of the ‘rights and wrongs’ of this particular case, the example of UnionsExpressen demonstrates that new entrants can face challenges and regulatory hurdles if they wish to enter the Swedish market, evidence supported by other RUs⁹. For example, despite being fully approved and certified by Norwegian authorities, UnionExpressen failed to meet Swedish requirements and thus lost their licence. While Tågakeret I Bergslagen’s experience with entering the passenger rail market is considered smoother, it entered into a direct partnership agreement with SJ AB beforehand, defeating the purposes of full market opening and introduction of competition to the Swedish market.

The Swedish Rail Agency is, however, aware of these problems and it has been suggested in their own reports that there should be a requirement for SJ AB to shed some of its locomotives and rolling stock, allowing other firms more equal access. How to achieve this remains unclear and will be a challenge; nevertheless this would make it easier for new entrants to enter the market while allowing existing firms more possibilities to expand operations.

Banverket’s position, as the main IM, has appeared to improve relations within the Swedish rail market, and has created a more efficient and equal means for new entrants to gain access. Because new RUs compete “for the tracks”, it is vital that the paths allocated to RUs are allocated in a fair and non-discriminatory manner, and that are able to create sufficient revenue. A bad allocation can effectively kill a new RUs chance of success. There is, however, a general feeling in Swedish circles that the incremental approach which Sweden has taken on its path to full market opening has proved beneficial for the passenger rail market but that more competition is needed.

Because complete rail passenger market opening is not planned to commence until October 2010 it is too early to say how successful this will be, or to appraise any successes and failures of the market opening structure that will be adopted. Some RUs think that the passenger rail market will develop along the same lines as the freight market did, in that there will be a few large and international players, combined with a few RUs offering niche services. Similarly it is also not possible to say how the value of the service offered to customers is likely to change.

There are various issues which the Consortium considers could improve the operation of the rail market in Sweden or the experience for users. These include:

⁹ JVS – Sector analysis of railway undertakings 2006/07

- addressing issues of access to suitable rolling stock for new entrants;
- more transparent access to ancillary services for new entrants; and possibly
- a more streamlined system for accessing train and ticket information, as the current system in Sweden is a mix and match of different information systems and ticketing options, which can confuse passengers.

These issues could possibly be addressed as part as any measures that might be introduced at an EU for further rail passenger market opening.