WORLD TRADE ORGANIZATION

RESTRICTED

S/C/W/61
28 October 1998

(98-4222)

Council for Trade in Services

LAND TRANSPORT SERVICES

PART II - RAIL TRANSPORT SERVICES

Background Note by the Secretariat

I. INTRODUCTION

1. This note has been prepared at the request of the Council for Trade in Services. It provides background information on rail transport services for discussion in the information exchange programme of the Council. It contains basic and general information on trade in these services and should not be considered exhaustive.

2. For details about intermodal competition and previous work during the Uruguay Round on land transport in general and on GATT jurisprudence potentially applicable to railways, refer to document S/C/W/60.

3. Rail transport is described in document MTN.GNS/W/120 as containing five sub-categories: passenger transportation, freight transportation, pushing and towing services, maintenance and repair of rail transport equipment, and supporting services for rail transport services. In order to study these subsectors, the present note is organized as follows: Part II gives an overview of the characteristics of the sector in terms of economics, trade and regulation; Part III analyses the relevance of the current classification; Part IV analyses the commitments; and Part V indicates additional sources of information.

II. OVERVIEW OF THE ECONOMIC, TRADE AND REGULATORY CHARACTERISTICS OF RAIL TRANSPORT

4. Railway companies were set up and operated in the 19th century as competing private enterprises, even though at that time they already received practical government support (allocation of land alongside the railway lines being built in the United States, financing of infrastructure). In the early 20th century they gradually formed themselves into groups. In many cases, they were nationalized, partly because the arrival of road transport for freight and individual motor transport for passengers meant that railway networks showed a massive structural deficit. In colonial territories, the government authorities usually established and administered the railway company directly. In the area of urban rail transport systems, the majority of subway systems (which are included within the definition of rail transport in the Provisional Central Product Classification (CPC-W/120)) were also set up, financed and managed from the start by government authorities, particularly the local authorities, in view of the large investment required and the fact that such networks are rarely profitable.

5. A "classic" public monopoly therefore emerged (but this was not universal because in the United States, for example, freight transport companies were never nationalized), and this form of organization is still the most widespread. This model only started to evolve in the 1980s as a result of the pressure for deregulation, privatization and the granting of concessions, encouraged by the authorities in some developed countries on the one hand and on the other by the World Bank in developing countries and countries with economies in transition. The very low level of commitments on rail transport (see paragraphs 42 to 49 below) is undoubtedly due to a large extent to the difficulty of integrating the GATS concepts of multilateral liberalization into this traditional framework.

6. Within such a framework, rail transport is a natural monopoly with high infrastructure costs, indivisibility and substantial externalities. Because of these features, government authorities have imposed controls over entry, withdrawal, technology, operating practices, capital formation, pricing, frequency, the financial structure and accounting practices.[1] Such companies are therefore vertically integrated; one single entity is responsible for the infrastructure, operation and marketing. The focus is on production and the company is centralized and tightly organized into a hierarchy, which has its counterpart in the high rate of trade union membership. A company may be State-owned (this was the case in Europe, Latin America, Africa and nearly always in Asia), or private (New Zealand, United States, Japan for certain companies). It may have national or regional geographical coverage (Japan, United States) with possible variations on sectorial monopolies (passengers in the United States, freight in Japan) or regional monopolies (passengers in Japan) that may sometimes compete (freight in the United States where several companies only involved in freight may compete on the same routes). It has traditionally been recognized that the advantage of this model of vertical integration is its capacity for planning, but practice has shown that its disadvantages are failure to respond to the market, sometimes questionable investment decisions, absence of any incentive to control costs and poor financial performance.

7. Since at least the 1970s, the growth in road carriage of goods and passengers and, to a lesser extent, air transport of passengers has significantly eroded the market share of the railways. To take an example, in the European Union the railway's share in terms of passenger/kilometres fell from 10.3 per cent in 1970 to 8.5 per cent in 1980 and 6.2 per cent in 1994, whereas the figure for automobile traffic rose over the same period from 75.1 per cent to 79.7 per cent and for air transport from 2.1 per cent to 5.8 per cent. The renaissance of passenger traffic due to high-speed trains has merely halted the trend without being able to reverse it. Future development of these high-speed trains remains dependent on finding the financing needed to build new track, and this is highly problematic, even when the private sector is brought in (cf. the financing problems of the Folkestone-London stretch of the Eurostar or the difficulty of finding enough private financing for the TGV projects in Texas, Florida and Australia).

8. This downward trend is even more noticeable in the freight sector, where the modal split share of railways in tonne/kilometres in the European Community fell from 31.7 per cent in 1970 to 24.9 per cent in 1980, 18.9 per cent in 1990 and 14.9 per cent in 1994, whereas the share of road transport rose from 48.9 per cent to 71.9 per cent. This trend is omnipresent, but the degree varies according to the country, the initial modal split ratio and the structure of the networks. In the United States, for example, rail transport is still well ahead in terms of volume (40.9 per cent in 1995) compared with road transport (28.9 per cent), but the growth trend is much lower than that for road transport (1970-1995: rail = +70.6 per cent, road = +123.4 per cent).

[1]For further details regarding the development of the legal and economic structure of rail companies, see: "Railways: Structure, Regulation and Competition Policy", DAFFE/CLP(98)1, 10 February 1998, submitted to the Round Table held at the OECD on this issue and "Restructuring Regulation of the Rail Industry for the Public Interest" by Ioannis N. Kessides and Robert D. Willig, 28 August 1995, working documents of the World Bank, Private Sector Development Department.

9. The trend is even more noticeable in terms of value because the nature of the goods transported has changed and there is a much larger proportion of light goods with a high unit value that have to be delivered rapidly. The railways' share has therefore gradually been confined to bulk and heavy traffic, although since the early days of containerization in the United States and later in Europe, they have tried to win back the high value-added traffic by establishing transnational freight corridors for container-only trains (for example, Gioia Tauro-Antwerp) with a guaranteed date of arrival and computerized tracking of the goods.

10. The development of combined transport remains extremely marginal, particularly piggy-back transport, and is highly dependent on subsidies or sometimes restrictive transit measures by government authorities, which utilize railways as an ecological and energy-saving alternative to the growing congestion on major highways.

11. In developing countries, railways are particularly important because they constitute the main form of mass passenger transport at a price accessible to the majority of the population. This explains why in 1995 China alone accounted for 18 per cent of passenger/kilometres carried in the world and India 18 per cent (for purposes of comparison, the figure for the 15-member European Community was 14 per cent, for Russia 9 per cent, and for the United States 1 per cent). Railway companies in these countries also face competition from road transport and problems in financing the maintenance and renewal of the infrastructure and rolling-stock.[2]

12. A study by the United Nations Economic Commission for Europe in 1990 on "Europe's Railway of the 90s" (Trans/SC.2/172) gives a fairly good idea of the sector's economic balance at the beginning of the decade. On average, 50 per cent of the network and 50 per cent of stations deal with 90 per cent of the traffic, while the following passenger sectors show a negative performance: suburban services and slow trains (local or regional trains); for goods, the negative sectors are parcels, single wagons and piggy-back transport ("railroad highways"). In passenger transport, the sectors that make a positive contribution are high-speed trains and daily Intercity expresses, for goods, they are complete train loads with long-term contracts and complete trains of trailers and containers.

13. Many analytical accounting calculations have even shown that passenger traffic at best only exceeds marginal costs whereas freight traffic is capable of yielding net profits. This is confirmed in the United States where freight companies are private and usually profitable, whereas passenger traffic is the responsibility of one large State company, Amtrak, which receives a subsidy of 21 per cent (1991) and 12 private companies with concessions and State finance for up to 40-60 per cent.[3] These figures also show that activities viewed as essential by the authorities and which have economic externalities such as suburban transport show a structural deficit (Japan does not fit this picture due to the density of its urban population and the property activities of railway companies). It can also be seen that half the network and stations only deal with 10 per cent of the traffic and their continued existence has more to do with regional administration and universal service considerations than economic ones. It is telling to note that projects carried out with World Bank support almost systematically include a component on closing lines that are particularly unprofitable.

14. All these characteristics can be clearly seen in the accounts of railway companies: for members of the United Nations Economic Commission for Europe, earnings from transport

[2]For an overview of the problems faced by railway companies in developing countries see in particular "Railways Project, Lessons and Practices", September 1993, World Bank, Operations Evaluation Department. "Designing Major Policy Reform, Lessons from the Transport Sector", by Ian G. Heggie, April 1991, World Bank discussion paper No. 115 and "Main Issues in Transport for Developing Countries during the Third United Nations Development Decade 1981-1990", ST/ESA/117, April 1982, United Nations Department of International Economic and Social Affairs.

[3]Cf. the background note for the OECD DAFFE CLP (98)1 Round Table *op. cit.*

(passengers and goods) only represented between 20 to 70 per cent of the railway companies' income, with an average of 50 per cent. The rest was covered by compensation for the performance of a public service and for retirement indemnities, subsidies, and the State's coverage of the residual deficit. With regard to costs, personnel costs, including social security contributions, accounted for between 48 to 77 per cent, with a median value of 55 per cent. This ratio is declining with the gradual reduction in the number of employees. Lastly, the accumulated debt to finance investment led to financial costs of around 5 per cent of operating costs and this figure has since increased.

15. This unbalanced economic structure is even more marked in the case of urban rail transport, due *inter alia* to the high cost of the infrastructure and amortization. In 1989, for example, the average cost of building 1 km. of railway track on the surface was US$20-25 million while in tunnels a kilometre of track cost US$85-105 million.[4] This explains why to date only 93 cities in the world have such a transport system (29 in the European Community, 14 in the United States, 9 in Japan, 4 in Central and Eastern European countries and 4 in China).[5] The following table, taken from a World Bank study[6] gives an idea of the structure of the accounts of urban rail transport companies in a representative sample of cities in developing and developed countries. It shows in particular (cf. penultimate column) that none of these companies cover their total costs by their operating revenue and, in general, the ratio is rather 20 to 40 per cent, irrespective of the size of the subway system or the technical choices involved. It should also be noted that old subway systems, where theoretically the cost of the building the lines has already been amortized, are not profitable either.

[4]Source: "Urban Transport Development with Particular Reference to Developing Countries", United Nations, ST/ESA/210, 1989.

[5]Source: "World Passenger Transport", March – April 1998, European Communities, DGVIIE-1 (RD).

[6]"Urban Transit System: Guidelines for Examining Options" by Alan Armstrong Wright, World Bank technical paper No. 52, May 1986, cited in "Urban Transport Development with Particular Reference to Developing Countries", United Nations, ST/ESA/210, 1989.

Table 1: Urban Rail Services: City Comparisons, 1983[a]

City	Type of system	Length of line (km.)	Percentage below ground	Total number of stations	Passengers/ year (million)	Annual operating costs (US$ million, 1983)[b]	Total annual costs (including cap. costs) (US$ million, 1983)[c]	Annual operating revenue (US$ million, 1983)[d]	Fare (5 km.) (US$)	Operating revenue/total costs (including annual cap. costs)[c]	Total costs per passenger/km. (US$, 1983)[c,e]
Caracas	Subway	12.3	90	14	80.6	33.34	120.28	42.16	0.47	0.35	0.332
Santiago	Subway	25.6	81	35	109.0	15.32	76.89	20.31	0.18	0.26	0.136
Sao Paulo	Subway	25.0	70	26	347.0	67.15	210.54	40.68	0.07	0.19	0.081
Tunis	Suburban rail	26.0	0	20	24.0	7.55	11.41	4.05	0.20	0.36	0.044
Adelaide	Suburban rail	152.1	0	93	12.9	31.70	51.88	4.29	0.54	0.08	0.538
Baltimore	Subway	12.8	56	9	7.8	99.20	147.33	48.10	0.75	0.33	2.518
Berlin (west)	Subway	100.8	100	114	346.2	126.44	498.15	104.05	0.78	0.21	0.228
Calgary	LRV*	12.5	10	8	11.9	5.44	15.43	..	0.81	..	0.146
Chicago	Subway	395.8	9	143	149.7	101.50	388.79	61.30	0.90	0.16	0.221
Hong Kong	Subway	26.1	77	25	412.0	60.96	152.06	132.27	0.06	0.87	0.049
London	Subway	388.0	42	247	563.0	440.08	1,094.58	440.99	0.51	0.40	0.259
Montreal	Subway	50.3	100	57	199.9	92.53	180.38	31.68	0.69	0.18	0.141
Nagoya	Suburban rail	544.5	0	369	379.8	189.34	224.78	261.43	..	1.16	0.032
Nagoya city	Subway	57.5	96	59	330.0	127.09	326.43	158.73	0.72	0.49	0.432
New York	Subway	370.0	60	465	992.6	1,100.00	4,750.99	955.34	0.90	0.20	0.480
Osaka	Subway	90.9	89	74	856.6	414.37	780.32	416.49	0.72	0.53	0.182
San Diego	LRV*	25.6	0	18	4.7	5.30	14.86	4.34	0.50	0.29	0.524
San Francisco	Subway	113.6	28	34	55.5	128.20	401.66	69.80	0.60	0.17	0.341

Source: Alan Armstrong Wright, "Urban Transit System: Guidelines for Examining Options", World Bank technical paper No. 52, May 1986.

[a]Two dots(..)indicate that data are not available or are not separately reported.
[b]Excluding depreciation and interest charges.
[c]Including operating costs, depreciation and interest charges. For comparative purposes, a uniform method of calculating depreciation and interest charges has been used to obtain total costs.
[d]Passenger-less including fare box and advertising revenue, but excluding subsidies.
[e]Where not specified in the survey response is imputed using an average trip length of 7.5 km.
[*]Light rail vehicle.

16. Faced with a growing deficit, at the end of the 1970s, government authorities tried to improve the traditional rail model. This led in the first instance to free fixing of prices (for example, in the United States, railways were authorized to conclude confidential contracts with shippers; 1976 Railroad Revitalization and Regulatory Reform Act and 1980 Staggers Act), often followed by the creation of specialized departments (freight, passengers, long distance, regional passengers, maintenance) as profit-making centres each responsible for its commercial policy but sharing common costs with the other departments on the basis of analytical accounting (a typical example is the organization of British Railways from 1980 to 1994). In parallel with this development, there was growing concern to identify more clearly the public service constraints and a consensus emerged7 that government authorities, particularly local or regional authorities, should be called on to finance the obligation to provide regular train services in a clearly-defined way adapted to each situation: depending on the country, the financing could be in the form of concessions or contract-plans with a single operator.

17. In the course of a third phase, a new model separating operating activities from management and maintenance of the infrastructure gradually started to be imposed. The theoretical inspiration for this model is similar to that for the telecommunications, electricity and gas sectors. In the case of railways, the idea was that, even if the costs of the infrastructure could not be recovered, the gains in efficiency obtained by separating operating/traction activities, no longer hampered by the financial burden of the infrastructure, would alone justify the State writing off the debt incurred by investment in infrastructure in its profit and loss account. This model was imposed in the European Union by Directive 91/440/EEC8 and in this particular case was coupled with the intra-Community liberalization of traffic. This step towards the international liberalization of rail traffic was the first in the world and warrants a relatively detailed description.

18. Directive 91/440/EEC gives "international groupings" (of one or more railway undertakings in member States) access and transit rights in the member States of establishment of their constituent railway undertakings, as well as transit rights in other member States for the supply of international transport services among member States where the undertakings constituting the said groupings are established. Furthermore, individual railway undertakings, (excluding urban, suburban and regional transport) are given the right of access, on equitable terms, to the infrastructure in the other member States for the purpose of operating international combined transport goods services. Subsequent Directives defined the regime for the licences that need to be obtained in order to be considered a railway undertaking within the meaning of Directive 91/440 (Directive 95/18 of 19 June 19959) and the criteria for the non-discriminatory allocation of infrastructure capacity and the charging of fees (Directive 95/19 of 19 June 199510).

19. These regulations are too recent for it to be possible to assess their impact fully. Nevertheless, in the light of the trade initiatives that immediately followed, the impact appears to be significant. Some member States interpreted the Directive strictly and established paths restricted solely to groups of national companies baptised "freightways". These include the 17 Antwerp-Lyons paths, with extensions to Marseilles and Barcelona, on the one hand, and to Turin-Genoa-Milan-La Spezia-Giaoia Tauro, on the other, set up in 1997-1998 by Interdelta/Belitalia, a grouping of Belgian, French, Italian, Spanish and Luxembourg railway companies.

---

[7]See, for example, Regulation EEC No. 1192/69 of 26 June 1969 and the subsequent legislation and Ioannis N. Kessides and Robert D. Willig "Restructuring Regulation of the Rail Industry for the Public Interest", World Bank, WPS 1506, 1997.

[8]Official Journal of the European Communities (OJEC) No. L 237, 24 August 1991.

[9]OJEC No. L 143, 27 June 1995.

[10]OJEC No. L 143, 27 June 1995, it should be noted that this Directive, as is the case for the licensing Directive, also excludes from its scope the cross-channel shuttle services.

20. Other member States (Germany, Netherlands, Austria and Italy, together with Switzerland in this instance) have gone beyond the Directive and have put in place three freight corridors between Germany, the Netherlands and eventually Scandinavia, on the one hand, and Austria, on the other, this time called "freeways" because they are not only open to national operators but also to any recognized rail operators within the meaning of Directive 95/18. The two cross-channel paths set up by the SNCF, the French rail company, in collaboration with the private British operator, EWS, subsidiary of the American company, Wisconsin, can also be considered "freeways", but in part at least these paths are not covered by the scope of the Directives. Shipowners such as the American company Sealand, the British company P&O and the Netherlands company Nedlloyd have already joined with the Dutch railways, NS, to set up a company, ERS (European Rail Services), to operate trains on these freeways. NDX, which is comprised of the Deutsche Bahn, the NS and the mother company Sealand, as well as the American company CSX, is another example of these international groupings. Lastly, in spring 1998, Deutsche Bahn and NS cargo merged their freight activities in a transnational company called "Rail Cargo Europe".

21. In two successive White Papers on 30 July 1996[11] and 29 May 1997[12], the Commission of the European Communities proposed to extend access rights to all freight and international passenger services. It also proposed that "freeways", which would remain based on voluntary arrangements among infrastructural networks, be open to all licensed operators and be able to undertake cabotage traffic (which would be partially opened up in accordance with a staggered timetable). It also proposed that rail, road and river transport operators be given fair, equal and non-discriminatory access to freight terminals. These proposals have encountered strong opposition from certain member States and trade unions.

22. In several member States, access has been much more open than that envisaged in Directive 91/440 and foreshadows the Commission's proposals by including national services. This is the case in Germany, where free access for freight has been established (but on a reciprocal basis in the case of foreign operators), the United Kingdom, where there is also free access for freight, and the Netherlands where free access also covers passenger services. Despite these provisions, new competition is emerging only with difficulty. The level of charges and the way in which they are calculated have no doubt discouraged newcomers in Germany, who remain confined to a few freight operators.[13] Although for the time being access is free in the Netherlands, only a few freight operators have arrived on the scene together with one passenger operator ("Lovers Rail") controlled by French interests; in the United Kingdom, only two freight operators have emerged, one of which was subsequently taken over by the main operator. Attempts can be made to explain this situation without referring to the reticence or even obstruction of infrastructure managers *vis-à-vis* newcomers in respect of paths and pricing offers: it has to be admitted that such negotiations and the technical identification of paths available are extremely complex.

23. This type of access right also exists, and has existed for some time, at the national level in the United States where Amtrak only owns 450 miles of track itself but has access to a further 24,000 miles of the American network owned by private freight companies on payment of a fee. Access rights also exist in the case of private freight companies and the Surface Transportation Board, which is the successor to the Interstate Commerce Commission, in accordance with competition policy, requires companies owning track to allow access by other companies. This is also true in Japan, where the only freight company has access to the whole regional company network subject to

[11] COM(96)421 final.

[12] COM(97) 242 final.

[13] See OECD document DAFFE/CLP(98)1 and H. Link "Access Pricing in the German Railways System", presented at the Fifth International Conference on Competition and Ownership in Land Passenger Transport (Leeds, 27-30 May 1997).

payment of a fee following privatization of Japan National Railways. In New Zealand, there are access rights for sections that carry less than a certain tonnage or specified number of passengers, but in this instance the railway company remains vertically integrated (infrastructure plus operation).

24. It is significant to note that this concept of access rights does not appear at all in the schedules of commitments even though it could be the technical vehicle for multilateral liberalization. If this should be the case in the future, non-discriminatory allocation of rights would raise problems similar to those for allocating air transport slots (whether or not this is the government's responsibility, allocation principles, etc.) and to a lesser extent interconnection and the allocation of frequencies in telecommunications. The question of non-violation (access denied because no path is available) would be a particular problem.

25. In parallel with this movement to separate the infrastructure from operations and to allow marginal opening up of access rights, more radical privatization initiatives have been tried out in developed countries, as well as in countries with economies in transition and developing countries under the auspices of the World Bank.

26. Up until now, the United Kingdom has gone the furthest along this road. As this experience in some respects constitutes a form of international liberalization of rail transport, it needs to be described in some detail.[14] In the United Kingdom, the principle of separating the two activities has been taken to extremes: the infrastructure has been given to a company, Railtrack, which was privatized in May 1996; passenger rolling stock was divided up among three companies subsequently sold to the private sector which lease it to the operators. The system was intended to reduce the entry costs for concession-holders. Passenger services were handed over to 25 companies, some of them controlled by foreign interests, in the form of concessions for periods of seven to 15 years. Track renewal and maintenance was also given to companies sold to the private sector, which compete in order to win contracts.

27. Two government bodies, the Office of Passenger Rail Franchising (OPRAF) and the Office of the Rail Regulator (ORR) grant the concessions, regulate prices and the terms of access to the tracks, specify minimum service levels and, for certain categories of fare, maximum fares. In order to protect the concession holder, open access to passenger services is limited to routes where there is no service or which account for a very small part of the concession holder's income. There is open access for freight, as mentioned above, but with even more limited results.

28. The immediate effect of privatization was a sharp rise in subsidies given to operators because they had to meet costs not faced by integrated operators: the charges for using the infrastructure and rolling stock (grants to the British Railways Board: 1993/4: £1,121 million; 1994/1995: £1,984 million. Subsidies to concession holders, 1996/1997: £2,090 million; estimated subsidy for 2003: £1,169 million.) Operators have nevertheless undertaken to reduce the subsidies by half within seven years and some routes could even become profitable. It is as yet too early to draw any lessons from this experience. Some competition can be seen on certain routes, the level of services has improved and operators have started to renew the stock, but the OPRAF is still critical of the level of services provided by certain concession holders and Railtrack has not reached the investment objectives fixed.

29. As part of its loan activities for restructuring railways, the World Bank, after having for a long time promoted autonomous operators rather than the government (in Pakistan, Colombia, Korea,

[14]For further details, see DAFFE/CL(98)1, OECD round table, *op.cit*, and C. A. Nash "Privatization and Deregulation in Railways: an Assessment of the British Approach" 1997, study presented at the Seminar on the Privatization and Deregulation of Transport, Oxford, 2-4 July 1997.

Senegal, Mali, Yugoslavia) now encourages the granting of concessions. This was the case in Argentina, Côte d'Ivoire and Burkina Faso.[15]

30. Concessions obey the logic of government procurement rather than that of market access within the framework of the GATS. It should nevertheless be noted that no member of the Plurilateral Agreement on Government Procurement has made any commitment on rail transport services.

31. The relative importance of different modes of supply and obstacles to trade are fairly closely linked to the structure of railway companies and their evolution as described above. In the case of mode 1, for a long time international transport of passengers and freight only consisted of joining successive national segments from the point of view of both fares and the technical and legal responsibility for transport. No single entity was responsible for an international journey, the freight or the passenger being passed on from one monopolistic network to another. In mode 1, therefore, there was no competition, except in the case of transit between the same two points using different routes (Rotterdam-Genoa through Germany and Switzerland or through Belgium and France). It was only following the arrival of high-speed trains, on the one hand, and freight corridors, either freightways or freeways, on the other, that basic commercial concepts emerged; for instance: the one-stop shop, harmonized commercial policy, the pooling of revenue or even more simply common accounting methods to allow the profitability of an international transport operation to be assessed. In spite of the noteworthy efforts made over the past 40 years, national operators still face many technical obstacles when operating beyond their own borders, even when such operations are allowed and they have an ad hoc path: the type of electric power, different gauges, signalling systems, braking systems, commercial speed limits, height of railway wagons, axle load and technical standards for wagons.

32. With regard to mode 2, there does not appear to be any restrictive legislation anywhere. On the contrary, there is cross-border cooperation among railway companies to attract certain customers and incite them to use rail transport services in mode 2 (young peoples' rail passes, Eurorail cards, for example).

33. There was no trade under mode 3 as long as rail transport remained a government monopoly. The establishment and development of private companies (provided that a majority shareholding by a foreign company is allowed), together with the gradual introduction of access rights, or even eventually cabotage rights, subject to establishment in the country concerned, now make rail transport under mode 3 increasingly possible. One example of this type of trade is the recent purchase of minority shares in the largest Mexican railway by several American railway companies and the planned purchase of minority shares in another Mexican network by another American railway company. In both cases, however, these are minority shareholdings. The increase in concessions, which are often given to foreign groups that then have to become established in the country concerned, also allows the development of trade under mode 3, but in this particular case the concession holder is given a monopoly, at least a regional monopoly, which restricts access by third parties and the issue concerns government procurement rather than market access.

34. As far as mode 4 is concerned, there is always a marginal flow of technicians and engineers, particularly to developing countries. The increased number of concessions has seen this flow broadened to include managers.

35. Following this brief description of the economic aspects and before analysing in detail the commitments undertaken, some comments on the MTN.GNS/W/120-CPC classification (see Annex 1) for this sector are called for. A study of this sector highlights what appear to be a certain

[15]For further details on this aspect, see the *op.cit* in footnote 2 on page 3.

number of instances in which the classification is not adapted to the true situation. Moreover, the classification itself seems to be ambiguous in some cases.

III. PRELIMINARY REMARKS ON THE RELEVANCE OF THE CLASSIFICATION TO COMMITMENTS

36. Rail transport services have been divided into five subcategories, namely, passenger transportation, freight transportation, pushing and towing services, maintenance and repair of rail transport equipment and supporting services (terminal services, cargo handling services, other support services).

37. In this structure, passenger transportation by railway (11.E.a) includes both interurban transportation and urban and suburban transportation, that is to say underground or elevated railways, whereas in economic and regulatory terms it can be argued that urban transportation by railway has characteristics that are closer to those of competing means of transport such as motor buses, tramways and trolley-buses[16]: A concession regime with public service obligations regarding networks and schedules compensated by operating subsidies and public financing of investment, often State-owned, managed by a common transit authority. Additionally, as mentioned in detail in paragraph 24 of document S/C/W/60 , it appears that for light rail vehicle (LRV) networks the distinction between rail transport and urban road transport is blurred and even disputable. In practice, of the ten Members that have made commitments on rail transport services, only one has distinguished underground from other passenger transport and introduced similar qualifications to those of the other urban transport systems.

38. The classification singles out an activity, "pushing and towing services", which is generally not performed by an entity separate from the one operating the transport (except sometimes in the case of the private connections where these services are generally supplied on their own account and therefore escape the discipline in the Agreement). Five Members have, however, offered these services, three of them without limitations and two of them with limitations (joint venture in one case, attribution of a concession in the other case). Technically speaking, the exercise of this activity by a separate entity from the one(s) operating the transport and the network implies access to the network and some kind of coordination with the operator(s) of the rail transport. If access to the network was to be denied or made subject to the payment of a large fee or coordination with the operator was refused, there might be a case for an action for non-violation and for invoking Article VIII. The question therefore arises whether or not it is necessary to establish more precise rules to guarantee access to the network and safeguard competition.

39. It should be noted that that maintenance and repair activities are limited to the transport equipment and not the maintenance and repair of the railway infrastructure, which is covered by the construction items of the CPC (CPC 51310 "construction work of highways, streets, roads, … railways and airfield runways", CPC 51320 "construction work of bridges, … elevated highways, … tunnels, and subways").

40. "Supporting services" are not described in great detail: "terminal services, except cargo handling, and other supporting services for railway transport" whereas similar headings for other modes of transport are much more detailed in the classification. This imprecision may be one of the explanations for the very low level of commitment in this subsector (four countries) and for the need felt by one country to have recourse to *sui generis* concepts. It might be worthwhile envisaging the development of a more detailed list based on the concepts of the industry.

[16] Classified under CPC 71211 "urban and suburban regular transportation" and under CPC 71214 "interurban special transportation" for school buses, all part of 11.F.a "passenger road transportation".

41. Finally, Members will find a detailed assessment of the changes suggested for railway transport in the CPC/Rev.1 classification in document S/CSC/W/6/Add.5, dated 4 June 1997, paragraph 5, and a summary of those changes and of their potential impact on existing commitments in document S/CSC/W/9, dated 9 October 1997, paragraphs 31 and 32.

III. ANALYSIS OF COMMITMENTS

42. As shown in Tables 1 and 2 in Annex 2, nearly one half of the commitments at subsectoral levels (18 out of 47) concern repair and maintenance, a subsector which has been offered by 18 countries out of 21 having made commitments in the sector. For repair and maintenance, the regime offered appears extremely liberal as full market access in consumption abroad has been granted in 16 cases out of 18 and in commercial presence in 12 cases, while partial restrictions were scheduled in two cases (joint venture, space and capacity constraints). It is worth noting that 12 countries have considered the supply of these services in cross-border mode as not technically feasible, while five others deemed it feasible. It may be worth considering a harmonized and refined solution to this question of technical feasibility, taking into account the progress in electronic tele-maintenance, which now makes certain operations technically possible.

43. Passenger transportation and freight transportation have each been offered by ten countries, eight of which have offered both subsectors.[17] In two instances, the scope of the sector offered has been limited: exclusion of high-speed trains in one case (United States) and of bulk liquids, gases and mail in another (Brazil). Market access has been opened up in four cases out of ten in model 1, while this mode was considered technically infeasible for passengers by two countries and for freight by one country. This divergence is related to the legal qualification of international trains. A harmonized solution to this question may be worth studying. Such a solution could take into account the general commercial evolution in both high-speed passenger and freight trains, moving from a regime where a journey meant joining together national segments in terms of pricing, management, and revenue-sharing towards a more cooperative and integrated regime among railway companies (one-stop shop, common exploitation, transnational freight alliances, etc.). Here again, the consumption abroad regime is extremely liberal (ten out of ten cases and nine out of ten cases respectively). Market access to the key commercial segment, commercial presence, has been fully offered by two Members, one of them having however kept an unbound entry for national treatment restrictions. For passengers and freight, the other seven and six countries respectively made partial commitments on commercial presence, but then introduced requirements on concessions authorizations, incorporation, joint ventures and investment limitations, and, with regard to national treatment, conditions relating to the nationality of executives, together with additional concession requirements.

44. Pushing and towing services have been offered in total by five Members with no limitations whatsoever in mode 2. Three countries also have a fully liberal regime for modes 1 and 3, while two countries imposed restrictions under mode 3 (joint ventures and concessions). No specific national treatment limitations were entered.

45. Supporting services for rail transport have been offered by four countries (one of them limiting the scope to security and cleaning), with a full liberal regime on consumption abroad. Two of these countries introduced limitations on commercial presence (joint ventures and horizontal limitations).

46. Finally, regarding mode 4, all the subsectors of rail transport seem to adhere to the classic norm of "unbound except as indicated in horizontal commitments".

[17] Brazil only offered freight and Mexico part of passenger transport.

47. In total, it appears that the level of commitments in rail transport is extremely low (13 per cent of the Members for maintenance, 7 per cent for passenger and freight transportation, with many limitations). This can certainly be explained by the existence of national monopolies. However, three of the activities (maintenance, support services, and pushing and towing) can technically and economically operate outside or inside the classic monopoly scope. There is certainly room for commitments under modes 1, 2 and 4, whose de facto regime seems in general relatively liberal. It is also noteworthy that the various regulatory reforms separating infrastructure and transport, privatizing, granting concessions and establishing competition did not translate at all into commitments undertaken. Their binding in WTO schedules may require additional work in the future on scheduling (additional commitments on access to/use of the network), monopolies, competition and the government procurement regime (for the concessions).

48. As far as MFN exemptions are concerned and setting aside the "all sectors derogations" it appears that two types of exemption affect the supply of rail transport services: those concerning land transport in general and those concerning rail transport in particular. In seven cases out of ten, the general land transportation exemptions concern regional agreements in South and Central America. The three other cases concern reciprocity requirements, among which one case of tax reciprocity (VAT). There are five proper rail transportation exemptions: three of them have been made in identical terms by Central European countries to cover existing or future agreements regulating traffic rights and operating conditions, one concerns preferential treatment for leasing charges for railway wagons for specified neighbouring countries, and one a reciprocal deduction of tax on earnings from the use of rolling stock. These MFN exemptions have a noticeable effect on the commitments as seven Members out of the 15 that have made exemptions have made commitments (two out of the ten have made general land transportation exemptions, all of the five have made proper rail transport exemptions).

V. INFORMATION SOURCES

Relevant sources of information also include the following websites :

- International Union of Railways (UIC) (http://www.uic.asso.fr/uk/about/annualreport/p1uk.htm)
- European Conference of Ministers of Transport (ECMT) (http://www.oecd.org/cem/resol/index.htm)
- Organisation for Economic Co-operation and Development (OECD) (http://www.oecd.org/)
- World Bank (http://www. world bank.org/html)
- United Nations Economic Commission for Europe (UN-ECE) (http://www.unece.org/oes/eceintro.htm)

ANNEX 1

MTN.GNS/W/120/ CPC PROVISIONAL
DESCRIPTION OF RAIL TRANSPORT SERVICES

(*Nota bene* the level of concordance between MTN.GNS/W/120 and CPC provisional is indicated in bold).

SECTION 11.E: RAIL TRANSPORT SERVICES:

711 Transport services by railway

7111 Passenger transportation (11.E. a)

71111 Interurban passenger transportation

Interurban passenger transportation provided by railway, regardless of the distance covered and the class used.

71112 Urban and suburban passenger transportation

Urban and suburban passenger transportation by railway. Urban traffic is defined as traffic the origin and destination of which are within the borders of the same urban unit; and suburban commuter traffic as traffic within a greater metropolitan area including contiguous cities. Included here are services provided by urban mass transit railways (underground or elevated railway).

7112 Freight transportation (11.E.b)

71121 Transportation of frozen or refrigerated goods

Transportation by railway of frozen or refrigerated goods, e.g./perishable food products, in specially refrigerated cars.

71122 Transportation of bulk liquids or gases

Transportation by railway of bulk liquids or gases in special tank cars. These cars may also be refrigerated.

71123 Transportation of containerized freight

Transportation by railway of individual articles and packages assembled and shipped in specially constructed shipping containers designed for ease of handling in transport.

71124 Mail transportation

Transportation of mail by railway on account of national and foreign postal authorities.

71129 Transportation of other freight

Transportation by railway of freight, not elsewhere classified.

7113 71130 **Pushing or towing services(11.E.c)**

Railway pushing or towing services, on a fee or contract basis, e.g. the movement of wagons between terminal yards, industrial sidings, etc.

8868** 8680 **Repair services of other transport equipment, on a fee or a contract basis (11.E.d)**

(no description as the items of division 88 "agricultural mining and manufacturing services" are not described by the CPC.)

743 Supporting services for railway transport (11.E.e)

7430 74300 Supporting services for railway transport

Railway passenger terminal services, except cargo handling, and other supporting services for railway transport, not elsewhere classified.

Exclusions: Shunting services are classified in subclass 71130 (Pushing or towing services).
Railway freight cargo handling services are classified in subclass 74110 (Container handling services), if for containerized freight, and in 74190 (Other cargo handling services), if for non-containerized freight or passenger baggage.

ANNEX 2

ANALYTICAL TABLES OF COMMITMENTS

Table 1: Summary of Specific Commitments - Rail Transport Services

COUNTRIES	11.E.a.	11.E.b.	11.E.c.	11.E.d.	11.E.e.	TOTAL
Brazil		X				1
Bulgaria				X		1
Canada	X	X		X		3
Czech Republic				X		1
European Community				X		1
Finland				X		1
Hungary	X	X		X		3
Japan				X		1
Mexico	X					1
New Zealand	X	X	X			3
Nicaragua	X	X	X	X	X	5
Nigeria				X		1
Norway			X	X	X	3
Philippines	X	X		X		3
Sierra Leone	X	X	X	X	X	5
Slovak Republic				X		1
Slovenia				X		1
Sweden				X		1
Switzerland	X	X	X	X		4
Thailand				X	X	2
Turkey	X	X				2
USA	X	X		X		3
Total	10	10	5	18	4	47

Key:

11.E.a. Passenger transportation
11.E.b. Freight transportation
11.E.c. Pushing and towing services
11.E.d. Maintenance and repair of rail transport equipment
11.E.e. Supporting services for rail transport services

Table 2: Analysis of Commitments Made by Members on Railway Transport Services
(Number of Full, Partial and No-Commitments by Subsector and by Mode of Supply)

Market access (Number of Members with commitments)	Cross-border supply			Consumption abroad			Commercial presence			Presence of natural persons		
	F	P	N	F	P	N	F	P	N	F	P	N
Railway passenger transportation (CPC 7111)	4	1	5 2*	10	0	0	2	7	1	2	8	0
Railway freight transportation (CPC 7112)	4	*1*	5 1*	9	0	1	2	6	1	1	9	0
Railway pushing and towing services (CPC 7113)	3	0	2	5	0	0	3	2	0	0	5	0
Maintenance and repair of rail transport equipment (CPC 8868**)	4	0	13 12*	16	0	1 1*	12	3	2	1	16	1
Supporting services for railway transport (CPC 743)	2	0	2	4	0	0	2	2	0	0	4	0

F: Full commitment (indicated by "none" in the market access column).
P: Partial commitment (limitation recorded in the market access column of the schedule).
N: No commitment (indicated by "unbound" in the market access column of the schedule).

Table 3: Analysis of the Types of Measures (Number of Measures in Land Transport Services, Excluding Pipelines)

Sector	Rail				Road			
MODE	1	2	3	4	1	2	3	4
MARKET ACCESS								
Number of suppliers	2	-	6	-	1	-	10	-
Value of transactions or assets	-	-	-	-	-	-	-	-
Number of operations	-	-	-	-	-	-	1	-
Number of natural persons	-	-	-	3	-	-	-	4
Type of legal entity	-	-	10	-	-	-	10	-
Participation of foreign capital	-	-	6	-	-	-	11	-
Other measures n.e.c[18]	-	-	17	-	1	-	28	-
NATIONAL TREATMENT								
Tax measures, subsidies and grants	-	-	-	-	-	-	-	-
Nationality and residency requirements	-	-	5	-	-	-	7	2
Licensing, standards, qualifications	-	-	1	-	-	-	2	-
Registration requirements	-	-	-	-	-	-	6	-
Authorization requirements	-	-	4	-	-	-	5	-
Performance requirements	-	-	-	-	-	-	-	-
Technology transfer requirements	-	-	-	-	-	-	-	-
Other	-	-	2	-	-	-	2	-

[18]The numbers in "other measures n.e.c" correspond to cases where an entry could not be classified in one or other of the separate categories of limitations. In some cases, this was due to lack of specificity in the description of the measure, while in others it was because the measure itself did not correspond to any category.

Table 4: Rail Transport in Europe 1995

Members of the UIC		Length of line (kilometres)	Passenger/kilometres		Tonne/kilometres	
			Millions	% 95/94	Millions	% 95/94
BR + Railtrack	United Kingdom	16,564[1]	29,216	2.0	12,537	-3.5
CFL	Luxembourg	275	286[e]	-1.0	529	-18.0
CH	Greece	2,474	1,568	-1.9	292	-5.8
CIE	Ireland	1,954	1,291	2.5	602	5.8
CP	Portugal	2,850	4,809	-5.9	2,019	23.5
DB AG	Germany	41,718	60,514	-1.3	68,490	-2.6
DSB	Denmark	2,349	4,784	-1.0	1,926	-4.1
EPS	United Kingdom	-	18	-	-	-
EUROTUNNEL	France/ Great Britain	58	182	-	-	-
FS	Italy	16,003	49,700	1.6	22,243	8.6
NS	Netherlands	2,739	13,977	-3.2	3,097	9.4
ÖBB	Austria	5,672	9,628	4.6	13,084	5.5
RENFE	Spain	12,280	15,313	3.1	10,011	16.7
SJ + BV	Sweden	9,782	6,219	5.3	18,542	-0.3
SNCB / NMBS	Belgium	3,368	6,757	1.8	7,304	-9.8
SNCF	France	31,939	55,319	-5.9	48,137	-1.7
VR + RHK	Finland	5,880	3,184	4.8	9,559	-3.9
Total EU		**155,905**	**262,765**	**-0.7**	**218,372**	**-0.0**
BLS	Switzerland	245	410	4.9	402	-9.3
CFF / SB	Switzerland	2,98	11,712	-3.1	8,156	1.2
NSB	Norway	4,023	2,381	-0.7	2,715	1.4
Total EU + EFTA		**163,160**	**277,268**	**-0.8**	**229,645**	**0.0**
BDZ	Bulgaria	4,294	4,693	-7.2	8,595	10.9
CD	Czech Republic	9,430	8,023	-5.4	22,634	-0.7
CFARYM	FYR of Macedonia	69	65	-3.0	169	11.2
CFR	Romania	11,376	18,847	3.1	24,041	11.5
GYSEV / RÖEE	Hungary	22	104	1.0	265	-1.9
HSH	Albania	674	197	-8.4	53	-0.4
HZ	Croatia	2,296	943	-2.0	1,975	19.2
JZ[2]	Yugoslavia	4,031	2,612	2.2	1,460	5.3
MÁV	Hungry	7,606	6,120	-2.7	7,254	10.9
PKP	Poland	23,986	20,960	-3.7	68,206	5.4
SZ	Slovenia	1,201	595	0.8	2,881	25.4
ZBH	Bosnia and Herzegovina	1,032	21	-	16	-
ZSR	Slovakia	3,668	4,202	-7.6	13,763	11.6
Total "CEEC"[3]		**70,513**	**67,382**	**-2.3**	**151,312**	**6.9**
Baltic countries and CIS						
BC	Belarus	5,543	12,505	-22.2	25,510	-8.8
CFM	Republic of Moldova	1,326	1,019	-15.4	3,004	-10.8
EVR	Estonia	1,021	421	-21.6	3,573	7.4
LDZ	Latvia	2,413	1,373	-23.5	9,757	2.5
LG	Lithuania	2,002	1,130	-28.2	7,220	-9.7
UZ	Ukraine	22,607	63,752	-10.1	195,762	-2.3
Total for the 6 networks		**34,912**	**80,200**	**-12.9**	**244,826**	**-3.1**
TCDD	Turkey	8,549	5,797	-8.5	8,409	3.8
TOTAL		**277,134**	**430,647**	**-3.6**	**634,192**	**0.4**

[1] Data for 1994.
[2] Railways of Belgrade and Montenegro.
[3] Central and Eastern Europe.
[e] Estimate.

Source: UIC, Statistics Centre.

Table 5: Rail Transport Worldwide 1995

Members of the UIC		Length of line (kilometres)	Passenger/kilometres		Tonne/Kilometres	
			(Millions)	% 95/94	(Millions)	% 95/94
Maghreb						
ONCFM	Morocco	1,907	1,564	-16.9	4,509	0.0
SNCFT	Tunisia	1,941	996	-4.0	2,302	4.2
SNTF	Algeria	4,290	1,797	-19.6	1,946	-14.6
Middle East						
ARC	Jordan	293	-	-	706	0.7
CFS	Syria	1,525	492	-13.2	1,285	8.0
IRR	Iraq	2,409	2,198	-5.8	1,139	-40.9
ISR	Israel	610	267	15.6	1,175	7.9
RAI	Iran	5,332	7,294	12.6	11,865	10.9
SRO	Saudi Arabia	1,392	164	18.0	822	0.7
Other networks						
BoR	Botswana	971	86	7.5	626	7.0
CFCO	Congo	609	302	33.0	267	20.3
CFM	Mozambique	3,123	251	48.9	886	19.4
ENR	Egypt	4,810	52,406	13.1	3,727	2.9
KR[1]	Kenya	2,740	408	-15.4	1,282	-14.1
NRC	Nigeria	3,557	-	-	-	-
OCTRA	Gabon	683	77	11.6	503	45.0
RNCFC	Cameroon	1,006	317	-5.1	812	7.3
SARCS	South Africa	2,228	9,085	9.3	-	-
SPOORNET	South Africa	23,327	590	-41.4	99,850	1.1
SIPF	Côte d'Ivoire	639	129	-	187	-
SITARAIL	Burkina Faso/ Côte d'Ivoire	-	52	-	58	-
SOPAFER	Burkina Faso	622	202[e]	-	45	-
SNCS	Senegal	906	194	4.4	475	23.1
SNCZ[1]	Zaire	4,752	29	20.8	176	3.6
SRC	Sudan	4,595	220	-	1,538	-
TRC 1	Tanzania	2,600	694	-	1,354	-
TZR	Tanzania/Zambia	1,860	689	-11.4	763	-1.0
URC	Uganda	1,250	30	-7.6	236	6.5
ZRL	Zambia	1,273	267	-20.6	462	-29.2
CFRC	Cambodia	650	38	-0.4	9	-41.3
CR	People's Republic of China	54,616	354,261	-2.5	1,283,601	3.3
IR	India	62,660	319,365	7.8	249,564[3]	-1.1
JR	Japan	20,134	248,993	1.9	24,747	2.6
KCRC	Hong Kong	100	4,038	3.4	41	-12.8
KNR	Republic of Korea	3,101	29,292	1.5	12,889	-8.4
KTM	Malaysia	1,798	1,270	-5.8	1,416	-3.2
TRA	Chinese Taipei	1,108	9,489	-0.2	1,801	-5.2
AAR Class 1	U.S.A.	201,284	-	-	1,906,268	8.8
AAR Amtrak	U.S.A.	39,429	8,692	-	8,0	-
VIA Rail[1]	Canada	13,490	1,341	1.8	-	-
EFE	Chile	2,742	689	-15.5	64	-
ENAFER	Peru	1,609	216	-7.7	407	-19.4
ARM[1]	Armenia	830	-	-	-	-
AZ	Azerbaijan	2,123	791	-	2,409	-
TRK	Turkmenistan	2,153	1,876	26.4	8,568	-34.0
QR	Australia	9,452	994	-2.9	26,492	5.2

[1] Data for 1994.
[2] Including empty private-owners' wagons.
[e] Estimate.

Source: UIC, Statistical Centre