

Railway transport and social-ecological transformation in Germany

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Short Paper

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1 Introduction

It is now twenty years after Deutsche Bahn (DB) has been created, the commercialized state-owned enterprise (SOE) that owns most parts of the German railway system and runs a large part of the transport services. In this context, one is tempted to appreciate one attractive feature of the recent financial and economic crisis: In 2008, the turmoil at the financial markets stopped plans of the late government to privatize up to 24.9 % of the transportation branch of DB. Nevertheless, the suspension of privatization does not necessarily imply a final stop. Therefore, it is necessary to develop alternatives which provide for short- and medium term reform proposals, but also embed the railway system into a broader “degrowth” agenda, guaranteeing the human right of mobility. In the remainder of this paper, I very shortly summarize the theoretical and empirical literature on railway systems and privatization, followed by an overview about the German development since 1994. I finish by laying out some proposals for reform in a social-ecological spirit.

2 Theoretical and empirical overview

In principle, most economists share the view that competition enhances welfare. But it is also widely acknowledged in microeconomic theory, that certain industries better be regulated closely or publicly-owned. A prominent case are “network industries” like telecommunications or railway systems which are characterized by economies of scale and scope, hence creating “natural monopolies”. Here, one firm is able to serve the market at lower cost than could two or more, i.e. the problem boils down to assuring that welfare gains are shared with consumers and stakeholders. Nevertheless, an influential literature building on property rights theory (e.g. De Alessi 1980), has propagated the privatization of these industries, expecting welfare gains from increased efficiency of private vs. SOEs. Peters (1993) and others however argue that in structurally less competitive industries, this theory of attenuated property rights does not hold against the empirical evidence. In a game-theoretical framework, Capuano & De Feo (2008) show that privatization does not increase welfare for a mixed duopoly. For railroads, the economic mainstream favors separating infrastructure and transportation services, leaving the traditional monopoly only for the former and enabling competition in

the latter, with public authorities assuring an equal playing field. This however prevents economies of scale and scope in an integrated organization. Furthermore, the problem of lacking incentives for infrastructure investment has to be approached (Benz et al. 2000). The results of empirical investigations into the outcomes of privatizations of railway systems do not speak with a single voice (see appendix).

3 Developments in Germany

Since the early 1990s, in Europe the EU and its predecessors required the separation of track and transportation services, and free entry to both cargo and passenger markets. In Germany, former West-German Bundesbahn and East-German Reichsbahn were merged to the stock company Deutsche Bahn in January 1994, fully owned by the federal state. The “Bahnreform” aimed at decreasing debt, transforming a bureaucratic institution to an efficient, service-oriented firm. One pillar of the reform was the so-called “regionalization” of the regional railway transport: Regional public client bodies use tenders or direct awarding of contracts to order passenger transport services in their area, i.e. distributing subsidies based on per-kilometer prices that are offered by DB and its competitors. Infrastructure and transportation services have been separated into several subsidiaries of DB, but competitors claim that DB continues to discriminate against them, for instance by using pricing schemes for rail electricity that favor the big regional subcompanies of DB (mofair 2013). The mainstream narrative (BAG.SPNV 2013) claims that competition has increased efficiency in the subsidized passenger transport, especially by extending the amount of train kilometers provided. This is true to a certain extent, but to date, to my knowledge there is no independent evaluation of the competition situation and its possible benefits, only studies on tender performance (Lalive & Schmutzler 2008, Link 2003). This is due to even though taxpayer money is spent on subsidies, the contracted train kilometer prices and other parameters are mostly not disclosed to the public. We simply lack data to be able to accept or refute the hypothetical welfare gains from competition, significantly in contrast to private consulting firms that advise client bodies and companies.

4 Critical assessment and reform options

When talking about efficiency gains, one has to consider on what grounds competition is carried out. Extending the service at the expense of employees or safety is not a favorable option (mobifair 2011). Moreover, overhead costs in terms of management and expenses for marketing and bidding procedures may eat up efficiency gains. Evaluating the performance of DB, critical observers (e.g. Engartner 2008) have pointed at insufficient infrastructure investment, despite public subsidies. It is well documented that it lags behind the replacement demand (Kunert & Link 2013). Striking examples are S-Bahn Berlin, where cutting maintenance cost has resulted in break-downs, or the constant problems DB is facing in winter time. DB has invested in creating a global logistics corporation, thereby reducing incentives for gaining market shares in the modal split, e.g. from road transportation. Preparing the company for privatization, unattractive lines and stations have been abandoned. Strikingly, scarce funds are spent on questionable prestige projects like Stuttgart21, while desperately needed upgrading of north-south cargo lines stagnates. Moreover, the majority of DB profits are generated from subsidized regional passenger transport, or from acquired business areas outside of DB's core, while debts remain high (Engartner 2008).

At the same time, some positive developments can be observed in regional contexts: There are some successful reconnections in rural West Germany, integrated synchronized timetables in selected areas or tram-train projects. Furthermore, a number of publicly-owned regional railway companies exist, like Hessische or Hohenzollerische Landesbahnen, which may be role models for a transition of railway services to public ownership as a viable short-term reform option. Additionally, legislators could change tenders to pursuit social and ecological goals, e.g. by requiring the application of collective wage agreements, emission standards or social tariffing. Unless society decides to favor it in order to gain shares in the modal split, I see few reasons to socialize freight transport. When it comes to passenger transport however, I ultimately favor the transformation of railway services to an integrated public agency. If one wants to sustain public rail transport outside of metropolitan areas, there is no way around subsidizing this public good. Given this, I doubt that artificially created competition about public funds involves efficiency gains that outweigh the costs. Moreover, it carries the danger of cutthroat competition like in the bus market. Finally, mobility is a human

right that ought to be guaranteed by the state.

Facing resource peaks, this right will be ever more difficult to fulfill at the speed that developed country citizens are accustomed to. So it will be necessary to use the available as efficiently as possible, and promote mobility on rails, as it emits less greenhouse gas than individual transportation and needs less concreted space than streets. In a reformed public railway transport agency, stakeholders instead of shareholders should decide and hence increase the realm of democracy. Serving people's mobility at an ecologically viable pace, institutionalized participation of passengers as well as an increased influence of democratically legitimized actors would be first steps to overcome an outdated Public Choice logic of commercialization and privatization.

A Appendix

Table 1: Overview of selected studies on the effects of railway privatizations in several countries

Article	Countries	Years	Methodology	Main findings
Baer & Montes-Rojas (2008)	Argentina	1995-2005	Qualitative study, descriptive stats	Positive: subsidies decreased, more passengers, higher quality in some metropolitan areas; Negative: insufficient regulatory framework, widespread dismantling, lower quality in poor areas, reaping of profits
Bartle (2004)	UK	1994-2004	comparative study, literature overview	Positive: subsidies to operators decreased, increased rail share in transport; Negative: Excessive fragmentation, bad regulation, huge profits and management overpay, lacking infrastructure investment until accidents occurred, decreased timeliness
Boardman et al. (2009)	Canada	1997-2003	cost-benefit analysis	Substantial welfare gains even in duopoly: \$15 billion (1992 dollars), negligible effects on employees
Crompton & Jupe (2003)	UK	1994-2002	Qualitative study, descriptive stats	More inefficient railway system, inferior quality of service for customers, fragmented system focused on cost reduction, substantial losses to taxpayers through under-priced sales
Estache et al. (2002)	Argentina, Brazil	1994-99, 1996-99	before-after calculations	Total factor productivity increased faster after privatization, especially output increased (labor, i.e. input, reductions took place before)
Laurin & Bozec (2001)	Canada	1995-98	before-after calculations	Productivity increased, privatized company even surpassed rival in duopoly, which had always been private

Table 2: Literature overview ctd.

Article	Countries	Years	Methodology	Main findings
Martin (2007)	Global South	1991-2006	Overview study, descriptive stats	No proof of overall economic and social benefits: no sustainable investment, investment focused on large-scale export business, job losses, increased precarity, decimated passenger service
McCartney & Stittle (2008)	UK	1994-2007	Qualitative study, descriptive stats	Serious under-pricing of the sales of rolling stock operating companies, very secure business with excessive profits, substantial losses to taxpayers
Mizutani & Uranishi (2007)	Japan	1987-99	Estimation of cost functions and productivity	Overall performance has improved, privatization contributed a 0.59% increase to total factor productivity growth, reduced costs, capital adjusted to “optimal” level
Shaoul (2006)	UK	1994-2005	Qualitative study, descriptive stats	Rail industry costs have more than doubled, annual subsidies risen, intransparency about the spending of taxpayers’ money
Thompson (2004)	UK	1994-2003	Qualitative study, descriptive stats	Positive: passenger and freight traffic increased faster than GDP growth, better safety record, investment in rolling stock, repair and renewal is high; Negative: bad government regulation, conflicting goals, overly complex structure
Williams et al. (2005)	Australia, New Zealand	1993-2004	Qualitative study, descriptive stats	Overall positive, AUS: freight industry increased intra-modal market share, but overly optimistic PPPs struggle, long-distance passenger service successful, urban and rural difficult; NZ: initially increased profits and rail traffic not sustainable, government took back network

Please note: As the railway privatization literature is much more extensive, especially for well-studied countries like the UK, this review necessarily remains incomplete. “Years” refers to the years after privatization that are analyzed by the respective authors.

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