



The impact of market opening on the supply of interregional train services



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ABSTRACT

A stepwise deregulation of all interregional passenger rail services in Sweden was legally completed in 2010. The incumbent operator (SJ) thereby lost the sole rights to commercial services. The most evident supply increase is the establishment of services in the low-cost niche, which rather complements than competes with the incumbent's supply. Public Transport Authorities' (PTAs) joint services have however resulted in strong competition on at least one main line.

Despite a period of almost five years since deregulation, the potential effects of the market opening have not yet fully materialised. The business risk for commercial rail operators seems to be much greater than for other modes like air and long distance coach services. SJ have also during decades of deregulated intermodal and years of intramodal competition developed their products and skills and seem well prepared for competition.

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1. Introduction

1.1. Background

To improve the attractiveness of rail, market opening in rail transportation was favoured by the European Union (EU), starting with the first major legislation in 1991 (Directive 91/440/EEC). For the benefit of rail passengers and freight customers and to create an integrated European railway area and an EU internal market for rail, national railway monopolies should be broken up in favour of intra-modal competition and consequently form a more competitive and efficient rail industry. This market opening, or deregulation, is intended to establish new services as well as put pressure on the incumbent companies to be more efficient and customer-oriented.

Existing EU legislation requires a degree of separation between infrastructure managers who run the network, and railway undertakings or operators that run the train services on the network, with the aim of ensuring fair and equal treatment of all operators. Since 1991, the market opening has moved on at different paces in some market segments and countries in the EU. Markets for rail freight services have been fully open to competition since January 2007 and those for international passenger services as of

January 2010, but national markets for domestic passenger services by rail remain largely closed with the exception of for example Great Britain, Germany, Italy and Sweden (COM 25, 2013).

1.2. Swedish rail service reforms

Market opening in Sweden has to a large extent been a forerunner of the EU model. The infrastructure was separated from the railway undertakings in 1988. Procured or franchised passenger services, primarily regional services run by Public Transport Authorities (PTAs), were opened for operators other than the incumbent (SJ) in 1990. In rail freight, competition on the tracks was legislated in 1996. A stepwise deregulation of all interregional passenger rail services in Sweden was legally completed in October 2010 (Alexandersson, 2010). Since 2012, commercial regional services have to be included in PTA's planning and procurement of rail service supply as long as the services fulfil the public service obligation according to Regulation (EC) No 1370/2007 on public passenger transport services by rail and by road.

PTAs currently franchises regional rail services for approx. SEK 5 billion (EUR 550 million or USD 600 million)¹ annually. Two or more PTAs may also run interregional services connecting neighbouring regions on commercial conditions, i.e. subsidies should be directed at regional travel. The incumbent passenger operator, 100% state-owned SJ AB (limited), had a turnover of SEK 9 billion

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¹ SEK 1 equivalent to approx. EUR 0.11 and USD 0.12 as of end of May 2015.

in 2014, approx. SEK 3 billion of which was derived from regional rail contracts (SJ AB, 2015). SJ operates on strictly commercial grounds but nothing prevents the operator from taking the surplus from one market or route to subsidy another as long as this would not be considered unfair intramodal competition. However, domestic airline services (1992) and interregional coach (1997–1999) are deregulated, extensive investments have been made in railway infrastructure during the most recent decades (Nelldal, 2001), and consequently the final step was to deregulate interregional train services to achieve a better-functioning market for interregional journeys.

Since the market opening, both entrant operators' increasing activities as well as the incumbent's measures to strengthen its position have been evident, as we will see in this paper. The hypotheses we will treat are that competition on the tracks is giving a better supply (by means of for example frequency of departures and fares) at least on lines with a high demand, but also that the competition forces the incumbent operator to restructure their services.

1.3. Aim

The aim is to provide current supply data (up to and including 2014) and analyse some effects hitherto in the process of market opening on the supply of interregional rail services in Sweden (i.e. long-distance services mainly adopted for journeys longer than 100 km). The research question is to what extent the new services compete with or complement the incumbent operator's services and how this affects the incumbent's supply over time. The contribution of the article is an intention to put the market effects in a geographical and passenger transport market context and benefit possible future in-depth analyses and policy measures.

2. Previous research – experience and expectations

Different models are available to deregulate, or open, markets in the rail sector. First, the issue of vertical separation or (degree of) integration of infrastructure and services results in different opportunities to give the incumbent and entrant operators equal possibilities. The vertical separation itself might affect the overall effectiveness of the sector in a slightly negative way due to insufficient incentives to focus on the system perspective, as might loss of economies of scale in operations as a result of competition. The institutional prerequisites and the relationship between operators and the infrastructure manager are however crucial to the success of organisational structures with vertical separation (Merkert et al., 2011; Nash, 2011; Beria et al., 2012; Nash et al., 2013, 2014).

For passenger services, two principal models can be defined. Both assume a vertical separation of infrastructure and services, and a strong independent regulator, to achieve equal rights for operators; Competitive tendering leading to franchising of sole rights (competition for the tracks), and open access (competition on the tracks), respectively. Competitive tendering is widely used for regional services in Sweden and many other countries, and is the general model in Great Britain also for interregional services. Open access is rarer for interregional passenger services, but there are some cases in for example Germany and Great Britain, as well as services in Austria, Italy (Lalivie and Schmutzler, 2008; Nash, 2010; Nash et al., 2013; Alexandersson and Rigas, 2013; Finger, 2014; Bergantino et al., 2015) and the Czech Republic (Tomeš et al., 2014).

Research on market opening has found that liberalisation has often had positive effects for the potential passengers through an improved supply of train journeys in terms of travelling times, frequency, and fares. This has led to increased demand and consumer

surplus (Alexandersson and Hultén, 2008; Alexandersson et al., 2010; Lang et al., 2013; Nash et al., 2013; Mancuso, 2014). Initially, when a monopoly has been replaced by competition, significantly decreased operational costs for the operations have resulted. The operational costs might increase after the initial period, which in some cases could be explained by higher quality or higher real wages (Jensen and Stelling, 2007; Nash, 2010; Smith et al., 2010). Britain seems to be an exception, where the franchising model in intercity services has led not only to increased travel demand, but also increased costs and overall greater national support (Johnson and Nash, 2012; Preston and Robins, 2013).

Preston (2008) found that in most cases, including two model-estimated Swedish cases, competition on the tracks can best be described as oligopolistic competition based on horizontal product differentiation. This tends to not only provide too much service at too high prices but also causes spatial and temporal bunching. We will refer to this analysis later.

In a case with open access, an analysis of international rail services found a status quo bias, i.e. passengers show a preference for the train (supply) they have already chosen (Paha et al., 2013). Lock-in obstacles, like frequent flyer/traveller programmes, and network effects contribute to switching costs for the traveller to change operator (Carlsson and Löfgren, 2006; Farrell and Klempner, 2007). The implication of this is that entrant operators might gain most passengers if they have a well-known brand name, few passengers possess a customer loyalty card by the incumbent, and low transactions costs for passengers, i.e. easy to obtain information and buy tickets on the internet (Paha et al., 2013). A positive valuation of a known brand was also found by Fröidh and Byström (2013), but supply factors like fares, frequency of departures and travelling time are more important. Most evident might be that a pressure to lower fares emerges when an entrant appears with lower costs than the incumbent in intramodal competition. This will however reduce the profitability of the incumbent (Ivaldi and Wibes, 2005; Preston, 2008; Johnson and Nash, 2012).

Some problems might arise when the rail network is opened for competition in passenger transport. The capacity of the Swedish network is more stressed by the expanding rail services resulting from deregulation, including the need for track maintenance and renewal of structures. A shortage of competence for some tasks in the sector has also been identified (Laisi and Poikolainen, 2011; Laisi, 2012). Nilsson et al. (2013) identify four critical issues: allocation of capacity, access to terminal and maintenance services, provision of rolling stock and new entrants' use of the incumbent operators' information and ticketing system. Some of these issues will be followed up in this paper.

3. Method

The research question is how the deregulation affects the supply of interregional rail services.

The analysis is divided according to the extent to which the competitive pressure from entrant operators:

1. Competes with the incumbent operator's services.
2. Complements (on the fringe) the incumbent operator's services.
3. Affects the incumbent operator's supply of services.

The method is to describe, systematise and analyse the development of competing interregional train services in Sweden since the market opening, and then draw inductive conclusions concerning the effects on train service supply and travel possibilities.

The last analysis focuses on quantitative factors by means of frequency of departures, travelling times, stopping patterns, fares

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