Russian Rail Reforms

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Russian Railways

The USSR was proud of its extensive railway network that had both the most numerous rolling stock in the world and carried the heaviest freight and passenger traffic in terms of tonne-km and passenger-km. Even after the break up of the USSR, Russia still occupies a leading position among the world's railways in various indices of rail transport. For example, Russian Railways (RZD) operates more than 87,000 km of trunk lines (about 50% electrified) and about 70,000 km of secondary and branch lines. The total rolling stock fleet is composed of 318,000 freight wagons, 29,000 passenger carriages, and about 24,000 locomotives, EMUs and DMUs. About 1.5 billion passengers use the railways each year, corresponding to more than 170 billion passenger-km. Freight traffic in 1997 totalled 1.1 trillion tonne-km.

The 1991 break-up of the Soviet Union saw the establishment of the 15 Commonwealth of Independent States (CIS), each of which faced serious social, technical, economic, and administrative problems due to the negative legacy of policies inherited from the Soviet era and the unskilled attempts to reform the Russian economy in the early 1990s. For example, the planned economy and production had all but collapsed, but privatization of large inefficient state-owned enterprises actually exacerbated the difficulties rather than solved them. Russian Railways (RZD), which comprises 17 of the 32 regions of the former Soviet Railways (SZD), was not immune to these problems. Although RZD remains a state-owned business and largely escaped the dramatic fall in production indexes experienced by other state industries, it faced severe difficulties caused by the close cooperative relationship between business and rail transport in Russia.

At the same time, although falling production has not caused any marked scaling-down of the transport infrastructure, it has resulted in an abrupt decline in production efficiency. For example, while the railway infrastructure has been scaled down only slightly (working rolling stock still stands at 350,000 units and registered rolling stock is twice that figure), total freight traffic in 1998 is half the 1991 figure.

The break-up of the Soviet centrally planned economy also resulted in less financial, technical and economic support. Subsidies from the state are being phased out. In 1994, the central government severely restricted its grants for major projects, and by 1995 government investment was about 96% less than it had been 3 years earlier. Most capital projects are financed by RZD itself, but local authorities sometimes provide assistance, especially for station construction and purchasing rolling stock for commuter services. The railway is no longer holding-down passenger fares by using cross-subsidies from profitable freight operations. Since the establishment of the CIS, the load factor for freight wagons has decreased; the ratio of empty mileage to total mileage increased from 0.34 in 1991 to 0.42 in 1997 (an increase equivalent to extra losses of US$160 million).

Containerization of rail transport has decelerated rapidly; in 1997, only 1% of freight traffic in Russia was containerized compared to 15% to 20% in the USA and Western Europe.

Other basic operating problems are related to the service life of locomotives. The mean life of commissioned RZD locomotives is 20 years and they still have the best service record and output power. However, fuel consumption of domestic diesel locomotives in 1997 was already a long way behind the USA.

Freight wagons present a serious problem. Although there are 726,000 registered units, most are out-of-date general-purpose wagons with long running histories. As a result, repair costs are more than twice the norm, and the low specialization level causes increased costs.

Moscow – St. Petersburg express (top speed of about 200 km/h) *(Author)*

Modernization

Russian Railways still holds a leading position in terms of trackage (72%) with automatic and centralized block control systems, but the level of automation is inferior to the latest technology used in other countries.

The railway efficiency has declined as a result of the marked decrease in traffic and because infrastructure maintenance costs comprise a massive 70% of operating costs (irrespective of traffic volume). As a result, when traffic decreased by half, productivity halved because the number of rail workers was reduced by only 2%. Inaccurate pricing and estimation of market factors caused other substantial problems. For example, demand elasticity was not factored into fare tables.

However, despite all these serious difficulties and unlike many other state-owned enterprises and entire business fields that were liquidated, RZD has survived the crisis while remaining under state-ownership and is still able to meet demand, albeit at lower efficiency.

Although many of the market economy and privatization models borrowed from the West have destroyed domestic industries, RZD experienced less suffering by optimizing the balance between state and private ownership. For example, workshops for individual railway lines were privatized as joint-stock companies, while key facilities remain under state ownership. It is quite probable that the present stage of Russian economic development is unsuitable for the Japanese railway privatization model, although there is a possibility of partial application in the future.

Railway transport in Russia still has room for wide expansion. RZD has its capital assets and infrastructure in place, although they require complete modernization, and it has prepared a technical improvement programme.

Passengers buying refreshments at Tula *(Author)*

1997 Action plan

The Ministry of Railways adopted an action plan in July 1997 to update the railway's technology flexibly in line with operating conditions, traffic volumes and structure of the railway industry. This programme contains the following measures:

- To classify railway lines, especially parallel lines running east–west and north–south, with the intent of optimizing train loads and movements, and closing surplus facilities (including stations, depots, yards, etc.) as well as sections suffering serious losses
- To review existing technology based on the real needs of consignors and consignees, and to use freight train diagrams more widely
- To introduce high-speed containerization and refrigeration on the following routes: West Europe–Central Russia–Asia; Scandinavia–Central Russia–West Europe; Central Russia–Southern Russia
- To use the latest trans-shipment technology at ports and change-of-gauge borders
- To improve the efficiency of railway operations through better technology despite lower traffic volumes

The Trans-Siberian Railway, which is being modernized, remains much more advanced than the New Asia–Europe Land Bridge (*JRTR* 14, pp. 30–33) in terms of logistics, staffing, and traffic levels. Probably, not only will the Trans-Siberian keep its No. 1 position for freight transport between the Far East and Europe, it will also be extended to provide services between South and Southeast Asia, and Europe.

Financing

RZD is defining its modernization priorities and is restructuring through organizational changes to find an up-to-date balance between private and state ownership and funding. Financing of transport systems in Russia has only recently moved away from reliance on the state budget, but as mentioned earlier, the state still carries the main burden of new railway construction and technical innovations. International financial institutions, particularly the

European Bank for Reconstruction and Development (EBRD) are providing assistance in development of future railway transport systems. A credit arrangement for US$120 million was agreed with the EBRD in 1996 to finance the first stage of RZD modernization.

Organizational reforms

A system of private transport operators is being created to meet the growing needs of passenger and freight customers. Establishment of private rolling stock companies is being encouraged and about 20% of the total freight wagon fleet is already owned by such companies. The process of setting up suburban passenger transport companies with private partners has also begun in some regions such as St. Petersburg and Samara. Efforts are being made to facilitate Russian and foreign freight customers using the Trans-Siberian Railway. A joint venture between the Russian Ministry of Railways and the American CSX Corporation has set up a land bridge railway service utilizing the Trans-Siberian Railway.

Restructuring of RZD through organizational changes is still in the first stages and the railway is adapting to the changing economic conditions in which it operates. Certainly, it is hard to articulate a clear-cut strategy of railway reforms for transport policy-makers because the future and consequences of Russian economic reforms as a whole are unclear. But it is obvious that a serious imbalance between public and private ownership during the slow transition to a market economy could destroy the country's transportation system and distort its economic mechanism. Much needs to be done to find the right balance, which will change with the pace of reforms.

Conclusion

Railway transport and the environment in Russia is another huge and separate subject but it seems to be pertinent to emphasize the following. The downward trend in overall transport activity in Russia will certainly result in an absolute reduction in negative impact on the environment. Simultaneously, growing transport technology could increase the pollution burden on man and nature but future technical progress in transport should stop this negative trend.

Improvements and new technologies in railways could become the locomotive of Russian economic development. Moreover, railway transport could help Russia occupy an important place in the global economy as a necessary link in the international transport chain connecting Asia and Europe. RZD is already involved in a large UN project to develop the land transport infrastructure in Asia especially the Trans-Siberian branch of the Trans-Asian corridor. The renaissance of the Trans-Siberian Railway on a new technical base can only benefit the countries of the Asia–Pacific region, the EU, and Russia. ■

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