



## Risk and reward in rail contracting

Gunnar Alexandersson<sup>a,\*</sup>, Chris Nash<sup>b</sup>, John Preston<sup>c</sup>

<sup>a</sup>Stockholm School of Economics, Stockholm, Sweden

<sup>b</sup>Institute for Transport Studies, University of Leeds, Leeds, UK

<sup>c</sup>University of Southampton, Southampton, UK

### A B S T R A C T

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This workshop considered the role of risks and rewards in rail transport by considering evidence on the impacts of industry structure, franchising and infrastructure charges. A schema for the allocation of risks and rewards was developed, which indicated that strategic risks should be borne by authorities and operational risks by operators, but that tactical risks were more difficult to allocate and appropriate reward mechanisms more difficult to design. The extent to which these difficulties can be addressed by competitive tendering and alternatives such as trusting partnerships and negotiated performance based contracts was considered.

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### 1. Introduction

This was one of the three workshops tasked with examining risk and reward in public transportation. However, given the composition of the workshop members and the papers presented and in order to introduce a degree of product differentiation, it was decided to focus on rail transport. This report is therefore structured as follows. In the next section, the evidence from eight papers covering three broad themes (industry structure, franchising and infrastructure charges) is assessed. In a subsequent section, the discussion among the participants in the Workshop (from eight countries – Australia, France, Japan, Portugal, Russia, South Africa, Sweden and UK) is summarised with respect to risk and reward and five of the identified ‘big agenda items’ of the conference. Finally, some tentative conclusions are drawn.

### 2. The evidence

#### 2.1. Industry structure

In rail, franchising through some form of competitive tendering has been the normal way to introduce competition for passenger services (see, for example, Thompson, 2006). This is considered in some detail in the next sub-section, with specific reference to Australia and Great Britain. Papers presented to this workshop highlighted three other structural issues.

Dementiev examined the role of open access entry on a vertically integrated network, with reference to the ‘golden route’ of St Petersburg-Moscow in Russia. A number of licenses to operate passenger trains were issued at the beginning of the decade. Three new firms (Grand Express, Megapolis and Passazhirskie Perevozki) entered the market in competition with the state operator RZD. The rationale for permitting these private entrants was that they could provide new rolling stock that the state operator was unable to finance. However, the entrants are required to pay the state operator both for access to the infrastructure and for the hire of locomotives and drivers. Much of this competition is for the first class, up-market tourist niche but some of this competition is for standard second class travel. A Bertrand model of oligopolistic competition for second class travel was developed to examine vertical integration compared to vertical divestiture. The advantage of vertical integration was seen to arise largely from economies of scope between infrastructure and train operation while the disadvantage was that, in the absence of regulation, it permitted the incumbent to sabotage entry, principally through increasing rivals’ operating costs. It was found that if there was tough competition in the downstream market (as there appears to be in the case of the St. Petersburg-Moscow route, at least for overnight travel) then vertical divestiture should not be considered necessary as a precondition for welfare gains from competition. Benefits from scope economies may be passed on to consumers in the form of lower prices even if the downstream market is only contested by the vertically integrated provider which may operate other routes that are contested. However, this finding needs competition authorities (or a specific rail sector regulator) to better monitor discriminatory activity (and hence sabotage) by the vertically integrated provider.

\* Corresponding author.

E-mail addresses: [dga@hhs.se](mailto:dga@hhs.se) (G. Alexandersson), [C.A.Nash@its.leeds.ac.uk](mailto:C.A.Nash@its.leeds.ac.uk) (C. Nash), [jpreston@soton.ac.uk](mailto:jpreston@soton.ac.uk) (J. Preston).

Aoki examined the problem of loss-making semi-public railways in Japan. Privatised former state operations such as JR East were highly profitable but there were also almost 40 small loss-making semi-public railways, operated as partnerships between local authorities and train operators. They were created at the break-up of the former state monopoly JNR in 1987 and may be seen as part of a localisation process observed elsewhere (e.g. France and Germany). However, these railways continue to lose traffic and are heavily loss-making and the subsidies that are provided by a stabilisation fund are not sufficient to sustain them in the long run. These railways might be thought of as a form of public-private partnership but one that has not been effective because the operators carry very little risk. Attempts to reduce costs by separating responsibilities for train operations and infrastructure were being undertaken. If these were not successful further line closures and bus substitution were likely. In certain parts of Europe, these lines would have been prime candidates for competitive tendering and it is interesting to speculate why this is not being considered in Japan. Aside from legal and institutional barriers, there also appear to be important cultural barriers in that operators would be reluctant to compete and, given current ownership structures, operators and authorities would be expected to collude.

Alexandersson examined whether public-private partnerships (PPPs) can be a successful way of delivering investment. The advantage of PPPs is that they can transfer risk to those who are best able to manage that risk but disadvantages include the higher costs of private capital and strategic behaviour by partners. With respect to the higher costs of private capital, this suggests that short-term Government budget constraints are not a good reason for contracting-out, unless there are offsetting operating cost savings. Strategic behaviour includes phenomena such as hold-ups, lock-ins and hostage taking. Hold-ups occur when events place a contractual relationship outside the self-enforcement range. For example, in the case of the Channel Tunnel scheme (arguably more a private than a public-private scheme) lower than expected, inflation contributed to such a hold-up while others (e.g., Vickerman, 2004) have argued that the construction industry exploited such hold-ups (construction took 7 years). Lock-ins occur as a result of long-term contractual commitments. In the case of the Channel Tunnel debts were negotiated on what have proved to be historically high interest rate levels. In this case, it might be argued that individual shareholders were taken hostage by the major financial institutions. Problems with strategic behaviour were also detected in the case of the Stockholm-Arlanda rail link but were found to be less of an issue in the case of the Oresund road and rail crossing between Denmark and Sweden.

A tentative conclusion from the papers by Alexandersson and Aoki is that public-private partnerships can be a successful way of delivering capital investment or subsidised services, but they can also go wrong if the institutional framework and allocation of risks and rewards are inappropriate. This is an issue that will be examined further below.

## 2.2. Franchising

The evidence base for the discussion of rail franchising was provided by papers by Mees on Melbourne and separate papers by Preston and Nash on Great Britain. A number of common features are apparent. The reforms were ambitious in both cases and, due to political expediencies, somewhat rushed. Both of the reforms had been preceded by a longish periods of corporatisation that had reduced costs and subsidy, but there were much shorter preparatory phases. In both cases, there have been increases in costs since franchising was introduced (particularly if the preparatory phase is taken into account) leading to rising subsidy levels. There have also been concerns relating to punctuality, reliability and the

provision of additional capacity. In Britain the most serious cost increases have been related to maintenance and renewal of infrastructure, but substantial train operating cost increases over the last few years have wiped out earlier gains. In both cases, there has been strong growth in traffic, but despite this at least half the franchises have failed in some sense, being replaced by renegotiated franchises or management contracts. In one case in Britain the state (through the former Strategic Rail Authority) even took over the running of one franchise (ironically from Connex, one of the surviving operators in Melbourne) as the operator of last resort. In Great Britain these measures have been a pre-cursor to re-tendering, which has been highly competitive and almost always accompanied by a change of operator. The most recent example has been the failure of GNER and the subsequent award (during the course of the conference) of the contract to National Express (a further ironic turn of events given their failure in Melbourne). In Melbourne, a new regime of negotiated performance based contracts has been initiated, apparently because the authorities feared that a re-tendering exercise might fail for lack of competition. This concern in Britain was partly met by a cap and collar incentive regime in which revenue risks (and rewards) are shared between operators and Government. This seems to have contributed to a highly competitive round of bidding.

The above suggest that long net cost contracts (Great Britain) or those with an emphasis on revenue incentives (Melbourne) can be problematic. All auctions are prone to the winner's curse but this is more apparent in contracts where the winner has to bear losses for a long period. Placing revenue risk entirely with operators is problematic given that trends in traffic depend mainly on factors such as the performance of the economy, that are outside the control of the operator, and long run contracts are inevitably incomplete in that unforeseen events may lead to a need to change the level or quality of services provided. Moreover, such uncertainties and incomplete contracts may encourage bidders to engage in strategic behaviour such as low-balling – that is bidding for too little subsidy (or proposing too high premiums, usually backloaded) – in the expectation that they will be able to renegotiate the contract mid-term. The winner's curse seems the most likely explanation of the contract failures examined but there is a suspicion that some firms may adopt a low-balling strategy (which is a form of predatory pricing), although in the Australian and British cases examined it does not appear that it has proved to be profit enhancing. This might be reduced by requiring the franchisee to post a surety which is surrendered in the event of contract renegotiations initiated by the franchisee. However, this could limit the competition for franchises. The performance bonds/financial guarantees required in Great Britain can be easily absorbed by the large multi-nationals but did appear to deter management buy-outs and small new entrants in the initial round. Instead, the current emphasis in Great Britain is on a no renegotiations strategy, including a cross-default provision (if one of a company's franchises fails, then that company has to surrender all of its franchises). However, the credibility of this strategy in the event of mass defaults (e.g. as a result of an unexpected economic downturn) must be questioned.

## 2.3. Infrastructure charges

Infrastructure charges are important for giving the right incentives but there are currently enormous variations in approaches. Macário presented evidence on charging in 23 Europe countries. It was found that some 46 variables were used to determine charges, which could be grouped into six categories – type of infrastructure used, type of slot requested, type of service, type of rolling stock, service offered and type of traction. It was found that charges varied from €0.6 per train km (Sweden) to €14.6 per train km for

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