Governance and structure of the railway industry: three pillars

Paul Amos and Richard Bullock

World Bank Office, Beijing

In China and in many other countries there is a compelling public interest in the railway industry. How do different countries try to pursue the public interest in railways? This paper finds common elements of governance and institutional structure in eight countries whose diverse railway industries collectively carry about two-thirds of all the railway traffic in the world outside China: Australia, Brazil, Canada, France, Germany, Japan, Russia and the USA. These common elements are: the existence of a Ministry of Transport with oversight and multi-modal transport policy responsibility; separation of government policy and regulatory functions from the commercial management of railway services; overwhelming preference for company structures (whether private or state-owned) to deliver railway services; multiple service providers; and divisional or institutional separation of freight from passenger services. China's railway industry governance structure is not based on these elements. But changes in transport competition and in the scale of China's railway industry, together with the desirability of a more coordinated national transport system, suggest that now there may be useful lessons for China from the international experience. The paper speculates on three common policy 'pillars' upon which China may wish to base alternatives for consideration.

THE PUBLIC INTEREST IN RAILWAYS

Railways contribute both to economic growth and social well-being. Rail freight services usually do the land-based 'heavy lifting' of national economies, giving producers in key industries access to high-capacity transport at a cost lower than road transport. Passenger railways also perform valuable economic and social roles in dense inter-city corridors, and as part of well-integrated regional passenger transport systems in densely populated areas.

These roles could often only be transferred to road transport at a higher cost in road infrastructure, traffic congestion, vehicle emissions and traffic accidents.

In countries which have suitable corridors and markets to sustain it, the railway industry is a matter of strong public interest. Public interests are what underpin public policies. This paper summarizes public interests and public policies for railways in eight geographically spread case-study countries which have large railway industries, namely Australia, Brazil, Canada, Germany, France, Japan, Russia, and the USA. These countries carry about two-thirds of the world's total railway traffic outside China[1].

Germany, France, Japan and Russia have, like China, mixed-use railways. By contrast, Australia, Brazil, Canada and the USA have limited passenger train activity outside the cities and are predominantly freight carrying railways. The eight countries therefore have very diverse railway industries in terms of their railway markets, train operations, and ownership characteristics.

PUBLIC INTERESTS IN RAILWAY TRANSPORT

What then are the public interests in railway transport in these countries? Naturally, their policy-making bodies prioritize objectives differently and use somewhat different vocabularies. Some countries have explicit national transport strategies which formally articulate government objectives across all

[1] Measured by the sum of passenger-km and tonne-km, International Union of Railways Statistics, 2010.

modes; others are recorded on ministerial websites or in ministerial statements. To paraphrase, the common denominators of public interest seem to be that railways should be efficient, market-responsive (provide good service to their customers), publicly affordable (not imposing an unsustainable burden on the public purse), safe, and environmentally acceptable.

Despite their very different railway industries, the eight countries pursue public interests in railway transport through public governance and institutional frameworks which have some remarkably similar characteristics.

UNITARY TRANSPORT MINISTRY

All eight countries have the equivalent of a transport ministry[2] at the central government level whose role is to develop and administer policies to promote public interests across all transport modes (or at least all land-transport modes).. They seek to establish integrated national transport policies that transcend or augment individual modal interests and they provide oversight of the specific modal departments responsible for implementation.

TRANSPORT COORDINATION

Governments of the eight countries are all seeking to attain transport systems that are more integrated than have typically been delivered either by traditional public administration of individual transport modes or by market forces. Integration is usually interpreted as a 'level playing field' for competition between modes, a rational allocation of public investment between different modes, or better interchange facilities between modes, or all three of these.

SEPARATION OF POLICY FROM DELIVERY

All eight countries adopt the principle that public policy-making and regulatory oversight roles in the railway industry should be separate from the role of railway services provider. Three factors seem to have been influential in adopting this principle.

First, the concern that, without separation, policy-makers who are also accountable for the commercial results of a services provider will be conflicted by public interest policies that may make it harder to achieve their targets (such as reducing barriers to entry, or implementing consumer protections). Second, there are big differences in the professional and institutional skills necessary for formulating and analyzing public interests and public policies, as compared to running a commercial enterprise. Third, separation allows more efficient forms of organization for the service delivery entities; this brings us to the fourth common characteristic.

CORPORATE FORM

Irrespective of ownership and structure, all but a handful of several hundreds of railway service providers in the eight countries are corporations or subsidiary companies of larger corporations. This is true when they are big or small, when they are state-owned or privately-owned, when they are constituted under companies law or by special state-owned enterprise legislation, when they receive no budgetary support or a lot of budgetary support, and irrespective of whether they are freight, passenger or mixed railway companies.

The main exception is in France where the national operator SNCF is not a corporation but a 'public sector commercial group' operating under its own legislation. Nevertheless it is strongly segmented, with separate management and accounting for each of five distinct divisions: Infrastructure; Urban/Regional passenger services; Long-distance and high–speed passenger services; Freight and logistics services; and Train station management and development.

It is not surprising that corporatized entities are favoured. In nearly all production and service industries, companies have proven historically to

[2] In some cases the Ministry or Department includes other infrastructure sectors.

be the most successful formula so far devised by modern economies for running large commercial businesses in competitive markets, even when the companies remain owned by the state. Nevertheless, a state-owned corporation is not a guarantee of good management. Evidence suggests that state-owned corporations should be reinforced with strong corporate governance: independent and qualified boards of directors; merit-based selection of managers; management accountability for targets; management structures geared to markets and focused on core functions; greater pricing freedom; effective accounting and auditing standards; and others [3] . Both privately and state-owned corporations in the eight countries demonstrate many such features.

MULTIPLE SERVICE DELIVERY PROVIDERS

As noted above there are many hundreds of railway transport service providers in the eight countries. They include over 800 different entities providing rail freight services and over 130 providing rail passenger services. (These numbers exclude purely metro rail systems.) Even where there is a major public corporation there are usually numerous specialist companies as well.

The largest number of service providers is in the USA which has 7 Class 1 railways (including Canadian rail companies operating under negotiated track access agreements), 23 regional operators, 339 local (or short-line) operators and 194 switching and terminal operators.

The most diverse industry in the predominantly passenger railway countries is arguably Japan, where there are 6 main regionally-based service providers (3 private and 3 state-owned) which succeeded Japanese National Railways, plus 21 large and medium-sized mainly private (and a few municipally) owned smaller companies operating mainly in the suburban or regional passenger railway sector. Japan also has a main private freight train operating company using track access rights plus several smaller branch line freight operators.

The number and configuration of companies in each country has been heavily influenced by history, by geography, and most particularly by the nature and dispersal of their transport markets (bigger and more diverse transport markets may, in principle, support more companies). But policy choices have also been important. In Australia, Canada, Germany, Russia and the USA, active policy decisions favoring competition in the rail freight market underpin the existence of multiple rail freight operators. In the long-distance passenger rail sector, direct competition between railway companies has not been prevalent in any of the countries. But some have separated regional passenger operations as a matter of policy (Germany, Japan and Russia).

SEPARATION OF FREIGHT FROM PASSENGERS

Another common characteristic is the separation between passenger rail and freight rail. In Australia, Brazil, Canada, Japan and the United States, nearly all freight and passenger service is offered by wholly separate companies. In Germany, Russia and France, freight and passenger services are offered as separate subsidiaries (or in the case of France, separate divisions) of a common holding group.

It was not always so; in all eight countries, the biggest national railway companies once jointly managed both passenger and freight transport business. Because freight trains and passenger trains run on the same tracks, railways historically treated them as different parts of the same business. They saw this business as being to run trains. But mixed freight and passenger management became increasingly ineffective in a more competitive environment. The business of a railway these days is to serve transport markets better than other transport suppliers. Market needs differ for passenger and freight services even if their trains run on the same

[3] A checklist of good practice is captured in the OECD Guidelines on Corporate Governance of State-owned Enterprises, 2005[3].

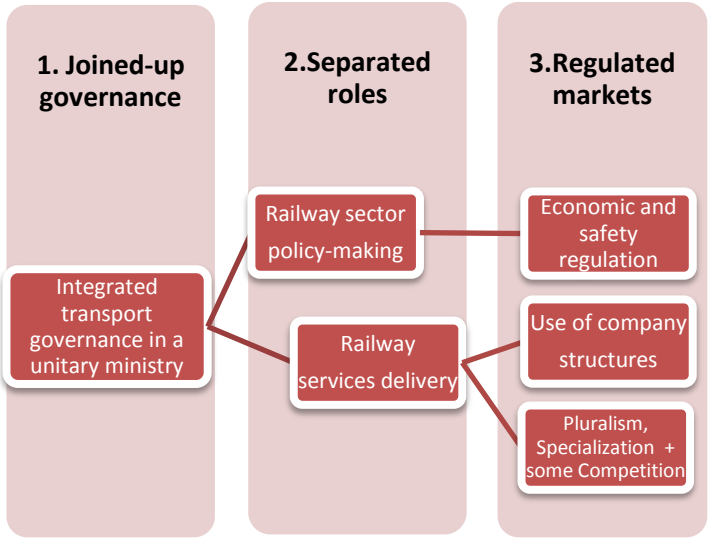
tracks: different customers; different service needs; and different social roles.

Mixed structures also make it harder to separate the profitability of each market so making it harder to monitor performance. And when profit in a more successful sector is automatically transferred to the lagging sector through a joint set of accounts, this dampens the incentive of the successful sector to keep on improving and dilutes the need for the lagging sector to try harder.

COMMON FEATURES: THE THREE PILLARS

It is evident then that the railway governance and industry structures contain three common policy principles, even though they differ substantially in most other respects. The figure below illustrates these three 'pillars'.

All eight countries have tried to join-up governance of the transport sector, or at least the land-transport sector, in a single ministry. All have separated the roles of policy-making and transport services delivery (in all modes, including railways). And all have seen a need to independently regulate the industry (whether by ministry or agency). Naturally railway supply markets differ but they are all dominated by entities that are corporations, and all have many specialist suppliers and some competition, especially in rail freight.



CHINA'S RAILWAYS

The organization and structure of China's railway industry is very different from the other eight countries. This is despite the fact that the public interests in transport are much the same in China as in case-study countries. China's rail sector governance and organisation, embodied in Article 3 of the 1991 Railway Law, differs from the other countries:

- **Ministry structures**: in China, a Ministry of Railways (MOR) is the policy-making body for railway transport, and not a Ministry of Transport.
- **Transport co-ordination**: China's Ministry of Transport has no policy mandate for co-ordinating railways with other modes.
- **Separation of policy from delivery**: the MOR directly administers and is financially responsible for railway service delivery units, the eighteen regional rail authorities (RRAs).
- **Corporate structure of service providers**: the RRA's are sub-divisions of a ministry, not state-owned companies.
- **Multiple service delivery providers**: despite the huge size of China, MOR is the overwhelmingly dominant transport service provider throughout the mainland[4].
- **Separation of freight and passenger service**: MOR's passenger and freight services are not separate entities; each of the eighteen RRA's operates both passenger and freight services through the same management structure and a shared resource base.

China's model is therefore exceptional. It does not have joined-up transport governance, it does not separate the roles of policy-making and

[4] Others include the Daqin and Shuohuang coal lines, and Guangshen Railway but most other train operators are confined to relatively minor industrial and local lines In practice, China Rail carries around 99 percent of passenger-kms and 94 percent of freight tonne-km (2009 figures)

service delivery and it does not have the features of a regulated market but of an administered industry.

IS ANY OF THIS RELEVANT TO CHINA?

This is a question for China to decide, but it may be helpful to offer some personal observations as to reasons why China might wish to consider alternatives. The reason cannot be that the current framework has not worked. In 1949, China had only 22,000 km of poorly maintained and war-damaged railway line, less than 1,000 km were double-tracked and none was electrified. Since then, MOR has transformed the railway sector into a vital element of China's national transport system and a key contributor to China's extraordinary record of economic growth. Today, on 91,000 km of generally high-quality network, China has by traffic volume the world's second busiest freight railway and busiest passenger railway. Train services are run with discipline and efficiency. All this has been achieved, in recent years at least, largely through self-funding with limited budgetary support. MOR's central role in driving and coordinating network development in recent years has been pivotal.

The reason for considering change is therefore not due to any lack of past achievements but more about adapting to changing circumstances.

The biggest and most important change is that of market competition. Since the 1991 Railway Law, highway transport, inland shipping and airline services have all improved and expanded their infrastructure and services by leaps and bounds. Railway mode-share has generally declined. In all the other modes, railways are competing not against government departments but against companies. Is it time to establish railway service providers on a similar basis?

A second factor is that China's railway network is now more amenable to alternative solutions. When it was a sparse, patchy system of 20,000 km the structural opportunities were limited. It is now headed towards a 2020 target of 120,000 km of some of the most modern and well-used railway in the world, located in one of the world's biggest countries. There is no reason to suppose that one company needs to run it all or one solution fits all parts of the country. To give a hypothetical illustration of this point, if China Rail actually consisted of five regional companies of roughly equal traffic task, each one would still appear on a list of the ten busiest railway companies in the world[5]. And each would be big enough to create an internal structure with freight and passenger divisions that would themselves be of world-class scale.

Third, since 1991 there has been massive investment in transport infrastructure in all modes of transport but programs have been assembled from the individual plans of different modal administrations, with little co-ordination and integration. If, in the future, China is to optimize the use of its existing infrastructure, and to allocate future public investment between different networks efficiently it needs a coordinated National Transport Strategy. This has been done in most of the eight case-study countries. It has proven to be a complex and demanding task even though they have multi-modal Ministries of Transport to do it. It seems wholly unrealistic to expect it can happen at all if such a huge and important transport sector as railways is quite separate from the rest of transport.

If China were to adopt the 'three pillars', while still retaining the central role of the state in railway policy and network ownership, it might look something like this:

- A Ministry of Transport responsible for general transport oversight, multi-modal transport policies, transport integration and public resource allocation between modal networks;

[5] The only larger ones would be the Indian Railways Board, the Russian Railways Corporation, Burlington Northern (USA), and Union Pacific (USA).

- A National Railway Administration (NRA) within that Ministry of Transport; the NRA would be responsible for railway policy and (possibly through specialist agencies) technical and safety regulation for all railways in China (as in the 1991 Law), but without the ownership or service delivery role;
- A specialist national network strategy and development unit within the NRA, to co-ordinate institutions and joint-ventures involved the delivery of the Mid to Long-Range Network Development Plan;
- A number of large regionally-based autonomous railway companies operating under a special state-owned enterprise law, or under company law; the shares in each company would be owned by a ministry responsible for public enterprises or other suitable ministry which would appoint their boards of directors and they would typically have separate operating divisions or subsidiaries for freight and passenger service;
- A number of specialist or separately branded inter-regional services run either as joint-venture companies of the adjacent regional companies, and/or through mutual track access rights granted between the regional companies to be able to use a neighbour's tracks, and/or as new independent companies operating with track access rights for an access fee which the NRA could regulate[6] .
- A number of smaller railways, including those classified as local, industrial and branch railways under the 1991 Law; but they could also include coal and other resource railways.

Adopting a new, more diversified structure cannot be undertaken lightly. The best solution must reflect actual transport markets. The implementation details (including the nature of corporate structures and the allocation of railway debt) would need careful investigation by China's specialists in government and institutes. The authors believe that such a policy re-evaluation at this time would be well worthwhile.

[6] Track access by third-party train operating companies occurs to a lesser or greater degree in all eight countries reviewed.

****

Paul Amos *is a transport strategy and management consultant and previously the World Bank's Transport Advisor.*

Richard Bullock *is a transport consultant specialising in railway business planning, financial modelling and project evaluation.*

The authors have been involved in management and technical studies relating to more than 80 railway entities in 52 countries.

*This note is part of the China Transport Note Series to share experience about the transformation of the Chinese transport sector. For comments, please contact John Scales (*jscales@worldbank.org*) or Gerald Ollivier (*gollivier@worldbank.org*), from the Beijing World Bank Office.*