Experience with Labor Redundancy Schemes in the Transport Sector in Western Europe, the United States and Japan

Dieter Havlicek

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Discussion Paper

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EXPERIENCE WITH LABOR REDUNDANCY SCHEMES IN THE TRANSPORT SECTOR

IN WESTERN EUROPE, THE UNITED STATES AND JAPAN

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France: French Railways (SNCF)
Germany: Port of Hamburg; Deutsche Bundesbahn (DB)
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UK: British Railways (BR); UK Ports
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ACKNOWLEDGEMENTS

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SUMMARY

1. This study is part of a broader research program on labor redundancy in the transport sector which is motivated by recent work in the Bank on public sector pay and employment policies which highlighted the need for further analysis and the formulation of policy guidance in a number of areas, including labor force reduction programs. Such labor reduction programs, often termed labor redundancy schemes, are the topic of this paper. The transport sector lends itself to an analysis of labor redundancy since it accounts for a large share of public sector employment, overstaffing is pervasive, the number of parastatal enterprises or government entities is easily identifiable, and lay-offs of redundant workers have figured prominently in Bank lending for the transport sector. But so far little attention has been given by the Bank to the evaluation of different options of labor redundancy schemes and the likely economic, social or political impact of staff reductions, or the question of how to minimize adverse consequences.

2. In Western Europe, the U.S. and Japan labor redundancy in the transport sector has been a familiar problem. Therefore, it was felt useful to review the experience of these industrialized countries in terms of the magnitude of the problem, its causes, how the entities concerned, as well as the workers and governments, coped with the problem, how effective the different solutions adopted were and what measures, if any, were taken to deal with the problem more effectively in the future. It is hoped that the experience of the industrialized countries can help identify some of the factors which must be taken into account in an analysis of similar cases in developing countries where labor redundancy in transport is an issue and where appropriate schemes are to be formulated for long-term solutions to the problem.

3. The magnitude of the decline of employment in the majority of railway enterprises, and ports, examined in this study has been impressive. Staff decreases between 40% and 70% were not uncommon in the railways. Only two small railway enterprises, Netherlands Railways and Austrian Railways, kept employment more or less static, but for different reasons. The ports registered staff reductions of the same magnitude. The 52 U.K. ports, for instance, participating in the National Dock Labor Scheme, experienced a decline in the employment of registered dockworkers of about 80%. The decline in employment may even be understated since it was not always possible to measure the staff reductions from the year of peak employment to the latest reference year. Moreover, the end of the decline has not yet been reached.
4. The time needed to adjust staffing levels differed considerably between seven and 48 years. In some enterprises it was a slow, continuous process, in others there were distinct periods of staff reductions. The introduction of staff redundancy schemes usually accelerated staff reductions. Slow adjustment was generally adopted by enterprises which were functioning well and experiencing constant or increasing demand. Concentrated periods of staff reduction usually were observed in enterprises with rapidly declining demand or accelerating losses.

5. The surplus labor in the enterprises included in the study resulted from a combination of forces, acting at the macroeconomic, sectoral, enterprise and political levels. As regards railways, the main determinants for the decline in employment were:

(i) on the demand side, the changing role of the railways in the economy from a quasi monopolistic, ubiquitous all purpose carrier into a more specialized, limited purpose one in competition with other developing modes of transport (roads, pipelines, coastal and inland waterway shipping);

(ii) on the supply side, technological developments in the railways themselves, which were spurred on by the pressures of cost and quality competition of alternative transport modes; and

(iii) sometimes, external pressures to employ more staff than necessary.

In the ports the introduction of laborsaving technology - containerization and other methods of cargo unitization - was the main cause for surplus labor.

6. While the factors identified above explain the causes of surplus labor they cannot explain the often slow adaptation of the enterprises to their changing economic and technical environment. The reasons for this "stickiness" of surplus labor is predominantly to be found in one or a combination of these factors:

(i) market morphological factors - labor markets were monopolistic in structure enabling organized labor to limit new entry and, through restrictive work practices, reduce labor productivity.

(ii) inadequate management autonomy and accountability.

(iii) excessive labor protection legislation.

7. Having established the causes of redundancy in the transport enterprises concerned, the paper then examines the impact of redundancy schemes on the labor adjustment process. The same institutional forces - governments, organized labor and management - which earlier in the process had hampered or were unable to deal effectively with the swift
adaptation of the labor force to changed circumstances also contributed to the formulation of policies to come to grips with the problem. In the case of the railways, governments were forced to act because mounting deficits had, or threatened to, become unmanageable. In the case of ports, the predominantly private port enterprises were unable to support, at the same time, the costs of introducing modern technology and of paying an underutilized labor force.

8. By and large, organized labor cooperated, reluctantly, with the staff reduction process, once it had realized its inevitability, and it helped formulate socially and politically acceptable terms of adjustment in return for financial and other compensation for the surplus employees.

9. Three methods of adjustment were most widely utilized by the enterprises concerned:

(i) internal adjustments, such as reduction of overtime, redeployment within, or outside the enterprise, often combined with retraining, and diversification into other business activities;

(ii) natural attrition, and

(iii) voluntary separation based on incentive schemes.

10. Redeployment into other enterprises was used on a large scale only in the case of JNR which is the accepted method in Japan of reducing or retiring staff. In all other cases, internal adjustments were made in conjunction with incentive schemes for voluntary separation and/or the natural attrition method.

11. The pace of adjustment depended on the level and growth of redundancy, the redundancy method adopted, the constraints limiting eligibility and, in the case of incentive schemes, the level of benefits offered. Not surprisingly, there was a close relationship between the pace of adjustment and the severity of the constraints. Thus, where natural attrition was adopted, the limiting factor was the number of staff becoming eligible for retirement. The retirement age was sometimes flexible because early retirement options were available.

12. However, incentive schemes were usually not unconditional either. They were aimed at certain target groups, such as older employees, or employees with a certain seniority or skill. The objective of these qualifying conditions was mainly to encourage enough employees of a desired age and service profile to opt for voluntary retirement and also to be able to meet budgetary constraints.

13. It was not always possible to ascertain precisely the costs of each element of redundancy because the enterprises did not keep separate accounts for these items. For example, the enterprises which applied the
natural attrition method did not identify the wages and overhead they paid for redundant employees as redundancy costs. Redeployment and retraining costs were usually not identified separately either. In the case of incentive schemes the direct cash payment by the enterprise and, where applicable, the government cash payment were recorded as redundancy cost, but not the benefits paid in the form of unemployment compensation or early retirement payments. On that basis, the redundancy costs of incentive schemes for voluntary retirement ranged from one to three years' salary on a discounted cash basis. In some enterprises, separation benefits included also non-pecuniary fringe benefits.

14. The paper also attempts to determine, where possible, the effectiveness of the redundancy schemes in terms of their impact on three criteria measuring the contribution of staff reductions to increases in labor productivity, decreases in personnel costs and increases in the revenues earned per employee. The results of the analysis show that staff reductions generally had a positive effect on labor productivity, the revenue earning power of the remaining staff and on slowing down the rise in personnel costs or even reducing it in absolute terms.

15. Enterprises with incentive schemes for voluntary retirement tended to do better in terms of the above criteria than those relying on other redundancy schemes, such as natural attrition or redeployment of personnel combined with natural attrition. However, the positive effects of staff reductions did not always translate into an overall financial improvement because increases in the average cost per employee could not sufficiently be controlled and/or other parameters such as output and average revenue per unit of output declined or could not be increased sufficiently. The case of Netherlands Railways shows that in reasonably efficient railways alternative options to staff decreases exist for the overall financial improvement of the enterprise. For instance, a control of the rate of increase of the average personnel cost per employee might be more acceptable to the employees than staff decreases. It must, however, be noted that a comparison between the increases in the average wage costs per employee with rates of inflation and wage increases in non-agricultural activities showed that increases in wage costs per employee were not excessive. But even this moderation may have been insufficient in the face of the financial problems of the railway enterprises. It is not surprising that those enterprises which were most successful in improving their overall financial performance, despite traffic decreases, managed to reduce both staff and the average wage cost per employee in real terms.

16. None of the enterprises included in the study had carried out a formal evaluation of alternative redundancy schemes, nor had governments, who often contributed to their financing. It is argued that such an analysis would have been useful in the choice of a particular scheme because it could have spelled out more clearly the costs and benefits of alternative options. It is suggested that, where possible, a formal cost/benefit analysis should be carried out but there is also a need to combine formal economic analysis with the evaluation of non-quantifiable socio-economic factors. The analysis should comprise an assessment of the proposed redundancy scheme from the point of view of the individual, the enterprise and the economy as a whole.
17. The paper reviews further the measures employed by the enterprises and/or governments to deal with the problem of surplus staff more effectively in the future. There has been no single consistent approach to solve the problem. The solutions adopted depended heavily on the socio-political environment and institutional relationships. Some enterprises adopted measures to increase traffic, others tried to diversify into other activities. While these strategies had some positive effects on employment they were only marginal in view of the magnitude of the problem. In two enterprises privatization was chosen as a means to respond more flexibly to market pressures and to eliminate or reduce restrictive labor practices and laws. Experience in Western Europe shows that government owned enterprises can also be successful in consistently reducing staff, provided they are given sufficient management autonomy, the rights and obligations of owners and management are precisely defined, and the political leadership does not interfere with sometimes unpopular decisions. The elimination or reduction of restrictive labor practices has been a useful method in making labor markets more responsive to a changing economic and technological environment. But often these practices could only be changed after years of laborious negotiations and costly compensation agreements.
Experience with Labor Redundancy Schemes in the Transport Sector in Western Europe, the United States and Japan

Introduction

1. This study forms part of a Bank research project on "Labor Redundancy in the Transport Sector." Its objective is to provide guidance to Bank staff in identifying situations where surplus labor is present and to provide a basis for an analysis of the impact of labor redundancy on the individual transport enterprise and the economy as a whole as well as to furnish the necessary tools for the formulation of effective labor redundancy schemes. The broader research project will contain a number of elements aimed at identifying, defining, and measuring the problem and its causes, calculating the costs and benefits associated with redundancy and redundancy schemes, and examining the experience with labor redundancy in a number of countries with a view to identifying the factors most likely to contribute to the successful or unsuccessful outcome of such experiences. The present study examines this latter aspect and reviews experience with labor force reduction programs in the OECD countries.

2. Labor redundancy in parts of the transport sector in Western Europe, North America and Japan has been a common problem. Despite the diversity of socio-economic, political and regulatory influences and of enterprise specific attempts to come to grips with the labor redundancy problem, a number of characteristics seem to be common to all or a majority of the labor redundancy schemes examined. It is the objective of this paper to identify these common features, discuss their importance in the success, or otherwise, of the schemes in terms of achieving the desired benefits for the enterprises as well as for the displaced workers and in finding economically, socially and politically acceptable solutions to the labor redundancy problem. It is also hoped that the lessons learned from the above analysis can help identify some of the factors which must be taken into consideration in similar cases in developing countries where labor redundancy is an issue and where appropriate schemes are to be formulated for long-term solutions to the problem.
3. It should be borne in mind, however, that the conclusions drawn in this report are based on a sample of enterprises in a few West European countries, the United States and Japan and the scope and detail of information that could be collected varies from one enterprise to another. Generalizations can therefore only be made with these limitations in mind, particularly as regards the possible application of the industrial country experience to developing countries. This is the reason why another part of the broader research effort deals with labor redundancy in developing countries.

4. The term labor redundancy is used in this paper for staff that can be reduced without a loss in efficiency and output of the enterprise.

5. Labor redundancy can be the result of the following factors: a permanent change in the capital/labor mix of production factors or a change in relative factor prices, technical progress, a change in the scale of operations, combined with constraints imposed by political or organizational influences and/or rigid labor markets. All of the factors enumerated above have played a role in the enterprises included in the study but of course in different degrees and combinations, depending on the specificity of the enterprise and its relevant socio-economic and political environment. Temporary underemployment is not considered as labor redundancy.

6. Apart from isolated estimates there were no systematic data available on staff redundancy. We used therefore in this paper annual staff decreases as a proxy. Such data may underestimate the real level of staff redundancy but they can readily be calculated from time series of personnel statistics. In cases without staff decreases or where staff decreases were inadequate the method obviously fails, but this does not mean that the enterprise has no staff redundancy. In order to enable us to estimate whether there may be a redundancy problem we have used as an additional criterion for railway enterprises the level of staff productivity, measured in output (traffic km plus passenger km) per employee. We assume that a relatively low level of staff productivity could point to a labor redundancy problem.

1/ The study comprises some 52 U.K. ports included in the National Dock Labor Scheme, the Port of Hamburg and the Port of Rotterdam and seven railways: British Rail (BR), Deutsche Bundesbahn (DB), Austrian Railways (OBB), French Railways (SNCF), Netherlands Railways (NS), CONRAIL, Japanese Railways (JNR).

2/ A more precise definition and measure of labor redundancy will be developed in the broader context of the research project on labor redundancy in the transportation sector.

3/ This indicator is quite simple because it assumes one production function per enterprise. In other words, all traffic units are assumed equal at a particular point in time and over time. On the other hand, it is easy to gather statistics on traffic units. A possible improvement might be to apply different weights to different traffic units but then the question arises which weights to apply. The attempt to compare the output/employee with other enterprises introduces additional difficulties since rarely are such parameters as the reference period chosen, production functions, cost functions, geographical factors, to name a few, equal or nearly equal for different enterprises.
II. The Magnitude of the Problem - Trends in Staff Reductions and Staff Productivity

Railways

7. The decline of railway employment has been a long term phenomenon. Five of the seven railways examined showed a steady decline in employment and significant increases in labor productivity as measured in traffic units per employee. One railway, NS, had more or less static levels of employment but at the same time above-average labor productivity suggesting little or no staff redundancy, and one enterprise, OBB, also kept its labor force practically static but at low levels of labor productivity. In this latter case there obviously is a labor redundancy problem, even if difficult operating conditions and other differences are accounted for, but one which has not been addressed. Table 1 provides a detailed account of staff decreases and related productivity developments.

8. The major railways' long term decline in employment has been spectacular in most cases. British Railways (BR) reduced their staff by 70% between 1963 and 1986 at an average annual rate of 5.2% which increased to 6.4% in the period 1982-1986. The Deutsche Bundesbahn (DB) decreased its staff by 52% between 1958 and 1986 at an average annual rate of 2.6%, and if improvements in the condition of employment are taken into account, at an annual average rate of 3.3%. SNCF's staff declined by 66% between 1938-1986, or at an average 1.6% per year and by 3.1% between 1983/1986 and before privatization JNR reduced its staff by 47% between 1972/85, at an average annual rate of 3.5%, with more emphasis on reductions in the 80's. Thus, the average annual rate of reduction between 1983 and 1985 was 12.1% with a corresponding jump in labor productivity of 46%. When JNR was privatized in 1987, staff was reduced by another 22%.

9. While European railways reduced their staff over long periods of time and only gradually modernized their capital stock, CONRAIL, by contrast, reduced its staff by 63% within seven years and, despite a 20% decrease in traffic during the same time, more than doubled staff productivity from an already high level. At the same time it increased its capital stock (plant and equipment) more than threefold, from 1.6 billion US$ in 1978 to 5.6 billion US$ in 1985.

10. The scope for further reductions in the individual railway systems is difficult to gauge since this requires a judgment about optimum employment levels at a given level of traffic mix, operational practices, capital/labor mix and other factors which are not always in the control of the railways. However, some of the railways included in this study have defined targets for further reductions. Thus, the DB has stipulated in its Plan "DB '90" a staff level of 232,000 people by 1990, a reduction of

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4/ When comparing rates of decline of different railways it must be borne in mind that such factors as changes in the average work week, holidays and other conditions of employment can distort the comparison.

5/ Source: U.S. Interstate Commerce Commission, R-1 reports.
Table 1
Staff Reductions and Staff Productivity^{2/}

<table>
<thead>
<tr>
<th>Year/Railway</th>
<th>BR (UK)</th>
<th>DB (Germany)</th>
<th>NS (Neth.)</th>
<th>OBB (Austria)</th>
<th>SNCF (France)</th>
<th>JNR (Japan)</th>
<th>CONRAIL (U.S.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972 Staff</td>
<td>199</td>
<td>403</td>
<td>27.5</td>
<td>71</td>
<td>287</td>
<td>441</td>
<td>98.6</td>
</tr>
<tr>
<td>Tu/E</td>
<td>248</td>
<td>259</td>
<td>407</td>
<td>244</td>
<td>384</td>
<td>592</td>
<td></td>
</tr>
<tr>
<td>1975 Staff</td>
<td>192</td>
<td>404</td>
<td>26.5</td>
<td>71</td>
<td>277</td>
<td>430</td>
<td>94.3</td>
</tr>
<tr>
<td>Tu/E</td>
<td>280</td>
<td>231</td>
<td>428</td>
<td>239</td>
<td>408</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>1980 Staff</td>
<td>212</td>
<td>327</td>
<td>27.4</td>
<td>69</td>
<td>252</td>
<td>414</td>
<td>85.2</td>
</tr>
<tr>
<td>Tu/E</td>
<td>233</td>
<td>325</td>
<td>455</td>
<td>285</td>
<td>497</td>
<td>564</td>
<td>1,573</td>
</tr>
<tr>
<td>1981 Staff</td>
<td>206</td>
<td>322</td>
<td>28.1</td>
<td>70</td>
<td>249</td>
<td>401</td>
<td>76.6</td>
</tr>
<tr>
<td>Tu/E</td>
<td>234</td>
<td>324</td>
<td>450</td>
<td>271</td>
<td>487</td>
<td>568</td>
<td>1,660</td>
</tr>
<tr>
<td>1982 Staff</td>
<td>195</td>
<td>315</td>
<td>27.8</td>
<td>70</td>
<td>253</td>
<td>387</td>
<td>63.4</td>
</tr>
<tr>
<td>Tu/E</td>
<td>222</td>
<td>311</td>
<td>445</td>
<td>271</td>
<td>472</td>
<td>577</td>
<td>1,726</td>
</tr>
<tr>
<td>1983 Staff</td>
<td>185</td>
<td>303</td>
<td>27.1</td>
<td>69</td>
<td>251</td>
<td>358</td>
<td>46.2</td>
</tr>
<tr>
<td>Tu/E</td>
<td>255</td>
<td>310</td>
<td>439</td>
<td>277</td>
<td>466</td>
<td>620</td>
<td>2,449</td>
</tr>
<tr>
<td>1984 Staff</td>
<td>174</td>
<td>290</td>
<td>26.8</td>
<td>68</td>
<td>246</td>
<td>326</td>
<td>39.0</td>
</tr>
<tr>
<td>Tu/E</td>
<td>300</td>
<td>389</td>
<td>456</td>
<td>290</td>
<td>497</td>
<td>675</td>
<td>3,169</td>
</tr>
<tr>
<td>1985 Staff</td>
<td>167</td>
<td>277</td>
<td>27.3</td>
<td>68</td>
<td>239</td>
<td>277</td>
<td>36.3</td>
</tr>
<tr>
<td>Tu/E</td>
<td>277</td>
<td>387</td>
<td>451</td>
<td>304</td>
<td>500</td>
<td>802</td>
<td>3,285</td>
</tr>
</tbody>
</table>

1/ In '000.
2/ In '000 traffic units/employee, Tu/E (traffic units = passenger-km plus freight-km).

3.5% p.a. over the five year period 1985-1990. If traffic remained at 1985 traffic levels this would mean a productivity increase of about 50% over the five year period but still below the level of French Railways. The Dutch Railways (NS), with one of the highest labor productivities in Western Europe, are aiming at still further productivity improvements during the period 1987-1990. NS are planning to reduce their staff by 7% p.a. to about 26,000 over the three year period. BR's corporate plan 1985-1990 sets a personnel target of 137,000 people by the end of the plan period. If BR's labor productivity is compared with the better performers such as SNCF and NS there seems to be scope for further substantial reductions beyond the 1990 target set by BR because so far staff reductions have been roughly in line with traffic decreases but do not seem to adequately reflect yet operational improvements. The JNR successor companies could also reduce their staff by another 15% without impairing operations or reducing output since they agreed in the context of the privatization deal to continue to employ 32,000 people more than they estimated were needed for an efficient operation of the system.

Ports

11. Ports have registered similar magnitudes of decline in employment as railways. The 52 UK ports participating in the National Dock Labor Scheme have experienced a decline in employment of Registered Dock Workers (RDW's) of about 80% over the period 1966-1987. This corresponds to an average annual decline of 7.4%. According to the U.K. National Dock Labor Board the contraction process is not yet terminated. It estimates that another 12% of the 1987 labor force of 11,500 RDW's will have to leave the profession in the near future.

12. The ports of Hamburg and Rotterdam have also experienced significant reductions in the numbers of their dock workers. Employment of dock workers in the port of Hamburg decreased by 35% between 1970 and 1986 from 14,000 to 9,200 workers, or 2.6% on an annual basis. The annual rate of decline accelerated to 4% since about 1980. This coincided with a decline in the business cycle and a quickening in the pace of containerization.

13. In the Port of Rotterdam, the number of dock workers was reduced by 20% between 1982 and 1987, at an average annual rate of 4.2%. According to estimates of the Rotterdam Ports Industries Association, about 1000 more dock workers, or 10% in terms of 1987 employment, are likely to become redundant over the next 3 1/2 years.

14. It is difficult to say whether the port labor forces, after additional reductions, will reflect optimum employment levels. Even more than in the case of the railways inter-port comparisons can be misleading because labor productivity in ports often may depend on factors completely outside the control of a port, such as the cargo mix, arrival times of

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6/ Excluding the staff of British Rail Engineering which, apart from rolling stock maintenance, is also engaged in the production of rolling stock.
ships, legislation on shift work, the length of the work week and the like. It would therefore be preferable to measure optimum employment levels in terms of the capital endowment and operating characteristics of each individual port. Unfortunately, such data were not available for the ports examined in this report.

III. Causes of Labor Redundancy in the Transport Sector

Introduction

15. Labor redundancy in the enterprises included in this study is the result of a complex array of factors at the macroeconomic, sectoral, enterprise and political levels. The various causes of labor redundancy can be broken down into the following broad categories:

- Shifts in the economics of the industry caused by:
  (a) changes in market demand which cause a reduction in the level of output;
  (b) changes in relative prices of capital and labor lead to the introduction of labor saving equipment;

- Unresponsiveness of the industry to shifts in demand/supply relationships caused by:
  (a) enterprise organization/government regulation;
  (b) non-competitive labor market practices.

- External influences on staffing policies.

Shifts in the Economics of Demand and Supply

(a) Changes in Market Demand

- Railways

16. Structural changes in the economies of the countries considered caused shifts in industrial location patterns, often on a gradual long-term basis, as well as sectoral shifts in production, with more emphasis on high value added production and less on the production of primary products. New production processes, for instance the substitution of oil and nuclear fuel for coal in power stations, led to a decline in demand for the latter, which in turn reduced demand for rail freight traffic. Reduced cost and quality competitiveness of railways are further reasons for their decline. An example of how these changes can affect rail traffic is given in the following table, showing changes in output of transport-using industries between 1962-1982 for the UK and, where possible, corresponding changes in British Rail's transport of the same commodities.
TABLE 2


<table>
<thead>
<tr>
<th></th>
<th>volume, 1962-1982</th>
<th>$\Delta$ changes in output</th>
<th>$\Delta$ changes in rail traffic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main rail users:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>coal and coke</td>
<td>-56</td>
<td>-52</td>
<td></td>
</tr>
<tr>
<td>metals</td>
<td>-36</td>
<td>-51</td>
<td></td>
</tr>
<tr>
<td>minerals, etc.</td>
<td>+25</td>
<td></td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>Main road users:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>construction</td>
<td>-3</td>
<td>-49 (1964-1982)</td>
<td></td>
</tr>
<tr>
<td>food manufacturing</td>
<td>+29</td>
<td></td>
<td>n.a.</td>
</tr>
<tr>
<td>distribution</td>
<td>+25</td>
<td></td>
<td>n.a.</td>
</tr>
<tr>
<td>agriculture</td>
<td>+75</td>
<td></td>
<td>n.a.</td>
</tr>
<tr>
<td>manufacturing</td>
<td>+16</td>
<td></td>
<td>n.a.</td>
</tr>
</tbody>
</table>

**Sources:**

Changes in output:

Changes in rail traffic: own calculations based on P. Mackie, et al., op.cit.

17. In addition, the average length of haul in BR's freight traffic of about 160 km made the railways particularly vulnerable to growing road competition which benefitted from a considerable improvement of the road network. The motorway trunk network in the UK grew for instance from nothing in 1950 to a more or less complete network of 2,555 km in 1980.7

Industrial action, such as the 1980 dispute in the steel industry, the 1982 strike by the rail unions and the 1984 coal strike all reduced rail traffic; and not only temporarily, because the customers of these industries often switched permanently to other suppliers or used different production processes. Loss of wagon load and less-than-wagon-load (LCL) traffic to road haulage for cost reasons, was a further reason for the decline.8 An increasingly unbiased, liberal transport policy probably fostered this development as well.

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18. But the example of British Rail cannot simply serve as a blueprint for the other railways in this study. Although the forces outlined above worked against the use of railways as a transport mode, such other factors as denser traffic in the economically more important parts of their networks, longer average length of haul, or more restrictive transport policies in most continental Western European countries often attenuated the decline in the level of rail freight traffic for other railways. In fact, freight traffic of SNCF and DB started to decline in absolute terms only in 1980, in Japan in the early seventies. It was more or less stagnant in the Netherlands and growing very slowly in Austria. CONRAIL, which was formed in 1978, has experienced a traffic decline along the British pattern. A similar development can be seen in passenger transport. The spectacular increase in personal incomes after the second world war resulted in equally impressive increases of air traffic, and road passenger traffic which was greatly fostered by the quantitatively and qualitatively improved road networks. The railways did not benefit equally from these economic influences. Their passenger transport in terms of passenger km remained relatively stable although its structure changed, with more emphasis on dense interurban corridors and commuter traffic. In the U.S., rail passenger traffic is practically insignificant and one of the reasons for the establishment of CONRAIL, a railway exclusively dedicated to rail freight, was that the previous mixed freight passenger operation was uneconomical. Freight and passenger traffic developments are presented in Table 3.

19. From the above analysis we can draw some tentative conclusions:

- A decline in the absolute level of demand for rail freight traffic and changes in its structure may have had some influence on staff redundancy, particularly British Rail, JNR and CONRAIL, but this influence probably only explains a small part of the redundancy; it must have been very small or practically insignificant for those railways with stagnant or slightly increasing traffic.

- The growing importance of competing transport modes - road, waterways, pipelines - had not only the effect of stunting railway traffic, both freight and passenger, but they also caused structural changes in rail traffic. The superior cost and quality characteristics of road transport in short and medium-haul, low density traffics forced a concentration of rail traffic on high density corridors and traffic with relatively low requirements concerning the quality of transport. At the other end of the spectrum, pipelines and waterway traffic competed successfully for low value bulk commodities.

20. Most railways were unable or unwilling to adjust in a timely manner to these shifts in demand and they were still operating the route networks that were basically completed during the 19th and early 20th centuries, with very little adaptation to new traffic patterns. Some of them, British Railways, for instance, partially corrected this in the early sixties through the route closures and personnel reductions of the Beeching era.
<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BR **/</td>
<td>Pe</td>
<td>28,349</td>
<td>30,265</td>
<td>31,784</td>
<td>30,746</td>
<td>27,300</td>
<td>36,100</td>
<td>38,400</td>
<td>38,268</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>21,003</td>
<td>20,990</td>
<td>17,640</td>
<td>17,505</td>
<td>15,879</td>
<td>17,144</td>
<td>16,842</td>
<td>16,647</td>
</tr>
<tr>
<td></td>
<td>T**</td>
<td>49,352</td>
<td>51,246</td>
<td>49,344</td>
<td>48,246</td>
<td>43,239</td>
<td>47,244</td>
<td>52,242</td>
<td>48,303</td>
</tr>
<tr>
<td>DB</td>
<td>P</td>
<td>47,099</td>
<td>44,873</td>
<td>47,690</td>
<td>48,999</td>
<td>47,143</td>
<td>47,201</td>
<td>48,397</td>
<td>51,729</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>68,047</td>
<td>59,561</td>
<td>70,868</td>
<td>66,841</td>
<td>61,010</td>
<td>66,372</td>
<td>64,333</td>
<td>66,427</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>116,046</td>
<td>104,424</td>
<td>117,758</td>
<td>116,640</td>
<td>108,953</td>
<td>107,573</td>
<td>112,730</td>
<td>120,156</td>
</tr>
<tr>
<td>NS</td>
<td>P</td>
<td>8,059</td>
<td>8,561</td>
<td>8,916</td>
<td>9,238</td>
<td>9,378</td>
<td>9,652</td>
<td>9,907</td>
<td>9,228</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>9,188</td>
<td>8,448</td>
<td>3,548</td>
<td>3,418</td>
<td>2,988</td>
<td>2,924</td>
<td>3,237</td>
<td>3,350</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>11,205</td>
<td>11,349</td>
<td>12,458</td>
<td>12,648</td>
<td>12,364</td>
<td>11,976</td>
<td>12,234</td>
<td>12,576</td>
</tr>
<tr>
<td>SNCF</td>
<td>P</td>
<td>43,231</td>
<td>50,695</td>
<td>64,495</td>
<td>56,668</td>
<td>56,864</td>
<td>58,420</td>
<td>60,202</td>
<td>61,896</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>69,088</td>
<td>66,155</td>
<td>71,560</td>
<td>66,456</td>
<td>63,327</td>
<td>69,403</td>
<td>61,904</td>
<td>57,612</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>113,219</td>
<td>116,850</td>
<td>126,055</td>
<td>122,121</td>
<td>120,181</td>
<td>117,823</td>
<td>122,186</td>
<td>119,507</td>
</tr>
<tr>
<td>OBB</td>
<td>P</td>
<td>7,238</td>
<td>7,336</td>
<td>8,043</td>
<td>8,333</td>
<td>8,541</td>
<td>8,385</td>
<td>8,216</td>
<td>8,468</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>16,961</td>
<td>9,611</td>
<td>11,092</td>
<td>10,843</td>
<td>10,413</td>
<td>10,547</td>
<td>11,565</td>
<td>12,195</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>17,199</td>
<td>16,947</td>
<td>19,045</td>
<td>18,976</td>
<td>18,954</td>
<td>18,852</td>
<td>19,781</td>
<td>20,063</td>
</tr>
<tr>
<td>JNR</td>
<td>P</td>
<td>201,068</td>
<td>215,289</td>
<td>196,040</td>
<td>194,073</td>
<td>193,533</td>
<td>195,082</td>
<td>196,824</td>
<td>200,095</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>69,534</td>
<td>48,268</td>
<td>37,559</td>
<td>32,927</td>
<td>29,778</td>
<td>26,068</td>
<td>22,135</td>
<td>22,647</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>261,104</td>
<td>263,557</td>
<td>233,600</td>
<td>227,800</td>
<td>223,303</td>
<td>222,232</td>
<td>219,969</td>
<td>222,142</td>
</tr>
<tr>
<td>CONRAIL</td>
<td>P</td>
<td>149,584</td>
<td>149,826</td>
<td>134,056</td>
<td>127,135</td>
<td>109,432</td>
<td>113,134</td>
<td>123,594</td>
<td>119,249</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>149,584</td>
<td>149,826</td>
<td>134,056</td>
<td>127,135</td>
<td>109,432</td>
<td>113,134</td>
<td>123,594</td>
<td>119,249</td>
</tr>
</tbody>
</table>

* = Passenger, ** = Freight, *** = Total

1/ In million ton-km, pass.-km, traffic units.

2/ Including London Transport, excluding shipping.

21. Other railways, like the DB (German Railways), abandoned passenger services on 6,000 km of its total network of 43,000 km. More drastic measures, which would have enabled DB to adjust adequately and promptly to the changed economic patterns, were difficult to implement, inter alia because of the influence of pressure groups and unclear concepts of public authorities about the role of the railways in the transport system. An overview of changes in network length and average length of haul is given in the following tables (Tables 4 and 5). Table 4 indicates that the railway enterprises have been reducing their route mileage as well as their labor forces.

### Table 4
**Railways: Route Length 1 of European Railway Networks in 1950, 1960, 1970 and 1985**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BR</td>
<td>31,335</td>
<td>29,602</td>
<td>18,989</td>
<td>16,729</td>
</tr>
<tr>
<td>DB</td>
<td>30,237</td>
<td>30,693</td>
<td>29,479</td>
<td>27,628</td>
</tr>
<tr>
<td>NS</td>
<td>3,200</td>
<td>3,253</td>
<td>3,147</td>
<td>2,824</td>
</tr>
<tr>
<td>OBB</td>
<td>6,052</td>
<td>5,939</td>
<td>5,910</td>
<td>5,387</td>
</tr>
<tr>
<td>SNCF</td>
<td>41,290</td>
<td>38,840</td>
<td>36,019</td>
<td>34,676</td>
</tr>
</tbody>
</table>

1/ In km.

**Source:** U.N., Economic Commission for Europe, Annual Bulletins of Transport Statistics.

### Table 5
**Railways: Average Length of Haul 1/ in Selected Years**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BR 2/</td>
<td>113</td>
<td>113</td>
<td>118 (1979)</td>
<td>115</td>
</tr>
<tr>
<td>DB</td>
<td>176</td>
<td>199</td>
<td>198</td>
<td>214</td>
</tr>
<tr>
<td>NS</td>
<td>137</td>
<td>139</td>
<td>161</td>
<td>161</td>
</tr>
<tr>
<td>OBB</td>
<td>172</td>
<td>194</td>
<td>210</td>
<td>205</td>
</tr>
<tr>
<td>SNCF</td>
<td>251</td>
<td>277</td>
<td>314</td>
<td>344</td>
</tr>
<tr>
<td>CONRAIL</td>
<td>-</td>
<td>-</td>
<td>1,029 (1979)</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

1/ km (CONRAIL miles) per ton carried.
2/ Full wagon loads.

- Ports

22. Ports were not entirely immune from structural changes in the economy either since shifts in the composition of the goods transported also had an effect on port operations and the composition of the labor force.

23. In the ports of Hamburg and Rotterdam this aspect was only marginally important for overall employment levels. The U.K. ports, by contrast, experienced a special development. With the U.K.'s entry into the European Common market trade flows started to shift towards common market countries and the composition of trade changed also. Trade with Commonwealth countries, and also with other overseas trading partners, became less important. The consequence was a decline of ports specializing in overseas trade and the growth of ports oriented towards the Continent.

(b) Introduction of Labor Saving Equipment

24. The long-term changes discussed above can only partly explain personnel redundancy since overall output levels fluctuated over a fairly stable average during the past 13 years. The exceptions are JNR and CONRAIL which lost traffic more or less consistently.

25. Nevertheless staff has been cut drastically in most railways. A possible explanation is that the competitive pressure in cost, and service quality of the other modes of transport - road, waterways and pipelines - forced the railways to adopt more efficient operating methods through modernization of their plant and equipment. For example, CONRAIL could not have implemented its staff cuts without investing at the same time in labor saving plant and equipment which enabled it to adopt highly rationalized operating methods. It is not surprising, therefore, that the statistical relationship between staff reductions and investments is significant. About 92% of the staff decreases can be associated with investment in labor saving technology. Data for the German Railways covering 17 years suggest that about 63% of staff decreases can be associated with investment in capital stock and in SNCF 65%, covering the period 1960-1985. It should be noted that a more refined analysis of the data would probably yield even higher correlation coefficients since no allowance was made for the introduction of more labor intensive measures such as a reduction in the average number of hours worked per week. Investment data for the other railways included in this study are not sufficient to carry out the same analysis.

9/ Although this relationship is based on only 8 observations, the r of 0.96 exceeds the critical value of r = 0.707 at the S = 95% level.

10/ r = 0.79. Critical value of r for 17 observations at S = 95% level 0.482.

11/ r = 0.81. Critical value of r for 26 observations at S = 95% level = 0.37.
26. In the ports, labor saving investment has been the major cause of staff redundancy, in particular in the general cargo area. The introduction of containerization\(^{12}\) in the early sixties and of such other methods of cargo unitization as palletization, ro-ro, and new logistical concepts like the integrated transport chain, as well as improvements in the handling of bulk commodities, have led to profound changes in the ports included in the survey. The Rotterdam port management, for instance, estimates that the introduction of containerization has increased labor productivity eleven fold. A factor of 1:10 is not uncommon for other ports.\(^{13}\)

27. Containerization has been a fairly rapid process over the last 10-15 years. In the port of Hamburg it increased from 19.6\% in 1975 to 56.5\% in 1987, at an annual rate of 10\%. A regression analysis, using the degree of containerization as explanatory variable, showed that almost 80\% of the labor reduction in the port of Hamburg was associated with containerization.\(^{14}\)

**Institutional Constraints on the Response to Changes in Demand/Supply Relationships**

28. The changes outlined above are not unique in the sense that other industries would not experience similar pressures. What sets the transport industry apart from other service or goods producing sectors of the economy is the unusual degree of government intervention at the enterprise level, widespread government ownership of transport enterprises, excessive labor protection legislation and restrictive labor practices, which hindered the flexibility of management to deal with the resultant excess labor.

(a) Government Ownership and Intervention

29. All railways included in this study are or were government owned and subject to varying degrees of government intervention. CONRAIL and JNR were privatized in 1987.

30. CONRAIL was formed as a government owned corporation under the Regional Rail Reorganization Act of 1973 (3R Act) and was the result of the merger of seven bankrupt private railway corporations. However, major weaknesses inherited from its predecessors - uneconomic passenger and freight traffic, excessive labor protection and unremunerative freight terminal operations - were not removed. The need to subsidize mounting losses of CONRAIL with no prospect of an end under government ownership finally led to a decision to privatize the railway after thoroughly streamlining its scope of services and labor practices, and restructuring operating responsibilities for the Northeast Corridor.

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\(^{12}\) Containerization expressed as a percentage of containerized cargo in total throughput of general cargo.

\(^{13}\) In Hamburg the relationship is estimated at 1:7 or 8.

\(^{14}\) \( r = 0.886 \). Critical value of \( r \) at \( S = 95\% \) and 12 observations: 0.576.
31. JNR was privatized after the JNR Reform Commission had submitted "Opinions on the Restructuring of JNR for the Development of the Railway's Future." The Reform Commission identified the "organization of JNR as a public corporation system and the centralization of JNR" as the major reasons for JNR's staggering losses which reached 2.4 trillion yen in 1985 on an operating revenue of 3.6 trillion yen. It is interesting to note what the Reform Commission had to say about the inadequacies of public ownership:

1) The system is constituted so that it cannot escape outside interference, because the government is heavily involved with it.

2) Because of the lack of management independence, its management responsibilities are not clear.

3) Labor-management relations became abnormal.

4) Because of limitations on the scope of business, it is difficult to carry out varied and dynamic business activities.

32. In fact, JNR's management was only responsible for day-to-day management decisions. Such strategic decisions as investment policy, personnel policy, market development, tariff policy were prepared in the Ministry of Transport.

33. JNR prior to privatization constitutes the extreme example of government intervention. In the DB, government influence has gradually been reduced but government still retains some power over DB's investment policy, its budget, and its staffing plans. The relationship between SNCF and government is laid down in a contract between the two entities for the years 1985-1989 which establishes the objectives the government expects SNCF to achieve and puts a ceiling on government financial assistance. Within these parameters SNCF management is fairly free in its decision making. NS investment policy is subject to government approval and the government can impose on NS the operation of specific services if it reimburses the losses these services may incur. Otherwise NS management is autonomous in its decision making.

34. As regards ports, government ownership of and intervention in the companies that provide services is insignificant. Only in the port of Hamburg one company (HHLA, Hamburger Hafen und Lagerhaus Gesellschaft) which employs about 1/3 of all workers in the port is owned by the State Government. In all three of the countries included in this study, the U.K., the Netherlands and Germany, central or local governments have, however, given direct or indirect financial support for port staff redundancy schemes.
(b) Labor Protection Legislation

35. In Europe and Japan ports and railway employees did not benefit from specific labor protection legislation as was the case in the U.S. But it can generally be said that the overall level of job security is higher in Europe and Japan than in the U.S. and hence specific industry agreements were not required. In the DB the higher echelon personnel enjoys a job status equal to that of a government official. These people have life job tenure. However, this has historical reasons and is not the result of special legislation. By contrast, the U.S. railroad industry has been subject to extraordinary labor protection legislation dating back to the 1930's and originally intended to compensate employees for the job destroying effects of company mergers. Section 5 (2) (f) of the Interstate Commerce Act required the ICC to impose labor agreements as a condition for the approval of mergers and similar transactions and with each successive round of mergers the conditions of the previous round became a floor for the new round. Private agreements during the 1960's often provided for "lifetime" protection under certain conditions. Title V of the 3R Act of 1973 provided lifetime protection to employees of CONRAIL, in essence an inheritance from the Penn Central whose assets and obligations CONRAIL had assumed as part of the bankruptcy reorganization. Subsequently, this arrangement proved to be one of the major stumbling blocks for a successful operation of CONRAIL which could only be removed at a substantial cost to the U.S. Government. A more detailed account of the evolution of job protection in the U.S. railroad industry and its financial consequences is given in Annex 1.

(c) Restrictive Labor Practices

36. In the ports of the U.K., Germany and the Netherlands legislation, intended to provide a measure of employment safety for the individual port worker and to furnish the employer with a pool of skilled manpower, was later used as an umbrella for restrictive labor practices. In the U.K., for example, an Act of Parliament set up a National Dock Labor Board in 1947, as well as local boards for each port, and provided for the registration of dockers and the adjustment of their numbers in accordance with changing needs. Similar legislation was passed in Germany and the Netherlands. In times of expansion and when manual labor was predominant in the ports, this concept worked satisfactorily. But with the advent of containerization and the consequential redundancy of a substantial number of dock workers the quasi monopoly the workers enjoyed by virtue of the limitations on entry into the port labor force was used as protection against employment reductions.

37. Only licensed port workers had the right to port work which was broadly defined as any work carried out within the boundaries of the port,


16/ Exceptions were made only to cope with a short-term unforeseen work surplus.
irrespective of the nature of that work. For example in the port of Hamburg the dispatching work of a mail order business or the cleaning of windows was considered port work and therefore reserved for port workers and subject to the wage scales agreed for those workers. Port employers who wanted to benefit from lower wages for the same type of work reacted by moving their enterprises outside the port, often only a short distance away from their former port location. In the U.K., those ports not subject to restrictive labor practices grew faster than the ports with such practices. Other rules governed the minimum number of workers in a gang and the number of shifts that were allowed per day, week or month, or the maximum number of hours allowed per shift.

38. Similar practices were applied in the railways. There are numerous examples that can be cited. The U.S. railway union practice of insisting on the employment of a brakeman on trains whose technology long since had made them superfluous highlights the absurdity of some of these outmoded work rules. The problem seems to have been particularly important for U.S. railways since an entire government program was devoted to the elimination of such practices. Annex 1 gives an account of the extent of these practices and the cost of eliminating them. Europe and Japan were not immune to these practices either, but usually management would negotiate compromise solutions where a change in work rules was traded off against other staff benefits.

External Influences on Staffing Policies

39. Except for JNR there has been little direct intervention into the setting of overall staffing levels. When Japan withdrew from China and Korea, JNR took over about 200,000 former Japanese staff from China and Korean railways. Although these people were not required for the operation of JNR they had to be put on the payroll without any specific compensation to JNR by government. Moreover, the government retained authority over overall staffing levels in JNR until its privatization in 1987. In Germany, some small interventions took place in DB and the Port of Hamburg. For instance, the DB accepted several hundred young people in their apprentice program in an attempt to contribute to the reduction of youth unemployment. In the Port of Hamburg, the state owned HHLA (Hamburger Hafen-und Lagerhaus-Aktiengesellschaft) employed a small number of young people for the same reason.

40. Staffing levels may be influenced indirectly where management has only limited autonomy such as in the DB and OBB. In the case of the DB, for example, the Administrative Board of the railway decides on the personnel plan, but this is subject to approval by the Minister of Transport in conjunction with the Minister of Finance.
IV. Implementation of Redundancy Schemes

The Role of Governments, Labor Unions and Employers

41. While governments tended to procrastinate about decisions on staff redundancy they were finally forced to deal with the problem. In the case of the railways the catalyst for action was the need to limit ever increasing and seemingly uncontrollable deficits. In the DB, for example, revenues barely covered personnel expenses and Government subsidies and compensation payments reached 13.6 billion DM in 1982. The Government decided to put a ceiling on its payments to DB while at the same time working out a strategy with DB for its rehabilitation and restoration to financial viability. The plan 'DB 90' provides inter alia for a productivity increase of 40%, a reduction of personnel costs in real terms of 30% and a reduction of total costs of 25% over the plan period 1982-1990.17

42. JNR was even in worse financial shape. The government initiated in 1981 a Management Improvement Plan for the financial rehabilitation of JNR which included substantial staff reductions of nearly one third of total staff. At that time JNR lost almost 1.2 trillion yen per year. Although the staff reduction goal of the 1981 Plan was exceeded, JNR's financial position had worsened in 1985 to 2.4 trillion yen. The Government had realized that its own intervention in JNR and the consequent lack of management independence, as well as limitations imposed on JNR regarding the scope of its business activities (see para. 31) were the principal reason for the railway's problems and it concluded that JNR's restructuring into several private companies was the best means to revive the railways and to ensure their independence. It estimated that privatization would make another 93,000 employees redundant.

43. CONRAIL is another example of a government owned railway system where privatization was deemed to be the only feasible option to cut through outdated established practices and accumulated employee privileges and to save the enterprise from collapse. According to government estimates a continued operation of CONRAIL along the established practices could have easily required federal subsidies approaching 4 billion US$ by 1985. This was deemed unacceptable and the government decided to prepare CONRAIL for privatization by streamlining its operations and by eliminating labor protection and surplus labor.

44. In the case of the ports governments recognized the fact that the private firms operating in the ports were unable to cope with the redundancy problem without outside financial assistance. Moreover, the port workers are a tightly organized workforce and the ports are highly visible in their local economies. This gave the port unions substantial political leverage vis-a-vis local and national government authorities. Assistance has taken different forms ranging from full assumption of redundancy payments in the ports of London and Liverpool to various mixed forms of direct payments, debt forgiveness, tax deductions, operational subsidies, and use of the social safety net.

45. Organized labor played an important part in shaping both general and specific solutions to the labor redundancy problem. This is not surprising since all enterprises showed a high degree of unionization: 60% to 85% are not uncommon. This is significantly higher than the national averages for the countries concerned which range from some 18% in the U.S. to 50% in the U.K. In JNR 97% of the employees belonged to one of the 10 railway unions as opposed to a national average of about 30%. This has not changed with privatization.

46. In some enterprises, staff reductions over and above natural attrition met with union resistance. The Austrian and German Railways are examples of this attitude. Other enterprises such as BR negotiated with their unions more active labor redundancy policies by offering voluntary redundancy packages acceptable in terms of the individual affected by the redundancy. Normally, before considering termination of employment the unions insisted that other options of keeping the worker employed should be used wherever possible, such as retraining, reduction of overtime, etc. Unions were sometimes involved in the implementation of the redundancy schemes agreed by them with the employers. Some unions offered their members training courses to upgrade their skills for the same job or to prepare them for another occupation.

47. Without exception there was a strong consensus between the representatives of employers, employees (the unions) and governments that the redundancy problem should not be resolved at the expense of the individuals whose employment was to be terminated. This meant that the individual was usually given the choice between remaining in the enterprise if at all possible or voluntary separation. At the same time the enterprises and their supervisory bodies were concerned that the costs of labor redundancy should stay within reasonable limits. These limits were not precisely defined but in the cases where employees near their retirement age were encouraged to terminate their employment, the aim was to provide redundancy benefits approaching the equivalent net retirement pay in order to guarantee a smooth transition to normal retirement. In the other cases the benefits were dependent on length of service and salary levels.

48. The general concern not to disturb the social peace reflects, not surprisingly, broader national attitudes towards labor relations and social responsibilities of employers as well as the governments in Western Europe and Japan. In the case of CONRAIL the substantial benefits received by workers who were made redundant were in compensation for renouncing lifetime employment contracts negotiated by the unions, but reflected as well political pressures.

49. There was also a tendency to look at the redundancy problem in the overall context of unemployment, particularly if staff reductions had an impact, even if only a psychological one, on labor markets with high unemployment rates. This attitude affected the speed of staff reductions because what might have been financially desirable for the enterprise concerned was in practice politically inopportune in the face of an already high unemployment rate. Thus, for instance, a labor reduction program in the port of Hamburg was designed in such a way as to avoid an aggravation of the already above average unemployment in the Hamburg area.
Measures to Reduce Redundancy

50. The enterprises included in the study utilized three basic measures to come to grips with the redundancy problem: internal adjustments, natural attrition and voluntary separation based on incentive schemes. Some typical redundancy schemes are summarized in Annex 2. Overall the tendency was to look first for internal adjustments such as reduction of overtime (Port of Hamburg), redeployment into other positions (all enterprises), or other firms, (Port of Hamburg, JNR), if necessary combined with retraining at the expense of the enterprise or the government (all European railways and JNR, all ports) and attempts to diversify into other activities (JNR, Port of Hamburg). A reduction of the average number of hours worked, on a national or industry basis, also led to a decrease of redundancy in some enterprises (e.g., France, Germany, Netherlands, U.K.). However, these measures by themselves were not sufficient to absorb all redundant staff. They were therefore often combined with a policy of natural attrition and a stop on new hiring. Only essential positions were replaced. New personnel was hired if the position could not be filled from within. The Austrian Railways and the German Railways applied this policy exclusively, the former with considerable success. The others used it in varying degrees together with other methods. The majority of the companies offered voluntary separation schemes with financial incentives and sometimes job placement and counseling services. In order to minimize expenses for the firm these separation schemes were mostly tied in with the national unemployment benefit schemes (Table 6).

Length of the Adjustment Process

51. With the exception of CONRAIL and JNR the reduction of staff has been a very slow process. CONRAIL needed only about 7 years to reduce staff by 2/3, at an annual average rate of over 13%. SNCF, at the other extreme, reduced its staff by 2/3 over a period of almost 48 years, or an average decrease of 1.6% p.a. Table 7 compares the length of the adjustment process in each enterprise and the effect of labor redundancy schemes on staff decreases.

52. It is noteworthy that entities which offered redundancy payments accomplished significantly higher rates of staff reduction than those which did not. And those entities which had a policy of natural attrition without offering redundancy payments had higher attrition rates than those which had no policy at all. This tendency can also be found within the same company. In SNCF for instance the staff reduction rate increased by 50% after the introduction of redundancy payments, but stayed nevertheless well below the extraordinarily high staff reduction rate of CONRAIL or that of the UK ports National Dock Labor Scheme (-7.4%) and of British Rail (-5.2% 1963-1983; -6.4% 1982-1986). JNR is an exception in the sense that the high attrition rates were not achieved by specific redundancy payments but by redeployment of staff into other enterprises which is the traditional method in Japan of reducing staff. These employees received, as does every JNR employee leaving the service, a generous end of service bonus payment depending on the length of service with JNR and the salary level of the employee.
### Table 6

**Measures Employed to Reduce Surplus Staff**

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
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<td>X</td>
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<td>X</td>
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<td>X</td>
<td>X</td>
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<td>X</td>
</tr>
<tr>
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<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>JNR</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>CONRAIL</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>British Ports</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Port of Hamburg</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Port of Rotterdam</td>
<td>X</td>
<td>X</td>
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<td>X</td>
</tr>
</tbody>
</table>

1/ E.g., reduction of overtime, redeployment, (incl. other enterprises), retraining, diversification.

2/ Non-replacement of positions falling vacant.

3/ Lump sum payments, monthly payments or combination of both.

4/ Including direct payments, tax deductions, unemployment benefits.

Note: X = emphasis of redundancy scheme was on this measure.
<table>
<thead>
<tr>
<th>YEAR</th>
<th>BR</th>
<th>% change</th>
<th>DB</th>
<th>% change</th>
<th>MS</th>
<th>% change</th>
<th>SM</th>
<th>% change</th>
<th>SNCF</th>
<th>% change</th>
<th>JRM</th>
<th>% change</th>
<th>COMB</th>
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<tr>
<td>prior</td>
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<td></td>
<td>516</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to 1972</td>
<td>(1963)/</td>
<td>190</td>
<td>508</td>
<td>-10.6 ps</td>
<td>408</td>
<td>-228</td>
<td>-1.8 ps</td>
<td>27.8</td>
<td>71</td>
<td>287</td>
<td>-426</td>
<td>-1.6%</td>
<td>441</td>
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<tr>
<td>('63-'72)</td>
<td>(1968)</td>
<td>('62-'72)</td>
<td>(1968)</td>
<td>(1968)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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<td>-3.6</td>
<td>71</td>
<td>0</td>
<td>277</td>
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<td>430</td>
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<td>327</td>
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<td>69</td>
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<td>282</td>
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<td>414</td>
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<td>322</td>
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<td>28.1</td>
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<td>70</td>
<td>+1.4</td>
<td>249</td>
<td>-1.2</td>
<td>401/</td>
<td>-3.1</td>
<td>78.6/</td>
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<td>315/</td>
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<td>27.8</td>
<td>-1.1</td>
<td>70</td>
<td>0</td>
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<td>-5.1</td>
<td>305</td>
<td>-3.8</td>
<td>27.1</td>
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<td>69</td>
<td>-1.4</td>
<td>251</td>
<td>-0.8</td>
<td>558</td>
<td>-2.5</td>
<td>46.2</td>
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<tr>
<td>1984</td>
<td>174</td>
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<td>-4.2</td>
<td>26.8</td>
<td>-1.1</td>
<td>68</td>
<td>-1.4</td>
<td>246</td>
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<td>-9.0</td>
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<tr>
<td>1985</td>
<td>1872/</td>
<td>-9.7</td>
<td>277</td>
<td>-4.5</td>
<td>27.3</td>
<td>+1.2</td>
<td>68</td>
<td>0</td>
<td>238/</td>
<td>-2.8</td>
<td>277/</td>
<td>-22.0</td>
<td>88.8</td>
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</table>
### Table 7 - continued

**Staff Fluctuations in Railways and the Effect of Labor Redundancy Schemes**

<table>
<thead>
<tr>
<th>Year</th>
<th>DB</th>
<th>NS</th>
<th>ORB</th>
<th>SNCF</th>
<th>JR</th>
<th>Conrail</th>
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</thead>
<tbody>
<tr>
<td>1986</td>
<td>140</td>
<td>288</td>
<td>27.9</td>
<td>224</td>
<td>255</td>
<td>n.a.</td>
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<tr>
<td>1987</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>218</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

1/ First collective agreement on staff reductions was signed in 1957.
3/ Conclusion of "Contrat de Plan" between SNCF and Government.
4/ Implementation of staff redundancy scheme.


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Note: The table provides data on staff changes in various railway systems, highlighting the impact of labor redundancies and the implementation of corporate plans. The years listed (1986 and 1987) correspond to specific events and agreements with the respective rail authorities or governments, such as the first collective agreement in 1957, the implementation of corporate plans for 1965-1990, and various acts and recommendations impacting staff numbers.
Age Groups and Skill Levels Affected by Redundancy

53. The redundancy schemes in Europe and Japan were aimed at employees either eligible for early retirement or shortly before early retirement age. This could range anywhere from age 55 and over. In Europe few employees leaving their enterprise attempted to re-enter the labor market and even if they had opted for alternative employment the probability of finding a new job in this age group are slim, according to labor market studies. By contrast, in Japan it is customary to pursue a second career after retirement at age 55. The scheme applied to CONRAIL had no age limits but was tied to seniority rights.

54. As regards skill levels the majority of those affected by redundancy were in the low or semi-skilled category. The few higher skilled employees whose positions were made redundant had usually no problem in finding a new job, either in the same enterprise or elsewhere. Some enterprises, (e.g., JNR, BR, DB, Port of Hamburg) even could not fill all their vacant positions, particularly in areas where competition for skilled labor by other industries was high, because rigid wage scales prevented them from active competition with private industry.

Level of Redundancy Payments and Funding

55. Broadly speaking the enterprises included in the study have followed three different approaches with regard to redundancy payments: monthly payments until early retirement, subject to minimum age and/or service criteria; lump sum payments depending on the years of service and subject to a ceiling; and a choice between monthly payments and a lump sum payment. The two entities (BR and UK ports scheme) which offered this latter option reported that the employees preferred the lump sum payment because among other reasons it afforded them more flexibility in their financial planning.

56. The level of payments varied greatly between the entities included in the study but also between different entities in a single country. Factors that primarily seem to influence the level of payments are the level of salaries in the enterprise concerned, the length of service, the rules governing the company's or, as it were, the national pension system, and budgetary constraints. In those cases where a minimum age was an eligibility criterion the objective was to provide a redundancy payment until early retirement, about equal to the pension of a retired employee. Depending on the prevailing social security system the enterprise financed either the totality of the redundancy payments or, where this was possible, relied on basic payments by the state social security system and topped these payments up by supplementary payments. Lump sum payments typically ranged from one to three years' salary.

57. The actual payment levels and conditions were negotiated with the unions on the basis of national legislation in this area and company or industry precedents, if any. There was no systematic attempt to determine
optimal policies on redundancy. However, in BR, detailed rules for redundancy including financial benefits were negotiated with the union and on the basis of this benefits framework, a cost/benefit test was applied to each specific redundancy case (see case study BR).

58. As regards the funding of redundancy schemes a variety of methods was applied. The reduction of staff by natural attrition did, of course, not require any specific additional funding. Staff simply continued to receive their normal salaries until they reached retirement age. In most cases where financial incentives were offered the schemes were funded by the transport enterprises and supplemented by public funds. Public subsidies took different forms: direct grants, low interest loans, tax credits, unemployment benefits (Annex 1 and Annex 2).

V. Effectiveness of the Redundancy Schemes

Introduction

59. An attempt has been made to evaluate the effectiveness of the redundancy schemes, first by measuring the impact of staff reductions under different redundancy schemes on changes in physical (technical) and financial indicators of the enterprise concerned, and secondly by evaluating the costs and benefits of the redundancy schemes themselves.

60. The first set of measures furnishes information on the relative importance of staff reduction measures in the improvement of selected technical, commercial and cost indications. The second approach enables us (in theory) to rank the different staff redundancy schemes themselves using the net present value of the schemes as ranking criterion and such socio-political factors as union and political acceptability of a particular scheme as additional constraints.

The Impact of Personnel Reductions on Physical and Financial Efficiency

61. As regards the first set of measures we will evaluate the changes in physical efficiency by comparing variations in output growth per employee, measured in traffic units, with total traffic growth. This comparison gives us a rough indication of the effect of labor reductions (increases) on variations in the ratio of output per employee. It should be borne in mind, however, that the staff decreases depended to a great extent on the introduction of labor saving technology, as was pointed out in paras. 25 and 26. The commercial efficiency with respect to staff changes will be measured by comparing the variations in the ratio of revenue earned per employee with the growth of revenue. Again, the difference between the two growth rates should enable us to identify the effect of staff reductions on the increase (decrease) of this ratio. Finally, we measure the cost efficiency of staff reductions by comparing variations in the growth rate of total personnel costs/employee with the growth of total personnel costs. If total personnel costs grew less than the total personnel costs/employee this should be due to staff reductions.

62. The following table (Table 8) shows the growth rates, as defined, for all railway enterprises included in the study. The same analysis could not be carried out for the ports since the financial information on the private port companies was not available.
Table 8
The Impact of Personnel Reductions on the Physical
and Financial Efficiency of Railways
Average Annual Growth Rates for the Period 1975-1985

<table>
<thead>
<tr>
<th>Railway</th>
<th>TU</th>
<th>TU/E</th>
<th>Share $E_{tu}$</th>
<th>R</th>
<th>R/E</th>
<th>Share $E_r$</th>
<th>PC</th>
<th>PC/E</th>
<th>Share $E_{pc}$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>BR</td>
<td>-1.0</td>
<td>-0.1</td>
<td>-</td>
<td>+8.3</td>
<td>+9.8</td>
<td>15</td>
<td>+8.8</td>
<td>+10.3</td>
<td>15</td>
</tr>
<tr>
<td>1980-86</td>
<td>-1.3</td>
<td>+3.5</td>
<td>100</td>
<td>+3.6</td>
<td>+7.4</td>
<td>51</td>
<td>-1.3</td>
<td>+3.5</td>
<td>100</td>
</tr>
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<td>DB</td>
<td>+1.4</td>
<td>+5.3</td>
<td>74</td>
<td>+3.2</td>
<td>+7.1</td>
<td>55</td>
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</tr>
<tr>
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<td>+6.3</td>
<td>+5.8</td>
<td>0</td>
<td>+3.8</td>
<td>+3.5</td>
<td>0</td>
</tr>
<tr>
<td>OBB</td>
<td>+2.0</td>
<td>+2.4</td>
<td>17</td>
<td>+6.3</td>
<td>+6.0</td>
<td>7</td>
<td>+5.5</td>
<td>+5.0</td>
<td>7</td>
</tr>
<tr>
<td>SNCF</td>
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<td>+2.1</td>
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<td>+10.6</td>
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<td>14</td>
<td>+10.4</td>
<td>+12.0</td>
<td>13</td>
</tr>
<tr>
<td>JNR 2/</td>
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<td>+11.7</td>
<td>41</td>
<td>+6.2</td>
<td>+10.9</td>
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<tr>
<td>CONRAIL 2/</td>
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<td>100</td>
<td>-11.9</td>
<td>+4.5</td>
<td>100</td>
</tr>
</tbody>
</table>

1/ A figure of 100 in this column means that 100% of the increase of the efficiency indicator can be associated with staff decreases. A figure of less than 100 means that only part of the increase of the efficiency indicator can be associated with staff reductions. For method of calculation see note below.

2/ Before privatization.

NOTE: TU = Traffic units (passenger plus freight km); TU/E = Traffic Units per Employee; Share $E_{tu} = 100 \times \frac{(TU)}{TU/E}$. R = Operating Revenue (in nominal terms); R/E = Operating Revenue per Employee; Share $E_r = 100 \times \frac{(R)}{R/E}$. PC = Total Personnel Cost (in nominal terms), including overhead; PC/E = Total Personnel Cost per Employee; Share $E_{pc} = 100 \times \frac{(PC)}{PC/E}$.

Source: Own calculations based on U.I.C. Railway Statistics.
interesting observations. It can be noted generally that staff reductions had a positive effect on physical efficiency, the revenue earning power of the remaining staff, and on slowing the rise in personnel costs. Further, railways with incentive schemes (CONRAIL, BR 80-85) for voluntary redundancy tended to have higher rates of reduction than those using exclusively (DB, OBB) or predominantly (SNCF) natural attrition, or a combination of redeployment of personnel and natural attrition (JNR before privatization). This shows that incentive schemes for voluntary redundancy are popular with staff and that substantial numbers accept this option. By contrast, natural attrition relies exclusively on the age structure of the staff. Personnel reductions in OBB, which did not pursue any personnel redundancy scheme had a low share in the improvement of the three efficiency factors. NS is a special case among the European railways in the sense that it has, after SNCF, the second highest output per employee and is, apart from BR, the only railway that could almost cover its operating expenses by its operating revenues (see Table 9).

63. If we look at the performances of individual railways it is obvious that CONRAIL has performed best in terms of our efficiency criteria. Despite an unfavorable economic environment, i.e., declining traffic, declining revenue and an increasing average wage rate all three indicators improved dramatically. As pointed out earlier it should be noted in this context that the massive staff reductions were accompanied by a restructuring of the operations and an investment program which changed CONRAIL's production and cost functions completely.

64. CONRAIL is unique in the sense that it was able to focus its operations on a small segment of profitable freight traffic. The privatized parts of JNR are trying to do the same with passenger traffic. Whether they will succeed remains to be seen. Therefore, it seems appropriate to review the performance of these enterprises separately. JNR before privatization can be included as well since its traffic mix and other operating characteristics resembled the sample of the main European railways in this study.

65. In BR the impact of staff decreases began to be felt from 1981 onwards which coincides with a more vigorous drive to encourage voluntary redundancy. Output per worker increased on average 3.5% per year, despite a decrease in traffic of 1.3% per year. Revenue per employee increased 7.4% per year. Two thirds of this increase can be traced back to staff decreases. The staff reductions resulted in a decrease of personnel costs by 1.3% per year despite an increase in the overall average wage per employee of 3.5% per year. If the 10-year period 1975-1985 is taken as a basis, BR did not fare so well. Staff actually increased during the first five years and revenue per employee increased by a healthy 9.8% per year over the 10 year period. But this was almost exclusively achieved by increases in the revenue per traffic unit, i.e., through substantial tariff increases between 1975 and 1980 and a change in the composition of traffic. At the same time, BR was forced to grant its personnel substantial wage increases. This, combined with the declining traffic, meant that the growth of personnel costs outpaced revenue growth.
Table 9
Railway Operating Costs and Revenues 1/, Operating Ratios 1980-1985

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<td>1. BR</td>
<td>C 2,758</td>
<td>2,730</td>
<td>2,777</td>
<td>2,968</td>
<td>3,890</td>
<td>3,193</td>
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<td>2,979</td>
<td>3,584</td>
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<td>1.07</td>
<td>1.00</td>
<td>1.09</td>
<td>1.00</td>
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<td>2. DB</td>
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<td>30,884</td>
<td>30,429</td>
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<tr>
<td></td>
<td>C/R 1.14</td>
<td>1.15</td>
<td>1.16</td>
<td>1.14</td>
<td>1.11</td>
<td>1.11</td>
</tr>
<tr>
<td>3. NS</td>
<td>C 2,758</td>
<td>2,450</td>
<td>2,661</td>
<td>2,752</td>
<td>2,739</td>
<td>2,988</td>
</tr>
<tr>
<td></td>
<td>R 2,229</td>
<td>2,420</td>
<td>2,631</td>
<td>2,726</td>
<td>2,767</td>
<td>3,021</td>
</tr>
<tr>
<td></td>
<td>C/R 1.23</td>
<td>1.01</td>
<td>1.01</td>
<td>1.01</td>
<td>0.99</td>
<td>0.99</td>
</tr>
<tr>
<td>4. OBB</td>
<td>C 22,770</td>
<td>24,718</td>
<td>26,120</td>
<td>26,855</td>
<td>27,797</td>
<td>29,141</td>
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<tr>
<td></td>
<td>R 18,439</td>
<td>20,667</td>
<td>20,675</td>
<td>21,186</td>
<td>22,616</td>
<td>27,749</td>
</tr>
<tr>
<td></td>
<td>C/R 1.23</td>
<td>1.20</td>
<td>1.26</td>
<td>1.27</td>
<td>1.23</td>
<td>1.05</td>
</tr>
<tr>
<td>5. SNCF</td>
<td>C 43,824</td>
<td>50,240</td>
<td>59,074</td>
<td>66,099</td>
<td>71,598</td>
<td>72,705</td>
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<td></td>
<td>R 42,109</td>
<td>47,377</td>
<td>52,405</td>
<td>56,969</td>
<td>61,131</td>
<td>64,338</td>
</tr>
<tr>
<td></td>
<td>C/R 1.04</td>
<td>1.06</td>
<td>1.13</td>
<td>1.16</td>
<td>1.17</td>
<td>1.13</td>
</tr>
<tr>
<td>6. JNR</td>
<td>C 3,964,263</td>
<td>4,325,427</td>
<td>4,774,928</td>
<td>5,140,971</td>
<td>5,209,128</td>
<td>5,572,840</td>
</tr>
<tr>
<td></td>
<td>R 2,963,679</td>
<td>3,173,016</td>
<td>3,313,019</td>
<td>3,298,907</td>
<td>3,389,789</td>
<td>3,552,753</td>
</tr>
<tr>
<td></td>
<td>C/R 1.34</td>
<td>1.36</td>
<td>1.44</td>
<td>1.56</td>
<td>1.54</td>
<td>1.57</td>
</tr>
<tr>
<td>7. CONRAIL</td>
<td>C 4,153</td>
<td>4,088</td>
<td>3,565</td>
<td>2,741</td>
<td>2,872</td>
<td>2,764</td>
</tr>
<tr>
<td></td>
<td>R 3,801</td>
<td>4,001</td>
<td>3,441</td>
<td>3,025</td>
<td>3,322</td>
<td>3,154</td>
</tr>
<tr>
<td></td>
<td>C/R 1.09</td>
<td>1.02</td>
<td>1.04</td>
<td>0.91</td>
<td>0.86</td>
<td>0.88</td>
</tr>
</tbody>
</table>

1/ In million national currency units.

Note:  C = Total Operating Cost
       R = Total Operating Revenue
       C/R = Operating Ratio

         CONRAIL: U.S. Interstate Commerce Commission, R-1 reports
         for various years.
66. The impact of staff decreases on the three efficiency criteria in DB, which had a consistent long-term approach to personnel reductions through natural attrition, was second only to the performance of BR during the period 1980-85. Three quarters of the increase in output per worker can be attributed to the decrease in staff while over half of the increase in revenue per employee was due to staff decreases, and personnel costs only rose by 1.9% per year rather than by the growth of the average wage rate of 5.8% per year which would have prevailed if there had been no personnel reduction.

67. A comparison between the BR experience and DB suggests that while incentive schemes for voluntary retirement yield results in a relatively short time period - five years in the BR example - the policy of natural attrition, consistently applied over a longer period of time, can also improve a railway's efficiency substantially.

68. It would be interesting to know whether the staff decreases had a tangible impact on broader financial measures. This would enable us to put the policy instrument of decreasing staff into perspective with other revenue increasing/cost decreasing options which a railway could pursue. Using the operating ratio (Table 9) as a broad measure of financial performance, we can state that only CONRAIL showed a significant improvement, from 1.09 in 1980 to 0.88 in 1985, and this can be traced back directly to a reduction in staff since traffic and revenue both declined and the average personnel cost per employee increased slightly. JNR's operating ratio deteriorated despite the substantial staff decreases and increases in average revenue per traffic unit. As can be inferred from Table 8 staff reductions had a positive effect on the operating ratio since the total wage bill grew slightly less than total revenue. Without these decreases, JNR's operating ratio would have deteriorated even more considering that the average cost per employee grew at the high rate of 10.9% per year. Had the total wage bill grown at this rate the operating ratio would have dropped to 0.34 in 1985. Unfortunately, the positive effect of the staff reductions was almost completely absorbed by the rate of increase in the average cost per employee. It should be noted in this context that in the case of CONRAIL the redundancy payments were financed by the government while JNR had to bear the cost of end of service benefits.

69. This finding points to an important conclusion: the positive effect of staff decreases will be blunted or even more than compensated if other equally important parameters, such as the average personnel cost per worker, are not controlled as well. SNCF is another case where the operating ratio deteriorated between 1980-85. Had it been possible to keep personnel costs per worker down the staff decreases would have had a more tangible impact on the railway's overall financial performance. BR and NS provide examples of an improving financial performance, for different reasons. In BR the staff decreases during 1980-85 were a major contributing factor since the wage bill actually shrank. But at the same time the rate of increase of the average personnel cost per worker was kept low and total revenue could slightly be increased as well, despite a loss
of traffic. The experience of NS is interesting insofar as this is a railway which kept personnel levels more or less static, but nevertheless improved its operating ratio from 1.23 in 1980 to 0.99 in 1985. It managed to achieve this remarkable result by keeping its wage bill down. At the same time it was able to increase its average revenue per traffic unit substantially without losing traffic.

70. Of course, not all railways can proceed in the same fashion. The mix of instruments to be used to improve operating results depends, as regards increases in revenue, inter alia on such factors as price elasticities of demand and elasticities of substitution; on the labor side, the average cost per worker will, at least partly, depend on such exogenous factors as overall inflation rates and wage increases in comparable occupations and on the extent to which management can persuade the representatives of labor to moderate their demand for wage increases.

71. A comparison of the rate of increase of the average personnel cost per employee (Table 8) and the rates of increase of inflation and wages for non-agricultural activities for 1975-1985 (Table 10) gives some interesting results. Those railways that did best in terms of improving their operating ratios showed substantially lower growth rates in average personnel cost per employee in comparison with inflation rates and increases in wages for non-agricultural activities. On the other hand it cannot be said that the increases in average personnel cost per employee for the other railways were way out of line with the inflation rate or the increase in the non-agricultural wage rate which might have indicated an excessive bargaining power of railway unions. Except for JNR the increases were either slightly below (OBB) or equal to (SNCF) or slightly above (DB) the rate of increase in non-agricultural wages.

72. The exception is JNR before it was privatized. Its average personnel costs per employee increased by 10.9% per year over the period 1978-1985 while the inflation rate increased by only 3.7% per year and industrial salaries by 6% per year. A possible explanation could be the fact that every employee who leaves JNR, irrespective of whether he finds employment elsewhere, receives an end of service bonus depending on the number of years in service and the current salary level, subject to a maximum of 60 months salary. This rule has of course the negative financial effect that the end of service bonus payments increase with the number of people leaving the railway. Therefore, over the short or even medium terms a successful redundancy scheme would constitute a tremendous financial burden on the railway even if no specific redundancy payments, in addition to end of service payments were made, as was the rule in JNR.
TABLE 10

AVERAGE ANNUAL INFLATION AND NON-AGRICULTURAL WAGE RATES
FOR THE PERIOD 1975 - 1985

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>INFLATION RATE</th>
<th>NON-AGRICULTURAL WAGE RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>+ 5.0</td>
<td>+ 6.8</td>
</tr>
<tr>
<td>France</td>
<td>+10.0</td>
<td>+12.2</td>
</tr>
<tr>
<td>Germany</td>
<td>+ 3.5</td>
<td>+ 5.2</td>
</tr>
<tr>
<td>Netherlands</td>
<td>+ 4.9</td>
<td>+ 6.9</td>
</tr>
<tr>
<td>U.K.</td>
<td>+11.3</td>
<td>+12.0</td>
</tr>
<tr>
<td>80-85</td>
<td>+ 7.0</td>
<td>+ 8.8</td>
</tr>
<tr>
<td>Japan</td>
<td>+ 3.7</td>
<td>+ 6.0</td>
</tr>
<tr>
<td>U.S.</td>
<td>+ 5.4</td>
<td>+ 5.2</td>
</tr>
</tbody>
</table>


We can summarize the main results of the above analysis as follows:

Staff redundancy schemes had a positive effect on the efficiency of the railways as measured by output per employee, revenue per employee and the wage bill.

Railways with incentive schemes for voluntary retirement tended to do better than those relying on other redundancy schemes, such as natural attrition or redeployment of personnel and natural attrition. However, the positive effects of staff reductions did not always translate into an overall financial improvement because increases in the average cost per employee could not sufficiently be controlled and/or other parameters such as output and average revenue per unit of output declined or could not be increased sufficiently. As the CONRAIL case and other railways and ports demonstrate, sometimes an enterprise needs to change its production technology radically in response to the effects of a changed competitive environment and price variations of its factor inputs. In this case the staff reduction is, ceteris paribus, closely related to the timing of the shift from one production technology to another. Therefore, the pace of staff decreases and improvements in efficiency may depend on the availability of adequate investment capital. The case of NS shows that in reasonably efficient railways alternative options to staff decreases exist for the overall financial improvement of the enterprise. For instance, a control of the rate of increase of the average personnel cost per employee might be more acceptable to the employees than staff decreases. It must, however, be noted that generally rates of increase in the average personnel cost per employee were lower than rates of inflation and growth rates of wages in the non-agricultural activities. Although this points to moderate wage policies of railway unions, the extent of the wage moderation may not have been sufficient in the face of the financial problems of the railways.

3. Possible Criteria for the Selection of Redundancy Schemes

(a) Introduction: Choice of Criteria

74. The choice of a specific redundancy scheme depends on the context in which it is evaluated. It can be looked at from the individual point of view, from the point of view of the enterprise and from the overall point of view of the economy taking into account the social and political context in which the scheme must operate. The individual affected by redundancy would probably consider a scheme as preferable if he could minimize his income losses resulting from being laid off in terms of the amount of financial compensation given to him and/or the probability of finding new employment equivalent in pay, status and other benefits.

75. A redundancy scheme would be effective from the point of view of the enterprise if for a given output the net savings resulting from the implementation of the scheme would be as high as possible, the disruption resulting from the implementation of a staff reduction program would be minimal and the quality of output of the enterprise would not be adversely affected by the staff reduction. There may also be an increase in the
marginal product of the remaining workers, for instance due to better staff morale, better work places, etc. If we use the present value rule as a quantitative criterion of effectiveness any payment scheme would be preferable to natural attrition in which the difference between the present value of the benefit stream - the avoided wage and other costs - and the present value of the cost of stream - the costs of redeployment or the redundancy payments - would be positive. Moreover, that payment scheme would be adopted which would maximize that difference, subject possibly to a budgetary constraint and an evaluation of the qualitative constraints mentioned above. The effectiveness of a redundancy scheme from the overall economic point of view could be evaluated in terms of allocative efficiency of the production factors, and in terms of the distributional equity and political acceptability of the proposed scheme.

(b) Assessment from the Point of View of the Individual

76. As to redundancy schemes based on natural attrition, it can be assumed that the individual is indifferent to this scheme since he is neither better nor worse off without it because his employment terminates with normal retirement. A scheme based on redeployment, like that implemented by JNR after privatization, can be considered equivalent to the natural attrition option in its effect on the individual employee. It does not leave the employee better or worse off unless the employment alternative offered is not equivalent to the job the employee has vacated. JNR seems to have ensured that the redeployment it proposed to its redundant employees did not mean a loss in income or status. Moreover, the end of service bonus payment to which every JNR employee is entitled meant a substantial boost in the incomes of those who found employment outside JNR. The Port of Hamburg reported some problems with the redeployment option when redundant employees had to transfer from individual companies to the port labor pool. Often this transfer was connected with the loss of seniority, lower pay and lower grade work. It is no surprise that under these circumstances redeployment was not a particularly popular option with the redundant employees.

77. Turning now to the other alternatives mentioned above, it is more difficult to assess ex ante whether an incentive scheme for voluntary retirement offered by the employer may be regarded as effective from the individual’s point of view. It will depend very much on the individual’s assessment of the trade off between the size of the redundancy payment and the probable length of unemployment and the value the individual attributes to the extra amount of leisure time while not working. In BR and the Rotterdam port, where a choice was offered between redeployment, if necessary after retraining, and an incentive scheme, the latter was chosen more often than the redeployment option. But it must also be born in mind that the majority of employees were only a few years away from retirement anyway and that the system was biased in favor of older employers since benefits depended, subject to certain ceilings, on length of service and wage level. SNCF had in its payments system a built-in bias in favor of those between 4 and 15 years of service. These younger employees also chose lump sum payments over redeployment. This seems to indicate that these employees had a positive assessment of the probability of finding alternative employment elsewhere.
(c) Assessment from the Point of View of the Enterprises

78. Only BR has systematically attempted to calculate the cost and benefits of reducing staff. The calculation was based on the existing incentive system for voluntary retirement. If redundancy occurs in BR as part of an investment or disinvestment decision the costs of redundancy are considered part of the investment/disinvestment costs and taken into account in the cost/benefit analysis of the project concerned. If redundancy is caused by other measures the discounted potential earnings stream of the redundant employee, as measured over the period of his employment until retirement, is compared with the discounted stream of redundancy benefits he is entitled to. Redundancy is not usually allowed unless at least 85% of the employees' tasks can be discontinued. BR feels that even with this proviso the potential savings may be overstated because not all redundant employees would stay in the employ of the railways until their retirement.

79. The other enterprises included in the study made no systematic effort to use cost/benefit analysis as a measure of the effectiveness of their redundancy payment schemes. None of the enterprises compared the schemes they adopted with feasible alternative options. They monitored the effectiveness of their policies with other yardsticks, such as the number of people who had left each year, increase in productivity per worker, decrease in personnel costs per year. The drawback of this approach is that it measures success or failure of a redundancy scheme only ex post; it does not address the issue of optimal choice between a number of feasible alternative redundancy schemes and it disregards the time value of money.

80. In many of the cases examined, a clearer and quantified concept about alternative options and their consequences might have led to the design of more effective redundancy schemes in terms of resources spent and reduction of redundant employees. At least such an analysis could have provided the enterprise with a clearer idea of the upper limit of possible redundancy payments which could have been useful for the inevitable negotiations with the unions but also with supervisory authorities. This does of course not mean that the use of cost/benefit analysis is advocated as the only efficiency criterion for the choice of a particular staff redundancy scheme. Other, non-quantifiable and non-economic factors may be of equal importance. For instance, in some countries or enterprises natural attrition may be the only socially acceptable method of staff reduction or it may be the easiest method for a government to accept since the funds needed to subsidize the surplus staff may not require specific approval from legislative bodies. However, without knowing and having evaluated all feasible policy choices it is obviously impossible to decide on the optimum approach.

19/ Another problem is that investment projects which rely for their justification on savings in staff costs do not usually take into account the time lags and the resources needed to actually reduce staff, thus overstating the benefits of the project.
(d) Assessment from the Point of View of the Economy

81. Ideally, an assessment of different staff redundancy schemes would include an economic evaluation of the resources spent on the reduction of personnel. This would have been justified since many of the schemes were tax deductible or directly subsidized by the governments concerned or the governments, as owners of the entities, subsidized the overall deficits of the enterprises. However, in none of the countries included in the study was such an economic evaluation carried out.

VI. Possible Measures to Deal with the Problem of Surplus Staff More Effectively in the Future

82. The railways and ports included in this study were confronted with a set of economic, technological and socio-political factors over which they had very little influence. For instance, the railways had only limited scope to influence demand for their services and thus absorb surplus staff through growth. To be sure, the railways have not simply adopted a fatalistic attitude and accepted the seemingly inevitable. Active price and quality competition by railways was more the rule than the exception. The UK freightliner experiment, for example, or the German overnight freight trains, intercity passenger trains, the French TGV (High Speed Train), the Japanese Shinkansen passenger train, and imaginative pricing policies in each of the railways bear witness to the contrary. Nevertheless, the fact remains that historically these policies have not significantly changed the long-term declining demand for rail freight or passenger transport.

83. Therefore, the growth option has not been a major instrument in eliminating surplus staff. The railways point out, however, that their mode can be made more attractive and thus regain lost market share through modernization, for instance, by extending the commercially highly successful TGV system Europe-wide. But even if such plans should materialize their implementation will take a long time and they would not solve the present labor problem. Also, experience has shown that the introduction of new technology tends to compound the personnel redundancy problem, at least in the short and medium term, rather than solve it.

84. The ports included in the study were in a similar situation as the railroads, as far as their ability to increase demand for their services is concerned. Price and service competition had only limited impact on increasing total throughput because the differences in these parameters between the competing ports were not significant. By contrast, such factors as geographical location, port-hinterland connections and the economic infrastructure around the port were more important.

85. The Port and State of Hamburg developed a plan to diversify into new activities, not directly related to the port work proper, such as dispatching work for a mailorder business.
86. If demand could not be influenced in a tangible way were there any possibilities to change the capital/labor ratio in favor of labor? The obvious answer in our examples is no. The substitution of capital for labor has been an important means of cost control. In addition, the introduction of modern technology also meant an improvement in the quality of service which was equally important. As regards ports, the switch to labor saving technology was a consequence of the introduction of container ships. As shipowners preferred ports equipped with container handling facilities, it became a question of survival for the ports to invest in container handling equipment. It is unlikely, therefore, that as far as the enterprises in our study are concerned, less capital intensive methods of production could have been adopted in order to absorb more labor.

87. Rather than reduce the numbers of staff, the Netherlands Railways (N.S.) controlled the wage bill by keeping the growth in wage costs per employee below the inflation rate and the non-agricultural wage rate, thus reducing real wages. However, a policy of containing the wage bill through reductions in real wages will soon find its limits if employees leave for better paying jobs outside, or they reduce their work effort. N.S. seems not to have had this problem.

88. In conclusion, it seems that the crux of the problem was the lack of flexibility in transport labor markets, as discussed in Chapter III. In the case of JNR, the Government was no longer willing or able to support growing losses, and it adopted privatization as a method to make the enterprise more responsive to market pressures. In the case of CONRAIL government ownership was regarded from the formation of the company as a transitory stage towards privatization. For CONRAIL privatization was a success, although the costs to the Government in restructuring the enterprise, including the downsizing of its staff, were high. In both cases of privatization the old restrictive labor practices and regulations were abandoned. Redundant labor was either bought out by the governments or redeployed.

89. The relative success of DB and SNCF in consistently reducing staff shows that government owned entities can also accomplish this task. It is worth noting that the pace of staff reductions accelerated once both railways had agreed with their owners on specific terms of reference for the operation of the enterprises: "DB 90" in the case of German railways and the "Contrat de Plan" for SNCF. "DB 90" contained specific, quantified goals for staff reductions, labor productivity increases and overall growth of the wage bill. The government had also put a ceiling on its previously open-ended subsidies to DB and at the same time, allowed the railways more management autonomy. By contrast, the agreement between SNCF and its government defined a broad framework, limiting government financial assistance and allowing SNCF to exercise its management powers as it saw fit, including redeployment and reduction of staff. The additional introduction of an incentive package quickened the pace of staff reductions. SNCF does not have a long-term staff reduction plan, probably because of political sensitivities in this matter; rather, specific staff reductions are determined from year to year in the light of such factors as traffic and technological developments.
Nevertheless, from these two different experiences emerge some common themes which might have been important for the success of these railways in coping with the staff redundancy problems. First, in both cases there was a strict limit on government subsidies. Thus the railways were forced to increase their technical and cost effectiveness. Second, management was given more autonomy in running their enterprises. Third, the political leadership accepted sometimes difficult decisions on staff reductions. In return, railway management took account of political sensitivities as well.

That private ownership is not always the solution to make labor markets more responsive to a changing economic and technological environment is demonstrated by the ports in our study. The control of the unions over port labor enabled them to establish practices designed to minimize reductions in the workforce, despite the fact that the operators in the ports were private enterprises. One response in the U.K. was the growth of non-unionized ports such as company ports. In addition, containerization removed the need to load and unload in the port itself which enabled the enterprises to move outside to another location and thus solve their specific redundancy problem. These developments tended to weaken union resistance to a change in work practices.

In the Port of Hamburg, for instance, the union leadership realized that it was faced with a dilemma. If it agreed to a relaxation of work rules its membership would blame it for the loss of jobs. On the other hand, if it resisted change the flight of enterprises from the port was likely to continue and job losses might even be more important in the long run. The traditional solution of compensating the workers for their agreement to give up certain privileges could not be applied either because wages were high compared to the labor market outside the port. The employers had discussed the problem with the unions already for years but the issue has not yet been resolved.

Some general conclusions can be drawn from the cases examined in this report, although its limitations, as set out in para. 3 should be borne in mind as well, particularly if the experience of the transport enterprises and entities of the countries examined in this report is to be applied to similar situations in developing countries.

The first lesson to be learned is that the labor adjustment strategy must be developed on the basis of the specific circumstances of the country as well as the enterprise/entity concerned. Such factors as the political processes of a country, labor relations, the social system influence the pace, form, scope and costs of adjustment. It is important to acquire an understanding of the local and national political environment in which labor redundancy schemes must operate, for instance to be able to identify where resistance could arise and why, how it could be overcome and at what cost.
95. There must also be an adequate commitment from the government/supervisory authority side and the enterprise/entity side to implement a labor adjustment program.

96. Furthermore, there should be a clear delineation of authority and responsibilities between government/supervisory authority and enterprise/entity, and on this basis management should be allowed, without outside interference, to develop, negotiate and implement labor adjustment programs. On the labor side the reduction or, ideally, removal of restrictive labor practices and regulations seems to be an essential ingredient for successful labor adjustment programs.

97. The time spans needed for the implementation of labor adjustment programs are a function of the political and socio-economic environment, budget and investment constraints, and such other design features of the labor adjustment program as minimum length of service, age limits or restriction to specific skills. In Europe, the time needed for the implementation of labor adjustment programs was substantial. Periods of 20 years or more, even with incentive programs for voluntary redundancy are not unusual. In contrast, the substantial labor reduction program carried out by CONRAIL in the U.S. was quick by comparison, taking less than 10 years. In Japan, where attitudes towards job safety are even stronger than in Europe, JNR nevertheless could reduce its staff, before and after privatization, by substantial numbers within a short time. This was made possible because of the unique flexibility of the Japanese labor market where excess staff in one firm usually are absorbed by other enterprises with whom the firm had business relations and/or by the public sector.

98. Staff redundancy is not a static phenomenon. It develops over time and accumulates until financial losses become unsustainable or the flow of subsidies is limited or eliminated. Such crises have typically been periods which triggered the implementation of labor adjustment programs.

99. There has been little or no effort to devise and evaluate alternative options for the adjustment of staff. Clearer and quantified concepts about a number of feasible options might have contributed to the design of more effective redundancy schemes in terms of resources spent and benefits gained from labor adjustment programs. Such an exercise could have delineated as well the critical parameters for the formulation of a bargaining strategy of the enterprise/entity with the representatives of the labor side and with the supervisory authority for the possible provision of finance for a labor adjustment program.

100. The implementation of labor adjustment programs in Europe, the U.S. and Japan has met with little resistance from the labor side because in all cases the representatives of the labor side played a role in the shaping of the program and the solutions adopted took into account the interests of the workers. On the other hand, this has often meant a slower than desirable adjustment process which contributed to the continually weak financial position of a number of enterprises. In such cases it might be necessary to consider additionally an adjustment in real wages of the remaining staff, if financial viability of the enterprise is the objective, which would reflect their suboptimal marginal productivity.
I. Labor Protection Arrangements

1. Labor protection is an issue that has divided rail labor and management for five decades. The first industry-wide job protection agreement, the Washington Job Protection Agreement, was signed in May 1936 by representatives of the railroad industry and organized labor. Its purpose was to protect employees from "coordinations," i.e., the merger or consolidation of carriers. Many of the provisions of the Washington Job Protection Agreement were later incorporated into public law and private agreements. Labor protection reached its zenith in the 1960s and early 1970s when several railroads entered into "lifetime" protection agreements to facilitate their mergers. Even Conrail's enabling legislation, which passed Congress in late 1973, carried forward the Penn Central's lifetime protective arrangements.

2. Beginning in the late 1970s, this upward trend was dramatically reversed in a comparatively short time period by three events: the Milwaukee Road reorganization, the staggering cost to the government of Conrail protection, and the liquidation of the Rock Island.

3. Washington Job Protection Agreement (WJP)
   a. The WJP Agreement was negotiated against a background of federal legislation that would have prevented the railroads from reducing employment without prior ICC (Interstate Commerce Commission) approval.
   b. The WJP Agreement provided both income guarantees and separation allowances.
      i. The income guarantee:

      The income guarantee was equal to 60 percent of the employee's average monthly compensation during the prior 12 months. It was payable for up to 5 years.

      An employee selecting the income guarantee was required to hold himself available for service and exercise his seniority to any positions for which he could bid.
An employee receiving an income guarantee could also be transferred to another location on the railroad as the need for additional employees arose. In the case of a transfer, the carrier would be obliged to pay certain moving expenses.

ii. Separation allowance:

An employee whose job was abolished, had the option to resigning and accepting a separation allowance equal to a year's salary in lieu of the income guarantee.

d. Another important feature of the WJP Agreement was the requirement that the carrier give the employees 90 days notice before a merger or coordination. The carrier then had to negotiate with the labor organizations on the application of the WJP Agreement to the particular merger or coordination for which notice was given. In other words, each coordination required the negotiation of an implementing agreement that applied the principles of the WJP Agreement to the specific railroads and unions involved.

e. Many of the provisions of the WJP Agreement were later incorporated into public law and private agreements.

4. Evolution of Labor Protection Legislation

a. The ICC first imposed labor protective conditions in the late 1930's. Although there was no explicit provision in the Interstate Commerce Act for labor protection until 1940, the Supreme Court in 1939 upheld the authority of the ICC to impose protective conditions under its public interest responsibilities.

b. The ICC began imposing "conditions" which became a floor for the next round of mergers, according to section 5(2)(f) of the Interstate Commerce Act, which required the ICC to impose labor agreements as a condition for the approval of mergers and similar transactions. The 60 percent income protection guarantee was usually stipulated in many private agreements.

c. The 1944 "Oklahoma" conditions revised the 60 percent income protection guarantee upward to 100 percent.

d. The "Burlington" conditions were imposed by the ICC in 1944, the first time labor protection was imposed in an abandonment of a line.
e. In 1952, the "New Orleans" conditions extended protection beyond the normal 4 years contained in the 1940 amendment.

f. In 1970, the "Amtrak" conditions increased the protective period to 6 years.

g. Private agreements during the 1960's often provided for "lifetime" protection as was described earlier. Title V of the Regional Rail Reorganization Act (3R Act) of 1973 provided lifetime protection to employees of Conrail, in essence a continuation of the Penn Central lifetime protective agreement.

5. Title V

a. The development of legislation to create CONRAIL from the Penn Central system and other bankrupt railroads again reflected concern for employees and the practical need to obtain organized labor's cooperation in the passage of enabling legislation, in this case the Regional Rail Reorganization Act of 1973.

b. Title V of the 3 R Act required that all eligible employees, of the bankrupt railroads in the Northeast be offered employment and accorded wage and job protection benefits until age 65, provided they had at least 5 years of seniority with CONRAIL's predecessors. Employees could terminate their employment with CONRAIL and receive a maximum $20,000 lump-sum separation allowance. Relocation expenses were provided for employees offered jobs elsewhere on the CONRAIL system.

c. The monthly displacement allowance (MDA)

i. The key element of the Title V compensation is the monthly wage guarantee, known as the monthly displacement allowance (MDA). Under this provision, employees who were offered other jobs on CONRAIL at lower rates of pay were guaranteed annual incomes equal to their total base period (1974) earnings, as escalated by subsequent wage increases. The deteriorated condition of the predecessor railroads and limited hiring resulted in paying the above guaranteed earnings to those employees who worked in 1974. The initial $250 million authorization of Title V was exhausted in early 1980 and as a result of the guaranteed earnings feature, $181 million out of $250 million was used for MDA payments.

ii. The Staggers Rail Act of 1980 revised the Title V provisions to reduce the level of some monthly wage guarantees. The amendments also increased the Title V
authorization by $235 million and set a limit of $180 million for payment of MDA's. If the $235 million proved to be inadequate or the $180 million MDA cap was topped, the Staggers Act required CONRAIL and the railroads to pay the costs. An additional $129.1 million had been paid for Title V benefits out of the $235 million authorization by August 1981.

d. Wage protection for furloughed employees

i. The protected employees who are furloughed are offered the option of receiving MDA's or accepting the $20,000 separation payment. Given the generous MDA formula, few employees have elected to take separation payments.

ii. Data available when the Staggers Act amendments were being drafted indicated that historically the number of surplus protected employees on furlough had ranged from 250 to 350. However, sharp declines in traffic and employment cuts increased the number of furloughed employees up to 1,700 who were entitled to their full wage guarantees.

iii. Title V provisions mandate wage protection for any eligible furloughed employee, regardless of the cause of the layoff. Most of the 1,700 surplus CONRAIL employees received wage protection payments because of a downturn in rail traffic, not because of any adverse impact caused by the creation of CONRAIL as the statute originally intended.

iv. The annual average cost per surplus employee was $28,000 in 1981, including the cost of fringe benefits. Similarly affected employees on other railroads received only payments from the Railroad Unemployment Insurance Fund, which was financed by payments to the fund from all railroad companies.

v. As a result, payments to CONRAIL from the fund were averaging nearly $5 million per month since early 1980. Payments covering adversely affected employees on other carriers which assumed trackage of the bankrupt estates add nearly $1 million per month.

e. The NERSA repealed the Title V program effective September 1, 1981.

i. NERSA authorized $25 million to pay outstanding Title V claims, which were paid in early 1982.

ii. The FY 1982 DOT Supplemental Appropriation Act provided an additional $9 million for outstanding claims.
f. Total Cost of Title V:
$250 \text{ mil} + $129.1 \text{ mil} + $25 \text{ mil} + $9 \text{ mil} = $413.1 \text{ mil}

g. Total number of employees covered by Title V:
Approximately 50,000 employees

Note: The number of employees covered by Title V is enormous due to the Monthly Displacement Allowance (MDA).

6. Downward Trend in Protection

a. The first reversal in the increasingly generous terms of labor protection came with the Milwaukee Railroad Restructuring Act of 1979 (MRRA).

b. The Milwaukee Railroad Restructuring Act (MRRA)

i. The MRRA passed in November, 1979 represented a sharp departure from the trend of steadily increasing protection benefits.

ii. The trustees of the bankrupt Milwaukee Road had determined that the railroad could not be reorganized if the estate had to pay the cost of the standard lifetime labor protection provisions imposed under the Interstate Commerce Act, commonly referred to as "New York Dock" conditions. Without relief from the protection liability, liquidation of the entire Milwaukee was likely.

iii. MRRA generated a labor protection agreement between the railroad and labor organizations under which employees, on a voluntary basis, could accept guaranteed but reduced payments which might ultimately be won in a court approved reorganization.

iv. Milwaukee conditions include a maximum $25,000 separation payment and, for those employees hired by other railroads, wage protection at 80 percent of base earnings for 3 years, in addition to moving expenses.

v. An overall ceiling was set at 5,000 employees of the Milwaukee in a partial liquidation.

c. The Rock Island Railroad Transition and Employee Assistance Act (ACT).

i. The Rock Island Railroad Act was similar to the MRRA but implementation of this legislation had been delayed pending litigation.
ii. Ultimately, Rock Island employees received an average payment of less than $5,000 each, from a $35 million federal grant, nearly four years after the railroad ceased operation, i.e., from December, 1983 until April 1, 1984.

II. Labor Redundancy Schemes

- Title VII of the NERSA (Northeast Rail Service ACT) -

7. The need for Title VII of the NERSA.

a. Existing labor protection for Conrail employees barred any permanent solution to Northeast railroad problems. Under existing labor arrangements any employment reductions that Conrail or a successor line made would have been offset by Title V labor protection payments. Savings from the abandonment of unprofitable lines also would be offset by Title V liabilities or other protective conditions.

b. Other railroads simply would not assume the large numbers of Conrail employees currently involved in providing Conrail's service, nor would they assume responsibility for the Title V labor protection payments. The financial risks of these levels of protection would outweigh any benefits of acquisition.

c. Hence, a solution for the large number of Conrail employees was needed but the high cost of labor protection under Title V of the Regional Rail Reorganization Act of 1973 (3R) became a central impediment to the privatization of Conrail, which was then expected to be the best solution to Northeast railroad problem.

d. Also it was not appropriate for the burden of lifetime labor protection, which preferred large numbers of Conrail employees over other railroads and industrial workers, to be paid by the taxpayer.

e. Accordingly, the existing Title V labor protection had to be repealed and replaced by labor protective arrangements. In 1981, NERSA (Northeast Rail Service Act) added Title VII to the 3R Act of 1973 to repeal the "lifetime" Conrail labor protection provision of Title V.
8. Title VII

a. NERSA added Title VII to the 3R Act of 1973 and authorized $385 million. Another $15 million, previously appropriated, was made available for the purposes of Title VII. Under Title VII, there were two separate labor assistance programs.

b. Section 701 of Title VII.

NERSA authorized $270 million for an employee protection program which provided up to $20,000 in separation or subsistence allowances for eligible Conrail employees deprived of employment as a result of actions taken under the 3R Act or NERSA. The administration of the 701 program was performed by the Railroad Retirement Board.

c. Section 702 Program of Title VII.

NERSA authorized $115 million for the Section 702 Workforce Reduction program, which paid up to $25,000 in separation allowances to surplus train and engine service employees. The two programs are discussed below in detail.

9. Section 701

a. Contents of Section 701 Program

Section 701 provided that senior Conrail employees (generally those hired prior to January 1974) who were deprived of employment as a result of actions taken pursuant to NERSA or the 3R Act of 1973 may elect to receive:

i) a separation allowance of up to $20,000 if they resign from the railroad; or,

ii) a $42 per day subsistence allowance plus continued health insurance coverage, without severing their connection with the railroad. In either case, the maximum benefit of Section 701 is limited to $20,000 per employee.

b. Eligibility of Section 701

Section 701 covered general employees such as professional, clerical, maintenance and train or engine service workers, except senior high executives.

c. Decision of the Allowance

The separation allowance of up to $20,000 or $42 per day subsistence allowance was the product of political compromise.
d. Comparison between Section 701 and "New York Dock" conditions

i. The standard labor protection arrangements for employees who were adversely affected by the merger of railroads were commonly referred to as "New York Dock" conditions. "New York Dock" conditions were imposed in 1979 by the Interstate Commerce Commission in its approval of the New York Railway’s application for control of the Brooklyn Eastern District Terminal.

ii. Under New York Dock provisions, employees who lost their job as a result of a merger might elect to receive separation allowance equal to one year's salary or they might elect to receive a monthly dismissal allowance generally equal to the prior year's average monthly wage. This monthly dismissal allowance might extend for up to six years. The cost per employee for New York Dock type protection could range from a low of $5,000 to a maximum theoretical value of $250,000.

iii. Since annual salaries generally were greater than the $20,000 maximum benefit allowed under NERSA, separation allowance under New York Dock were somewhat larger than under NERSA.

iv. Under New York Dock, employees who were placed in a lower paying position as a result of a merger might receive a monthly displacement allowance equal to the wage differential, for up to six years. NERSA did not provide comparable benefits since, under NERSA, the individual had to be deprived of employment in order to be eligible for benefits.

e. Statistics of Section 701

i. Total Transfers = $142,000,000

ii. Total expenditures = $141,688,025

Benefits Expenses: Expenditures = $139,425,911

Administrative Expenses: Expenditures = $2,262,114

Balance = 311,975

Note: * Administrative expenses mean the government agent's cost.

iii. Yearly Benefit Payments.

<table>
<thead>
<tr>
<th>Year</th>
<th>Separation Allowance</th>
<th>Subsistence Allowance, H + W</th>
<th>Subsistence and Separation Allowance</th>
<th>Health and Welfare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>58,247,608</td>
<td>48,898,680</td>
<td>282,450</td>
<td></td>
</tr>
<tr>
<td>1983</td>
<td>49,181,130</td>
<td>13,762,960</td>
<td>753,584</td>
<td></td>
</tr>
<tr>
<td>1984</td>
<td>14,516,534</td>
<td>8,802,796</td>
<td>278,562</td>
<td></td>
</tr>
<tr>
<td>1985</td>
<td>9,081,358</td>
<td>8,189,655</td>
<td>209,626</td>
<td></td>
</tr>
<tr>
<td>1986</td>
<td>8,399,281</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total $139,425,911 $137,901,689 $1,524,222
iv. Coverage of Section 701 as of December 21, 1986

Total: Employees covered by Section 701 = 10,033  
Employees who had received separation benefits = 2,874  
Employees who had received subsistence benefits = 7,159

v. Yearly Number of Employees Covered by Section 701

<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>Number of Employees Paid Separation Allowances</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>1796</td>
</tr>
<tr>
<td>1983</td>
<td>669</td>
</tr>
<tr>
<td>1984</td>
<td>163</td>
</tr>
<tr>
<td>1985</td>
<td>114</td>
</tr>
<tr>
<td>1986</td>
<td>113</td>
</tr>
</tbody>
</table>

Total 2855

vi. Every employee who was covered by the Section 701 program had been theoretically covered by Title V. Hence, a lot of employees in Section 701 already received a fairly large amount of protective allowance on account of Title V.

10. Section 702 Conrail Workforce Reduction Program

a. Contents of Section 702 Program

i. Section 702 of title VII provided that Conrail might eliminate surplus fireman and brakeman positions upon payment of a $25,000 termination allowance to employees who held seniority rights to these positions. The termination allowance was not based on economic analysis but was a product of political compromise like Section 701.

ii. Section 702 is distinct from Section 701 since its purpose is to facilitate the elimination of surplus positions as opposed to surplus employees and it targeted only for engine service and train service not for all general positions.

b. Statistics of Section 702

i. Total Expenditure = $92,790,647.84
<table>
<thead>
<tr>
<th>FY</th>
<th>Appropriated Funds (millions)</th>
<th>Benefits Paid (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>$115.00</td>
<td>$70.616</td>
</tr>
<tr>
<td>1983</td>
<td>- 0 -</td>
<td>$3.275</td>
</tr>
<tr>
<td>1984</td>
<td>$15.0*</td>
<td>$2.806</td>
</tr>
<tr>
<td>1985</td>
<td>- 0 -</td>
<td>$0.05</td>
</tr>
<tr>
<td>1986</td>
<td>- 0 -</td>
<td>$16.04</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong> $100.00</td>
<td><strong>$92.79</strong></td>
</tr>
</tbody>
</table>

(as of 12/31/86)

Note: * In FY1984, $15 million was transferred to Section 701 account per the 1984 supplemental Appropriations Act.

ii. The rest of the budget was returned to the federal government after the sale of Conrail to the private sector in 1986.

iii. Number of Employees Separated.

Total number of employees separated = 3,759.
SUMMARY OF REDUNDANCY SCHEMES
Country: Austria

1. Austrian Railways

The Redundancy Issue

Austrian Railways has experienced the same economic and technological pressures as other railways in Western Europe: structural changes in the economy and shifts in the geographical distribution of industries and population, transfer of traffic from rail to road, introduction of labor saving technology in the railways. Yet, Austrian Railways' reaction to these changes in the personnel area has been markedly different from other railways. While personnel reductions between 40% and 80% have been the rule in other railway systems Austrian Railways has reduced its personnel by only 19% between 1950 and 1987, which amount to an annual rate of reduction of .6%. Between 1982 and 1985 the rate of reduction increased to .9 %, but it tailed off again in 1986. For the period 1987 - 1989 reductions totalling about 3,360 are planned, an average rate of decrease of 1.7 %, still well below the personnel decreases of the other Western European railways. Thus, it would seem that there is still a great deal of scope for personnel rationalization measures in Austrian Railways. The extreme caution in the handling of the redundancy issue reflects a deliberate policy choice by Austrian Railways which is backed by the government. Keeping labor relations at an amicable level is of prime concern to the railways, the government and society in general, although labor conflicts in private industry do occur occasionally.

Redundancy Schemes

In 1980 management introduced a policy which was to be applied to personnel which became redundant as a consequence of rationalization measures. The policy stipulates that:

- reduction of personnel should take place in the context of natural attrition, if at all possible; if this was not possible redundant employees should be transferred to equivalent jobs or, if such jobs were not available they could temporarily be requested to do work elsewhere provided the workplace was within acceptable bounds of their place of residence and their former job.

If a change of residence was unavoidable a list of criteria establishes a ranking between employees asked to move. Compensation, financial and other, can be granted in cases of hardship. There are no special incentives for voluntary early retirement.
Labor Relations

Given the prevailing attitudes labor relations obviously are good. The staff association of the railways must be informed in advance about rationalization measures and the benefits of such measures must be demonstrated. Moreover, before these rationalization measures are implemented social plans must be developed for the redundant employees and be agreed with the staff association. The staff association must also be consulted during the implementation of the social plan.

Problems Encountered

The average age of employees in Austrian Railways is between 30 and 40 years. On the other hand the obligatory pension age is 65 years or after 35 years of service at the earliest. Although the trend in the actual pension age in Austrian Railways is down and now lies between 55 and 56 years there are not many railway men left in the pensionable age groups. Therefore the policy of natural attrition has its limitations in the demographic structure of Austrian Railways' personnel and the management has to resort increasingly to the policy of reducing the intake of new employees.

Lack of mobility is another problem. Downward mobility is practically excluded but upward mobility is not popular. A possible reason is probably the strong "class" tradition of railway personnel. Hence it is not surprising that the unions are opposed to a change of work rules even if it means an upgrading of jobs.
Country: France

2. French Railways (SNCF)

Background

The relationship between SNCF and the government is laid down in a Contract Plan State/SNCF 1985-1989 which was concluded in April 1985. The plan establishes strategies and broad objectives for SNCF's commercial policy, social policy, management policy, investment policy, and the financial relationship between the state and SNCF. As regards social policy objectives article 19 of the contract plan refers only indirectly to measures in the personnel area. Article 19 stipulates that SNCF will adapt its organization, its personnel and the functional and geographical distribution of its personnel to the requirements of its regional activities, its commercial, traffic and productivity developments and the conditions of competition. It will also take into account the consequences of investment decisions and the evolution of work rules. The neutral formulation of article 19 allows SNCF the flexibility it needs to tailor its personnel policy to its management objectives. However, SNCF has refrained from setting objectives for redundancy in advance. This is a decision which is made on a yearly basis, as a function of the development of the overall economic environment, the specific yearly SNCF plan objectives relating to traffic, costs, productivity etc. and discussions with SNCF's three unions (communist, socialist, christian).

The Redundancy Issue

Reasons for Redundancy in SNCF

Structural shifts in the economy, its regional distribution and shifts in the distribution pattern of the population have been long term factors in the decline of railway traffic. There has also occurred the shift of traffic between rail and road, as seen in all European countries over the past three decades. Rationalization and modernization of SNCF has also contributed to reduced personnel requirements. A system wide strike in 1985/86 has accelerated the shift from rail to road because many shippers who made the switch to road transport because of the strike did not return after its termination.

Size of the Problem

Since reaching a peak in 1938 there has been a continuous reduction, with variations, of personnel in SNCF from 522,000 to 233,000 in 1986. If the war period and the period of reconstruction of SNCF are excluded there has
been an average annual decline in personnel of 1.7%, most of it through natural attrition. The introduction of incentive schemes and a stop in new hirings increased the rate of reduction of personnel to about 3% p.a., a rate of decline which is still at the lower end of the range if compared with other West European railways of SNCF's size. This is certainly the reflection of a very cautious and deliberate policy of SNCF since labor relations are a potentially explosive issue and even if a swifter downsizing might have been desirable from a managerial point of view the potential cost of a labor dispute outweighed in the opinion of management by far the benefits to be gained by accelerated downsizing.

Redundancy Scheme

The present SNCF redundancy scheme is based on executive order no. 54-1101 of November 12, 1954 which lays down the conditions under which the SNCF is allowed to facilitate the voluntary separation of its personnel. Eligibility to apply for the scheme depends on the years of service, employment status, and a declaration by SNCF which service(s) and grade(s) are considered superfluous. The system has a built in bias in favor of those employees who leave SNCF in mid-career because employees with a minimum of four years of service but less than 15 years are entitled to a redundancy payment of one year's salary plus one month's salary for each year of service exceeding four years, and those with more than 15 years of service are entitled to one month's salary for each remaining year of service until normal retirement, subject to a ceiling of 15 month's salary. Thus, typical benefits for voluntary cessation of employment can range from about 59,000 FF for an employee near his normal retirement to 236,000 FF for an employee in the middle of his career.

In addition to the voluntary separation benefits the employee can also claim from the SNCF unemployment scheme up to 2 1/2 years unemployment compensation provided they are registered with the state unemployment agency. They are entitled to 40% of their last monthly salary, increased by a fixed per diem (at present 47.87 FF) or, if this is more advantageous, to 57% of their last monthly salary. In addition, ex-employees can remain in the SNCF sickness insurance system for the period they receive unemployment benefits.

Obligatory retirement in SNCF is 60 years but employees 55 years old and with a minimum service of 25 years can apply for early retirement. The benefits are those described above, less the voluntary separation benefit. At age 55 the employee would be entitled to an early retirement pension.

A third type of measure to reduce excess personnel consisted in an internal reorganization of jobs, both functionally and geographically, and a simultaneous freeze on hiring staff from outside. In order to encourage mobility a "reconversion" benefit was offered. Those who were willing to change their residence were entitled to a "change of residence" bonus and those who also changed their jobs were entitled to an additional bonus payment.
Measures Accompanying Voluntary Separation

SNCF has established an advisory service in each of its regions to counsel employees on job changes, transfers to another region and mobility issues in general. The counsellors were prepared for their tasks by an outside firm specialized in this field. SNCF has also established an employment exchange where employees can inform themselves of outside job and retraining opportunities.

Labor Relations

Despite these measures SNCF has experienced difficulties in enlisting the cooperation of its unions. Frequently there have been strikes as soon as reorganization measures were muted. There have also been wildcat strikes. Generally, all measures designed to reduce the workforce are normally resisted by the unions.

The same problems are encountered by SNCF with the change of work rules. There have been strikes but it seems that these had at most a delaying effect.

Wage Levels

Wage levels are about equal to those of private industry at the time of recruitment. Thereafter it depends very much on the specific industry used for the comparison.
Country: Germany

3. Port of Hamburg

Background: Organizational Aspects of the Port of Hamburg

There are three forms of enterprise in the port of Hamburg: private companies, a company owned by the city state of Hamburg, the Hamburger Hafen- und Lagerhaus-Aktiengesellschaft (HHLA), and the Gesamthafenbetriebs- GmbH (General Port Company Ltd) which has been founded by all port employers and which exercises similar functions as the local boards of the National Dock Labour Board in Britain or the labour pool SHB in the port of Rotterdam.

As of January 1987 there were about 228 companies operating in the port of Hamburg. They comprised all aspects of port work such as stevedoring, warehousing, weighing and cargo control, harbour shipping etc. Until 1983 the HHLA, which is the port's largest employer with more than 1/3 of total port employees of 9,200 (1986), was managed more like an executive branch of of the state government of Hamburg, although it was legally organized as a private company. Thus, the HHLA had been given the role of executing port policy set by the Hamburg government while at the same time offering its services in competition to the private companies in the port. Part of its personnel had been transferred from a government department, at pay and social conditions of the Hamburg civil service. Since it was not possible to discriminate against the other, non-government employees, they also were paid like the civil service employees of Hamburg. This has meant that HHLA was entirely dependent on the state government as to the control of its most important cost factor, wages and social overhead costs. The state government influenced other management decisions as well. For instance it obliged HHLA, with the support of the union, to employ more people than necessary because it wanted to signal to other private companies to do likewise in order to contribute to the reduction in the youth unemployment rate of Hamburg. State interventions and other factors brought HHLA to the brink of bankruptcy and the only options open to the state government were either liquidation of the company or to put HHLA on a sounder commercial footing. Continuation of the old policy was impossible because it was becoming too costly. Liquidation, on the other hand, was politically undesirable. Therefore the state government decided to organize HHLA along strictly commercial lines. The company was relieved of all quasi governmental functions, it was also put on a sounder financial footing through the conversion of debt into equity, injection of additional liquidity and the transfer of fixed assets. The state government accepted responsibility for those excess personnel costs which were caused as a result of the civil service status of the employees.
These costs mainly comprised present and future pension payments whose present value was estimated at 106 million DM (57.3 million US dollars). The HHLA management was authorized to run the company in accordance with commercial principles. This included personnel policy. As regards pay it was decided that personnel hired before 1983 would continue to be employed under the old contract conditions. Employees hired as of 1983 were offered contracts compatible with the conditions of HHLA's competitors.

The Gesamthafenbetrieb (General Port Company Ltd.) employs about 1,300 people. Its role is to even out the peaks and troughs of short and medium term employment variations of its member companies. Unlike the British case the formation of a Gesamthafenbetrieb is entirely voluntary. However, since the government has a monopoly on the operation of employment exchanges a special enabling law had to be passed by the Federal Parliament authorizing the establishment of port labor pools. In addition the law stipulated that other labor legislation also applied to the Gesamthafenbetrieb. In Hamburg the employers unanimously adopted a resolution about the establishment of a Gesamthafenbetrieb and the union agreed as well. The policy of the Gesamthafenbetrieb is set by a board of directors which consists of four employers' and 4 employees' representatives and a "neutral" person belonging to neither of the two groups whose vote will be decisive in the event of a tie. Main tasks of the board are inter alia: establishment of regulations on the distribution of workers, execution of port work, size of the labor pool, definition of port work, establishment of a list of employers recognized as doing port work.

Day to day management has been delegated to the General Port Company Ltd. which executes the board's policies, pays salaries according to the time sheet issued by the various port companies, grants holidays etc. Employees of the General Port Company Ltd have the same rights and obligations as the employees of any private port company with regard to pay, holidays, working time and other elements subject to the general wage contract concluded between employers and the union.

The General Port Company Ltd. lends out its employees to its members who pay the employee's salary and overhead costs for the duration of his employment with the company. Employees of the General Port Company Ltd. who are temporarily unemployed are nevertheless paid their full salaries. The necessary funding for this and the administrative cost of the management of the General Port Company Ltd. itself is provided by means of a levy raised from the member companies. Employees who cannot be employed in the long run can be dismissed subject to the general provisions of the national labor legislation and any supplementary agreements with the union. The efficient functioning of the labor pool depends on its ability to control entry into the port labor force and the distribution of workers in the port. Therefore the General Port Company Ltd. has a monopoly over these two functions. Entry is controlled by means of a work permit without which no docker is allowed to work in the port. In the event of shortages of manpower the General Port Company Ltd. is entitled to hire additional workers from the local Labor Exchange.
The Redundancy Issue

Reasons for the Redundancy

As in the other West-European ports technical progress in the form of containerization, unitization, ro-ro, on shore mechanization and computerization, and the development of the integrated transport chain can be identified as the main reasons for redundancy in the port of Hamburg.\(^1\) Statistical analysis suggests that containerization was the single most important factor in the decline of employment. The major part of port investment has been used for labor saving capital deepening investments including investments related to containerization. Only an insignificant part of the investment outlay seems to have contributed to new employment. Since the volume of commodities handled in the port oscillated around 53 million tons without a clear trend up or down, its influence on sustainable growth of employment in the port was minor. Employment in Hamburg was hit particularly hard because about half of its business is based on general cargo, most of it containerized. In addition, a number of industries that had established themselves in the port, such as warehousing, distribution etc., left the port area because wage levels for the same job were markedly higher than outside the port.

The Problem

Between 1970 and 1986 employment of port workers dropped from about 14,000 to 9,200, a decrease of 35% or 2.6% on an annual basis. During the seventies the decrease was so slow that special redundancy measures were not required. However, the decline in employment accelerated to an annual average rate of 4% since about 1980. The quickening of the pace of the decline in employment was the result of the combination of the increasing containerization ratio which rose from 38% in 1980 to 57% in 1986 and a decline in the business cycle.

Looking to the future it can be said that the employment base will shrink further since the forces that have worked over the past two decades have not yet come to a halt and, if the productivity achieved in such other ports as Rotterdam for instance is taken as a yardstick, there is still ample scope for further rationalization which will be unavoidable due to the competitive pressures in the industry. HHLA has already started the process through the implementation of a rationalization plan which will include a reduction of its labor force by 23% from 3,500 to 2,700 in 1990. The private port companies will shift about 250 employees to the General Port Company.

The majority of redundancy cases occurred in the category of lower skill jobs. Employees with higher job qualifications usually had no problem of re-integration either in the port itself or outside.

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\(^1\) The hiring of workers for political reasons referred to on page 1 was a one-time, exceptional measure.
Redundancy Schemes

Generally employers tried to keep their personnel as long as possible through administrative, organizational and financial measures such as downgrading of jobs, of salaries paid over and above the wage contracts negotiated with the unions, reduction of overtime, reduction of the work week (a national measure). The local union also negotiated with the Employer’s Association an increase in holidays of nine days at full pay. This has initially lead to new hirings. Furthermore, there were transfers of people from the private companies into the labor pool, the General Port Company Ltd.

All these measures had the effect of slowing down the decrease of personnel, although sometimes at the price of reduced productivity and/or competitiveness. However, redundancy measures could not be avoided altogether. Therefore "social plans" were elaborated within the context of the overall national social legislation which offered employees 59 years or older (58 years in the case of handicapped people) early retirement which comprised a combination of unemployment compensation payments by the government and a topping up by the employer so that the net take home pay could be maintained until regular retirement at age 60.

As regards the redundancies at HHLA the majority of redundant personnel (732) can be accommodated by early retirement under the conditions described above. Some additional contract terminations will be necessary, however. This will be done in the context of the German law on the termination of labor contracts which provides for a period of prior notice of up to 6 months to the end of the calendar year for those employed 15 years or more with the same firm and a compensation payment of 1/2 month’s salary for each year worked. In addition HHLA has reached agreement with other publicly owned enterprises in Hamburg that job vacancies which are not to be filled internally would be offered to former HHLA employees first before they were publicly advertised. A similar right of first refusal has been agreed between HHLA and the public administration. Apart from these measures former HHLA employees have of course all the rights accruing to them under the general German social legislation, i.e. unemployment compensation, retraining paid by the government, social assistance.

Retraining

Training facilities are available for all aspects of port work, whether administrative, operational or technical. The school is jointly administered by the employers and the unions and officially recognized by the state of Hamburg. The school grants a certificate (Hafenfacharbeiter) upon successful completion of its courses. These courses are also open and utilized for retraining purposes.
Problems Encountered in Downsizing

The displacement of employees from private companies into the General Port Company Ltd. has not been without friction. The causes have partly been psychological - a reluctance to leave the accustomed work group, lower status with the new group - , partly material. Employees lose their seniority rights; they lose steps within their particular salary scale, or they are graded in accordance with the function they happen to carry out at the time of transfer even if they used to be higher graded. There is a reluctance to do work below the acquired skill level.

Measures to Prevent Recurrence of the Problem

The existing worker permit system allows an effective control of the intake of new port workers. This, coupled with a stop on newhirings prevents an unwanted increase in the workforce. On the other hand, there are also more positive measures designed to attract new business and to prepare the port for future technological changes. The government of Hamburg has inter alia commissioned a study entitled "Terminal 2000" whose objective it is to examine the impact of information technology and new logistical concepts and techniques on the port of the future. The Study is being carried out by the Institute for Maritime Economics (Bremen) in conjunction with HHLA and the OTV (Public Services and Transport Union).

Work Rules/Wage Levels

The labor monopoly in the port has resulted in a certain amount of featherbedding. Wage levels for comparable skills are generally higher in the port than outside. Over the years there has also been a tendency towards wage compression. While the increased containerization and other developments have radically changed the time pattern of demand for port services the rules on the organization of work in the port have not changed since the times of the sailship. The present organization is that of a six day work week with 8 hour shifts and a total of 37 1/2 hrs work per week per employee. The rule is that after a minimum three hours of work per shift the whole shift must be paid. There are attempts from the employers' side to introduce more flexible rules. The unions have not yet adopted a definitive position.

The definition of port work is another contentious issue between employers and unions. The position of the unions so far has been to consider as port work all work performed in the port, regardless of its nature. They have resisted so far attempts to narrow the definition for fear of discriminating between workers in the port. But the alternative has been equally unpalatable because a number of companies have left the port altogether and sometimes resettled just outside the port perimeter with the consequence of a loss of work in the port.
Labor Relations

Labor relations are good. There have been no major strikes in the port. Both parties, the port employers' association and the union value this "social peace" highly: the potential costs of a strike in terms of a long term loss of the customer base and the consequent loss of employment are seen by both parties as outweighing the potential benefits to be gained from strike action. Of course the "closed shop" nature of the labor market is also conducive to such non-conflict behavior.

Wage negotiations and negotiations on conditions of work are conducted on a national basis for all German ports between the national association of port employers and the national union OTV. The local branches of these two bodies however are allowed to adapt the results of the national negotiations to local circumstances.

Other Aspects

Obviously the port is a crucial part of the economy of the state of Hamburg. Until recently, the port, shipbuilding and connected industries up- and downstream played a dominant role in the economy of Hamburg. Efforts are being undertaken to diversify into non-maritime activities such as electronics and civil aviation. There are efforts as well to upgrade the qualification of the labor force. The State of Hamburg has initiated a pilot program whereby redundant workers are retrained for higher qualifications or different jobs while technically still being employed by their old company. The costs of retraining and payment of up to 90% of net salary are partly borne by the federal unemployment insurance scheme and partly by the State of Hamburg. Despite encouraging successes in attracting new industries the unemployment rate still hovers around 13%, significantly higher than the national average of about 9%.
Country: Germany

4. Deutsche Bundesbahn (DB)

Background

Relationship between DB and the government

The DB is 100% owned by the state. The government determines the overall frame within which the DB can operate. The railways is to be managed by its Board of Directors and the Administrative Board like a commercial enterprise (para. 28; DB law). The Board is responsible for the management of the enterprise (para. 9; DB law) and the Administrative Board decides on the budget and personnel plan (para. 30; DB law) subject to approval by the Minister of Transport in conjunction with the Minister of Finance. Management autonomy of the Board of Directors and the Administrative Board is subject to considerable constraints since all important matters such as in the administrative, personnel, financial, investment and commercial field are subject to information, consultation with, or approval by government authorities. The officials (Beamte), employees and workers of the Bundesbahn are by law employed by the federal government. The officials are under the direct authority of the federal government (para. 19; DB law).

The Corporate Plan "DB 90"

By 1982 it had become clear that the Deutsche Bundesbahn was developing into a financial risk for the federal budget and that the government was neither willing nor in a position to increase federal subsidies indefinitely. The role of the railways in the German transport system had changed dramatically since the early 50's. For instance the share of the railways in passenger transport (in pass.km) decreased from 40% in 1950 to 7% in 1982 and in freight transport it halved from 60% to 30% (in ton.km) during the same period. The tendency is still down. The deficit of the DB increased from about 1 billion DM in 1970 to 4.1 billion DM in 1982. Long term debt doubled during that period from 18 billion DM to 36 Billion DM which is equal to the entire external debt of Chile. Government compensation payments and subsidies for DB increased from 3.5 billion DM to 13.6 billion DM. Interest payments in 1982 amounted to 2.9 billion DM p.a.. Although attempts were made to reduce excess capacity, particularly in the personnel area, the reductions were too slow and inadequate. It was felt that a radical change in the definition of the role of the railway in the changed economic and competitive environment was required. The result of this re-orientation is "DB 90", the corporate plan worked out by the railways covering the period 1982-1990 and approved by government. DB 90 defines three broad areas of activity: 1) the commercial sector of DB encompassing freight traffic and long distance passenger traffic; 2) public service activities encompassing short distance (commuter) passenger traffic; 3) functions executed for the account of government encompassing maintenance of and investment in fixed installations.
In order to fulfill the commercial function of DB a more market-oriented approach was developed: the activity of DB was to be geared towards the customer, a more active price and product policy was to be pursued, the enterprise was to be managed result oriented and new business had to pass the test of profitability before being accepted. Public service activities were accepted provided the DB received adequate compensation.

Finally, capacity of plant, equipment and labor was to be planned as a function of their revenue earning potential rather than as a function of internal output or as an aim in itself.

The internal strategic objectives of DB 90 were formulated as follows:

- significant improvement of DB's competitiveness where it has system advantages and where cooperation with other modes leads to improvements in competitiveness;
- increase in productivity relative to DB's competitors;
- concentration of investments (40 billion DM from 1984 - 1990) in areas with revenue earning potential.

Productivity was to be increased over the plan period by 40%, personnel costs were to be reduced by 30% in real terms and total costs were to be reduced by 25% in real terms.

The Redundancy Issue

Reasons for the Redundancy of Staff

- Structural changes in the economy, e.g. decreasing importance of heavy industries in the Ruhr Valley, strong growth of secondary and tertiary sector, substitution of traditional commodities for new commodities such as plastics;
- changes in land use and the locational pattern of industries;
- heavy investment in other modes of transport (roads, inland navigation, pipelines);
- technological changes in the railways;
- DB executes functions (e.g. repair of rolling stock) which it cannot carry out in a cost effective manner;

Despite a very restrictive regulatory policy in respect of road transport, railway traffic was practically stagnant during the 22 year period from 1960 to 1982 and this situation has persisted.

Size of the Problem

In 1958 the DB had 516,000 staff. This figure was reduced by 1986 to 268,000 people, a reduction of 52% over 24 years or 2.6% per year on a compounded basis. At the same time various improvements of the working
conditions of DB staff such as national measures to reduce working time, increase of holidays, lead to a retention of staff equivalent to 66,300 people.

In the judgement of the DB Board of 1982 and the government the decrease was too slow an adjustment to the structural changes in the economy and in the transport sector. Therefore "DB 90" stipulates a further reduction of the workforce by 1990 to 232,000 people, i.e., 4% per year on a compounded basis.

Redundancy Schemes

Apart from a few isolated redundancy schemes aimed at so called guest workers (foreign workers) the DB offered no incentive schemes for surplus labor. Personnel reductions are made in the context of natural attrition and by reducing the intake of new staff. It seems that the DB has never seriously evaluated the option of a more rapid decline in staff by offering a voluntary redundancy scheme.

A further possibility to reduce staff in the long run is the privatisation of certain functions such as repair and maintenance of rolling stock and track. However, because of the legal and factual impossibility to terminate the employment of railway personnel other than for disciplinary reasons and because of political pressures at various levels privatisation has been a slow process at best and often impossible to implement against various interest groups.

Another method to tackle the redundancy problem is the redeployment of redundant staff. This is coupled, if required, with retraining in DB schools providing courses for administrative staff and technical and operational staff. Difficulty: mobility, both regionally and functionally, upward and downward, particularly if additional training is involved. For instance, train drivers are urgently needed but there are insufficient applications because of long absences from home, additional stress, problems with the family. In some regions there is demand for workers because of ample opportunities to work for private enterprise at higher salaries (example: Mercedes Benz in the Stuttgart region), in others there is a surplus. Yet it is not possible to simply shift these workers from one region to another since the salary structure does not compensate for regions with a higher cost of living and it does not take into account that private enterprises may compete for the same labor. DB cannot solve this problem by modifying the salary structure since it has to follow the salary structure of the government services. Management is considering now to offer some compensation by providing more opportunities for promotion in deficit regions than in surplus regions. But often the incentives must be very massive to encourage people to leave "their" region.

Approval Procedure for the reduction of Personnel

DB management discusses its plans with the representatives of the personnel (Personnel Council) in accordance with the requirements of the law on personnel representation (Personalvertretungsgesetz), then proposes to DB Administrative Board. If approved by the Board the plan is submitted to the Minister of Transport who, in conjunction with the Minister of Finance,
gives his final approval. The federal parliament (Bundestag) and the
council (Bundesrat) must be informed.

Work Rules

The unions tend to be conservative in discussions about work rule changes,
e.g. the abolishment of the second man in locomotives driving over 140
km/h. However, so far compromises have always been found, at a cost. The
work rule change issue is not considered by DB to be of great impact.
Although compromise has its price in terms of higher costs or some other
concession this is considered worthwhile because it avoids strike action
and keeps the "social peace".

Effectiveness of DB Personnel Redundancy Policy

Productivity of labor, defined as the ratio of own revenues and number of
staff, has increased between 1982 (start of DB 90) and 1985 by 10 per-
centage points (see graph 1). Although this misses the DB 90 target by 3
percentage points this is still considered satisfactory by DB since
revenues in real terms decreased by two per cent compared with 1982. Total
personnel cost decreased by 10 percentage points against a target of 11
percentage points (see graph 2). The difference of one percentage point
can be explained by a more than proportional increase of retirement and
social expenditure which DB can only influence in a limited way.

Looking ahead it can be said that despite the relative success of DB 90
during the first three years it is too early to call the overall plan
already a success. In the personnel area there are two risks which need to
be dealt with in the future: the hitherto successful policy of natural
attrition combined with a reduced intake of new personnel will be much more
difficult to follow through due to the reduced potential for personnel
reductions. Management will probably have to look much more carefully at
the contribution to the overall result by individual areas of activity.
Secondly, the increase in pension obligations cover the plan period over
and beyond what a comparable private enterprise would have to pay will
result in an increasing financial burden which will reach 620 million DM by
1990. This is equivalent to about 9% of the personnel costs of the active
personnel.

Other Aspects

In order to assess the optimal use of its personnel resources DB has
developed a complex job evaluation system which is applied to the whole
organisation, including the administrative functions. The most important
functions of the job evaluation system are:

- establishment of job performance standards,
- job grading,
- checks whether personnel requirements and work load concur
  with established regulations,
- personnel planning
- control of the use of personnel in relation to established
  plan objectives.
The system is a permanent one, i.e. each year the above mentioned tasks are carried out within the framework of objectives established by the corporate plan and on the basis of such exogenous factors as the national legislation on working time, agreements with unions etc.

In other words, the job evaluation system optimises the use of personnel within a given scale of operation whereas management is responsible for the establishment of the scale of operations of the enterprise and the establishment of its objectives in the context of the overall economic and political constraints.
Graph 1: Comparison of development of productivity DB '90 and actual development (internally generated revenue/staff numbers).
Graph 2: Comparison of development of personnel costs in real terms DB '90 and actual.
Country: Japan

5. Japanese National Railways (JNR)

Background

JNR is primarily passenger oriented. Of the 624 million train-km operated in 1985 about 85% were for passengers. Thirty per cent of total passenger-km were commuter traffic in large conurbations such as Tokyo and Osaka, 4% was on rural branch lines and the rest intercity service. One third of operational revenue from passenger service was derived from commuter service, some 3% from rural branch line traffic and 64% from intercity service. Passenger services contributed about 80% to total operating revenue.

The share of the railways in total passenger traffic has declined from 30% in 1975 to 23% in 1985. The share of freight transport has declined even more drastically from 13% in 1975 to 5% in 1985.

The railway deficit has steadily worsened over the past 20 years and in 1985 it amounted to 1,848 billion yen or over 50% of operational revenue of that year. The accumulated loss amounted to 14 trillion yen in 1985 and long term liabilities to 24 trillion yen (about 16 billion US Dollars at today's exchange rates).

However, not all railways in Japan were in deficit. Major private railways specializing in commuter traffic were profitable in 1984 and even some private railways in rural areas were profitable.

Since JNR was losing money to the tune of 1 trillion yen per year the government realized that only drastic measures could restore the railway. A JNR Reform Commission was established within the wider context of a comprehensive review of the role and scope of government administration. This commission recommended that JNR should be privatized and split up in 6 passenger companies, a nationwide freight company, and some other companies covering related activities. The purpose of the privatization was to make JNR more responsive to local demands, increase management efficiency and in general to revitalize the railway business through deregulation.
The Redundancy Issue

Reasons for Redundancy

The decline of the railways has been concurrent with the growth of the expressway system which increased from 1,519 km in 1975 to 3,555 km in 1985. JNR's passenger traffic share declined as a result of increased road and airline competition. As in the case of Western Europe structural changes in the economy itself favored road rather than rail transport. Although various attempts have been made since 1969 by the central government and JNR to adjust the railway system to the changed circumstances the results proved to be only marginal since there were powerful forces against basic changes within JNR itself but government also lacked the political will to implement painful decisions. In addition, the JNR Reform Commission also pointed out as forces against change "the public corporation system" and "nationwide uniform operation".

The Size of the Problem

Between 1972 and 1985 (prior to the JNR privatization) staff was reduced by 47%, from 441,000 employees to 277,000 which corresponds to an annual reduction of 4.3%. Between 1980 and 1985 the rate of reduction accelerated to 7.7%. The privatization of JNR and its split into six independent regional railway companies will result in the release of another 93,000 employees (of which 32,000 will be re-hired by the successor companies).

Redundancy Scheme (Privatization)

The JNR Reform Commission presented its "Opinion on the Restructuring of JNR" to the prime minister in July 1985 recommending that the work force of the new companies be set at 183,000 employees on the premise that operations will be at a level of productivity comparable to that of existing private railways in Japan. The size of the work force at the beginning of fiscal 1987, however, was estimated to be about 276,000, notwithstanding efforts made to reduce its size by encouraging retirements, resulting in an estimated employee surplus of about 93,000.

Measures to be taken for surplus employees were (1) to set the size of the appropriate work force for the new companies at 215,000, an increase of 32,000 or about 20 percent more than the originally estimated 183,000, (2) to implement the voluntary retirement of about 20,000 employees before the switchover to the new companies, and (3) to temporarily assign the remaining 41,000 employees to JNR's successor (the JNR Accounts Settlement Corporation inaugurated in April 1987 and hereafter referred to as the Corporation) taking adequate measures for their re-employment during a Special Countermeasures Period which will last for three years.

In accordance with the preceding measures, JNR secured positions for the re-employment of 21,000 in subsidiary companies and other JNR related companies, and at the same time sought the assistance of national and local
governments in the public sector and the private industrial sector for the employment of its surplus employees with the guidance and cooperation of the "JNR Surplus Personnel Re-employment Headquarters" set up within the central government. JNR initiated a call for voluntary retirements in June just after the 1986 Special Measures Bill (concerning emergency measures to be taken in fiscal 1986 for JNR's restructuring) which was approved by the Diet in May 1986 stipulating the payment of special benefits for voluntary retirees.

Furthermore, (1) the public sector began the blanket screening of candidates for employment up to the beginning of fiscal 1990 and tentative decisions made on the employment of JNR personnel progressed smoothly and (2) together with outside help to secure re-employment, employment measures yielded major progress due to the large number of applications for voluntary retirement which doubled the original target.

Re-employment results by sector at the time of the switchover to the Corporation (April 1, 1987) are shown in Table 1.

Forty-one thousand employees were originally expected to move to the Corporation. However, as a result of the aforementioned measures, this number decreased to about 23,650 and the number of personnel whose re-employment positions were yet to be secured was reduced to about 7,600 as shown in Figure 1.

**Benefits**

Every employee is entitled to an end of service lump sum payment, depending on his years of service and last income. The maximum payment is 60 months salary. Payments normally range between 12 million and 20 million yen. In addition, those who retire voluntarily before the normal retirement age of 55 years are entitled to another 10 month's salary.
Table 1  Results of Re-employment Decisions by Sector (as of April 1, 1987)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Transferred</th>
<th>Tentative</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>National government agencies</td>
<td>2,500</td>
<td>6,000</td>
<td>8,500</td>
</tr>
<tr>
<td>Special corporation agencies</td>
<td>3,100</td>
<td>1,450</td>
<td>4,550</td>
</tr>
<tr>
<td>Local government agencies</td>
<td>5,050</td>
<td>3,700</td>
<td>8,750</td>
</tr>
<tr>
<td>Subtotal</td>
<td>10,650</td>
<td>11,150</td>
<td>21,800</td>
</tr>
<tr>
<td>Related enterprises</td>
<td>11,550</td>
<td>50</td>
<td>11,600</td>
</tr>
<tr>
<td>Private enterprises</td>
<td>12,400</td>
<td>50</td>
<td>12,450</td>
</tr>
<tr>
<td>Total</td>
<td>34,500</td>
<td>11,250</td>
<td>45,750</td>
</tr>
</tbody>
</table>

Number of personnel employed by successor companies - 200,650
Number of personnel voluntarily retired - 39,100
Number of personnel employed by public sector - 7,250
Number of personnel ordinarily retired - 6,350
Number of personnel for Corporation proper - 2,500
Number of personnel on leave as precondition for retirement - 2,250
Number of personnel for tentative re-employment - 11,250
Number of personnel yet to secure positions for re-employment - 7,650

Fig. 1  Personnel Moved for JNR Restructuring (Round Numbers)

Source: East Japan Railway Company
Country: Netherlands

6. Netherlands Railways (NS)

Introductory Remarks

The Nederlandse Spoorwegen (NS) is one of the smallest railway systems in Western Europe but also one of the most productive. Its track length amounted to 2,817 km in 1986 and it employed 28,000 people. Traffic has been fairly constant over the last five years at about 9 billion passenger-km per year and 3.1 billion ton-km per year. This compares with Belgian railway's 3,667 km of lines, 57,964 personnel, and 6.6 billion passenger-km and 9.5 billion freight-km (1985).

In the beginning of 1987 NS elaborated a corporate plan for the 1987 - 1990 period whose objective is to improve productivity even more. It is planned to reduce operating costs by 6%, and other cost categories between 12% and 20% so that a cost reduction of 300 million guilders would be achieved. Personnel is to be reduced by 2,000 people over that period, a reduction of about 7%.

If successful this would not only eliminate the need for the present, small, subsidy NS receives for its transport of freight traffic but it would also enable it to make a profit. This would be a unique achievement among Western European railways.

The government of the Netherlands owns 100% of the railways. However, NS management is responsible for running the railways efficiently and profitably. The government has never interfered with NS personnel policy. However, NS can be ordered by the government to implement certain policy objectives such as the number of trains to be operated or the opening or closing of lines which would indirectly affect the level of personnel needed. In this event NL would be entitled to compensation if losses occurred.

The Redundancy Issue

Reasons for the Redundancy

Contrary to other West European Railways personnel redundancy is not primarily the result of developments to which the railways had to adapt but the result of a management decision to run a commercially viable and efficient enterprise. For example measures to increase efficiency concern such aspects as modification of manning standards for engine drivers, optimization of manning reserves, reduction of absenteeism, privatisation of peripheral services (cleaning of rolling stock), increased use of radio-operated diesel engines in shunting, optimization of maintenance cycles, simplification of administrative procedures.
Redundancy Schemes

The objective of reducing personnel by 2000 persons over 4 years will be achieved by natural attrition. Each year about 1,500 persons retire on average and about 500 will not be replaced. In addition, internal mobility will be emphasized both as regards functional and regional mobility; retraining or additional training will also be offered. The redundancy measures will fully take into account national social regulations such as unemployment compensation or early retirement provisions.

Benefits

NS offers its personnel since 1980 voluntary early retirement at age 61 with a minimum 10 years of service or after a minimum 40 years of service. In both cases retirement benefits are fixed at 80% of the pensionable income of the last year of service. Benefits are accumulated at a rate of 1 3/4 % per year of service. About 70% of the personnel in these two categories make use of this possibility.

At present the scheme is funded out of revenues but there are plans to incorporate the scheme into the NS pension fund.

Wage Levels

For lower ranks and beginners, i.e. those under age 21, NS pays slightly more than the average. For higher ranks, i.e. high school and up and professional training, NS pays slightly less than a comparable position in private industry. NS has problems hiring highly skilled employees. Wage compression may be one of the causes. But there are also regional discrepancies. People who want to stay in a certain region often forgo more attractive salaries elsewhere.

Relationship with Unions

All matters concerning NS personnel are discussed and agreed with the railway unions in the appropriate organizational framework (e.g. the Ondernemingsraad) although in a formal sense NS is free to decide the personnel policy measures it deems necessary. NS emphasized that the social safety of the individual employee is one of the prime objectives of NS personnel policy. In this context it is interesting to note that NS has concluded an agreement with the unions that no employee under the age of 55 will be fired.

Other Aspects

The Netherlands provide a good example for conflicting policy objectives concerning labor markets at the macro level and at the level of the enterprise or public authority. Total unemployment in the Netherlands is about 700,000 people out of a total workforce of 6 million. The government
has set the objective to reduce unemployment by 1990 by 200,000 or about one third. On the other hand the government has also set the objective of reducing significantly the public sector deficit and has therefore decided to reduce government staff by 26,000 people. This will partly be done through the privatization of certain government functions, and partly through reduction of the workforce. Public and private enterprises such as the railways have embarked on similar exercises to reduce their workforce. It remains to be seen whether growth rates of the Dutch economy can stimulated sufficiently to create enough new jobs to overcompensate the job losses planned for the next few years and to accommodate in addition the significant number of new entrants into the labor market.
Country: Netherlands

7. Rotterdam Ports Industries' Association

Background

There are about 200 private companies in the port of Rotterdam handling general cargo, containers and bulk cargo. They are represented by the Rotterdam Ports Industries' Association (SVZ) which is contract partner of the employers' branch organizations (general cargo, containers, bulk) and private companies not members of any branch organization. SVZ represents the employers in negotiations with the labor unions, the Transport Workers' Union FNV and the Transport Workers' Union CNV.

In addition to the workers employed by the individual private companies there is a labor pool, SHB, formed by collaborating port employers. The pool employs about 2,500 people out of a total of 10,000 port employees. About 2,200 pool employees work in the general cargo sector, the rest in the grain and other bulk cargo sectors. Pool workers who are underemployed still receive 100% of their pay, since 50% of the pay is guaranteed by the government unemployment scheme and 50% by the employer. Participants in the pool are companies who use dock workers. They guarantee employment for a certain minimum number of people in the pool.

The function of the pool is to even out fluctuations in the employment patterns of individual companies. There are also arrangements whereby temporary surplus staff or staff made redundant as a result of the bankruptcy/moratorium of a company will be part of the pool.

The Problem

Between January 1982 and April 1987 about 2340 dockworkers (about 20% of the dockworkers as of 1.1.82) have left the Rotterdam docks (see annex). About 1000 more are likely to become redundant over the next 3 1/2 years. Part of the past decline in dockworkers is due to natural attrition and non-replacement, but a substantial number of dockworkers also left voluntarily on account of the incentive schemes offered to them.

The Redundancy Issue

Reasons for the Redundancy

The major reason for the redundancy of dockworkers in Rotterdam is the development of new cargo handling techniques. Since the introduction of containers in the early 60's the number of dockworkers declined rapidly.
The port management estimates that containers have increased labor productivity eleven fold. In other words, eleven men were needed to handle 1000 tons of general cargo before containerization. Now only one man is needed to do the same amount of work. For instance, the Europe Container Terminal in the port of Rotterdam handles over one million containers per year with a workforce of only 1400 people. Even in trading ranges where containers have not yet been introduced the increasing tendency to unitize cargo, e.g. the use of pallets and big bags, has lead to a decrease in the need for dockworkers.

Redundancy Schemes

The Rotterdam Port redundancy scheme has been elaborated by the SVZ on the employers side and the two labor unions, FNV and CNV, representing the dock workers. The Minister of Social Affairs and Employment and the Director of the Port Company of the Municipality of Rotterdam have co-signed and assumed the liabilities falling to them under the agreement. The scheme has been so designed as to maximize the contribution of the Government and to enable the employee who opts for redundancy to retire with a normal pension at the end of the period of the redundancy payments.

In the Netherlands an employee who is laid off is entitled, for a period of 6 months, to unemployment benefits of 70% of the employee's last month gross income. Thereafter he is paid unemployment compensation of 60% of his last month's income for a period of two years. At age 60 the government pays the laid off employee 70% of his last income until age 65, at which time the person is entitled to a state pension. The Rotterdam Port redundancy scheme takes these statutory unemployment benefits into account by offering volunteers 57 1/2 years old or older 85% of their last net income until normal retirement age at 65 years. In addition, the redundant employee continues to accumulate pension rights until normal retirement. The pension benefits of the Port of Rotterdam are paid in addition to the state pension benefits.

However, the accumulated pension benefits are subject to a ceiling of 75% of the last income of the retiree. Since the redundancy problem was most pronounced in the general cargo area the container companies committed themselves to employ one man who had worked in general cargo for every two people who left them on account of the redundancy scheme. However, the container companies experienced some problems with their offer since the general cargo workers had sometimes problems adapting themselves to container work.

The voluntary redundancy scheme has been so successful that further redundancies will have to be found in the age groups below 57 1/2 years. SVZ is presently discussing proposals with the ports unions whereby workers could be eligible for voluntary redundancy at age 55 already. Such a scheme would be much more costly for the employers since they would have to finance 2 1/2 years of redundancy without the assistance of the government.
In addition the government has introduced an income test which stipulates that for four years supplementary income to government benefits is not deducted from government payments, thereafter it is. In order to overcome this problem SVZ is considering to capitalize the income after four years and to make a lump sum payment instead which is neither subject to deductions nor taxation.

There are also arrangements whereby staff made redundant as a result of temporary fluctuations or the bankruptcy/moratorium of a port company will form part of the common labor pool SHB under special rules for defraying the cost of these additional men: 70% of their wages are paid by the government's General Unemployment Fund.

Furthermore, the SVZ operates a labor exchange which acts as a broker for jobs both within and outside the port and provides training in its areas of competence, if required.

Costs of Redundancy

SVZ has calculated that the 57 1/2 year scheme applied at present costs them on average 62,000 guilders per redundancy. To this must be added the costs to the government which can only be roughly estimated. Since the minimum income of a general cargo dock worker is about 46,000 guilders per year and taking into account the unemployment assistance outlined above the government pays an additional 232,000 guilders. Thus the total cost per redundancy is 294,000 guilders or 6 times the minimum yearly salary for a man 57 1/2 years old. As stated above, about 2,300 men have left the industry since 1982. Hence the total cost of redundancy in the port of Rotterdam so far has amounted to about 676 million guilders.

SVZ estimates that a scheme which would lower the age level for voluntary redundancy to 55 years would cost them 150,000 guilders per redundancy.

Labor Relations

About 60% of the dock workers are members of one of the two labor unions. As already mentioned the redundancy scheme has been negotiated by SVZ with, and agreed by, the labor unions. It has been emphasized by the SVZ that cooperation of the unions in the implementation of the scheme is crucial.

Measures against Recurrence of the Problem

There is no recruitment from outside, except that 35 youths are recruited each year in the context of a youth employment program agreed with the unions and supported by the District Labor Office.

Wages

Access to the profession of dock worker is restricted by means of a system of passes. Without the issue of a pass (by the Municipal Port
Administration?) nobody is allowed to perform port work. As a result wage levels are significantly higher than modal income in the Netherlands as a whole. While modal income amounted to about 36,000 guilders per year the minimum yearly income of a general cargo dock worker was 46,000 guilders, based on a 36 hour work week, and that of a container operator 62,000 guilders, based on a 32 hour work week.

Other Aspects

SVZ operates three trade schools which are also engaged in the retraining of workers: one for adult education and retraining, financed by school fees and SVZ support, one for general administrative training and one for the training of port equipment operators. The minimum entrance age for the latter two schools is 18 years. The two schools are subsidized by the government and SVZ.

It is interesting to note that SVZ has helped establish port training schools in Peru, Egypt and Ethiopia. The establishment of the port training school in Peru was financed by the Municipality of Rotterdam.
### Rotterdam - Port Personnel (excl. employees)

<table>
<thead>
<tr>
<th>Sector</th>
<th>01/01/82</th>
<th>01/01/83</th>
<th>01/01/84</th>
<th>01/01/85</th>
<th>01/01/86</th>
<th>01/01/87</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Cargo*</td>
<td>4.502</td>
<td>4.068</td>
<td>3.189</td>
<td>2.879</td>
<td>2.653</td>
<td>2.527</td>
</tr>
<tr>
<td>Bulk Cargo</td>
<td>1.458</td>
<td>1.338</td>
<td>1.300</td>
<td>1.297</td>
<td>1.256</td>
<td>1.306</td>
</tr>
<tr>
<td>Containers</td>
<td>1.337</td>
<td>1.314</td>
<td>1.334</td>
<td>1.387</td>
<td>1.340</td>
<td>1.337</td>
</tr>
<tr>
<td>Roll on/Roll off</td>
<td>323</td>
<td>325</td>
<td>308</td>
<td>309</td>
<td>316</td>
<td>314</td>
</tr>
<tr>
<td>Grain</td>
<td>957</td>
<td>953</td>
<td>937</td>
<td>915</td>
<td>876</td>
<td>834</td>
</tr>
<tr>
<td>Control, Forwarding</td>
<td>1.102</td>
<td>987</td>
<td>911</td>
<td>865</td>
<td>776</td>
<td>807</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>408</td>
<td>397</td>
<td>455</td>
<td>404</td>
<td>359</td>
<td>423</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>10.087</td>
<td>9.382</td>
<td>8.434</td>
<td>8.056</td>
<td>7.576</td>
<td>7.548</td>
</tr>
</tbody>
</table>

### S.H.B. (Pool General Cargo)

| S.H.B. (Pool General Cargo) | 1.763 | 1.269 | 1.771 | 1.827 | 1.761 | 1.674 |

| Others                   | 87    | 313   | 288   | 376   | 348   | 395   |

| **Total S.H.B. (Pool)**  | 1.853 | 1.620 | 2.128 | 2.264 | 2.192 | 2.069 |

**Total Port**


* Decrease is partly due to redundancy scheme, partly due to switch to pool (83/84:750).

Source: S.V.Z., Personnel Administration.
Country: United Kingdom

8. British Railways

Background

In 1948, substantially all railway companies operating in Great Britain were nationalized and the British Transport Commission assumed their ownership. A modernization plan providing much needed capital investment was adopted by the government in 1955. In 1953 and 1962 legislation was passed which dealt mainly with the reform of the administrative structure of the total system. Thus, in 1962 the British Railways Board was set up to manage the railways, shipping, hotels, catering and other services.

In 1963 the Board proposed in its "Report on the Reshaping of British Railways" drastic changes in the role and operation of the railways: concentration on the mass movement of goods and passengers over medium and long distances, abandonment of uneconomic lines, large reductions in equipment and personnel. In fact the Board's proposal was a belated acknowledgement of British Rail's reduced role in the nation's transport of goods and people and a blueprint of how to change the oversized system into a smaller but competitive one. Between 1963 and 1975 the railway's route length was reduced by about 40%, from 17,500 miles to 11,258 miles, equipment was reduced by about 70%, from 909,000 units to 248,000 units, personnel was cut by 47%, from 475,000 to 254,000.

In addition to the restructuring, deletion and rehabilitation of physical assets of the railways, its financial rehabilitation was tackled as well. Various Acts of Parliament in 1962, 1968 and 1974 allowed the railways to reconstruct their balance sheet and to return to financial equilibrium. Furthermore, grants were provided by the government to compensate the railways for losses incurred in passenger transport and measures were taken to relieve the railways of all pension obligations. Freight traffic was expected to earn a profit.

In a communication to British Rail in 1983 the government set the objectives for British Rail up to the end of the decade, including inter alia: profitability of the rail freight business by 1988, privatization of BR's supply and support services, reduction of excess capacity of BR Engineering (BREL) as soon as possible, including the possibility to privatize BREL; competitive tendering for BR rolling stock; substitution of guaranteed and subsidised bus services for trains, where locally acceptable and more economical. In addition, the Public Service Obligation Grant (PSO) to BR was to be reduced substantially over the years.

In response, BR elaborated a Corporate Plan covering the period from 1985 - 1990, translating the government's objectives into action plans for administrative reorganization, rationalization of engineering workshops, removal of surplus track and productivity increases.
Part of the increase in productivity was to be achieved by further cutbacks in manpower. The aim of reducing personnel to 137,000 by 1990 was almost achieved already in 1987 when personnel numbered 140,000. Further cuts are being considered in the workshops' and administrative areas.

The Redundancy Issue

Reasons for Redundancy in BR

1) The declining role of the railways in the economy lead to an oversized network; increased intermodal competition reinforced this trend.
2) Technological change, i.e. automation, mechanization, rationalization.
3) Organizational, e.g. nationalization of railways in late 40's was one factor which lead to the rationalization of infrastructure and operations in the early 60's.

Redundancy Schemes

The first collective agreement with the unions on redundancy was concluded in 1957 and over the years modified. The last modification took place in 1984. In addition, the railways must of course comply with all specific national minimum statutory requirements dealing with this matter and in force at any particular time, i.e. the Employment Protection (Consolidation) Act of 1978. Most changes concerned increases in the size of severance payments. Since the railway management considered it necessary to reduce staff faster than through natural attrition the incentives for staff to leave the railway had to be attractive. Although British Rail in theory does not give its staff a lifetime employment guarantee it is considered desirable, for social, political and labor relations reasons, that redundancy be voluntary. Only in exceptional cases, for instance in line closures, employees were made redundant. And this happened only if no suitable or acceptable alternative employment could be found in the railways. The latter procedure is based on an internal agreement between BR and its unions that management makes every effort to offer the employee an alternative employment in the railways. Redundancy benefits were negotiated with the railways.

Specifics on Benefits Offered to Staff

Beneficiaries: All staff of BR, subject to certain minimum service criteria.

Benefits:

Staff whose positions are made redundant and who accept alternative positions are entitled to a whole range of benefits the most important of which are:
retention of rate of pay and all connected rights in the event of a transfer to a lower grade;

staff transferred to positions involving the movement of their residence can, subject to certain conditions, qualify for such benefits as a lump sum mobility payment, lodging allowance, travel allowance in lieu of lodging allowance, allowance for the removal of household effects, disturbance allowance, financial help towards the cost of house sale and purchase, assistance with house purchase (e.g. interest free loans, reimbursement of mortgage interest payments), rent allowance for 10 years, daily travelling allowance;

training: the transfer of an employee to a reasonable post implies the willingness of railway management to arrange any necessary training and of the employee concerned to undertake such training. An employee who has been advised of his redundancy and who leaves railway employment to enroll in a government retraining scheme will nevertheless be granted BR's redundancy benefits as applicable to him.

staff who leave voluntarily with the assent of management are entitled to a lump sum redundancy payment depending on the length of service and age of the employee, the maximum payment amounting to about £10,000, i.e. approximately 3 times the statutory minimum. In addition, a minimum length of notice of up to five months from the date of the personal redundancy advice must be given. Employees who retire on grounds of redundancy within five years prior to minimum pension age (55 years old) are entitled to a pension equal to the amount of the deferred pension in addition to the lump sum redundancy payment.

employees who are made redundant and who occupy BR owned houses will be given sympathetic consideration in the event they wish to retain tenancy.

Despite these rather generous terms, if compared with the statutory scheme, the railway unions claim that redundancy benefits are too low if compared with such industries as coal and steel, for instance, where the government and the EEC pay additional redundancy benefits.

Financing:

BR pays redundancy benefits out of revenue. However, since these benefits were paid by headquarters and the regional units had their own, separate, budgets redundancy was used by the regional managers to 'improve' their own budgets. This has been corrected. Until August 1986 the government paid BR the 35% rebate on the statutory maximum amount fixed by the Employment Protection Act of 1978.
Involvement of Labor Unions:

All agreements have been negotiated with the railway's labor unions and in general, once agreement was reached, union cooperation was forthcoming. By contrast, changes in work rules (e.g. from two to one man on a locomotive) are more difficult to negotiate and often the cause of industrial disputes.

Analysis of Costs and Benefits of Redundancy:

If redundancy occurs as part of an investment or disinvestment decision the costs of redundancy are considered part of the investment/disinvestment costs and taken into account in the cost/benefit analysis of the project concerned. If redundancy is caused by other measures the discounted potential earnings stream of the redundant employee, as measured over the period of his employment until retirement, is compared with the discounted stream of redundancy benefits he is entitled to. However, the post will only be abolished if at least 85% of its tasks can be eliminated. A summary of the costs of redundancy and redeployment is given in Attachment 1.

Age and Skill Distribution of Staff Who Left BR

In 1987 over 3/4 of the staff who left BR was in the age bracket between 55-64 years. This is not surprising because BR's rules on retirement tend to maximize redundancy benefits for this age group. A breakdown of redundant staff for 1987 shows that 78% of the staff who were layed off were manual workers, the remainder was white collar staff (Attachment 2).
BRITISH RAIL

Employees and Redundancy 1982 - 1986/7

<table>
<thead>
<tr>
<th>Year</th>
<th>Reduction in Employees</th>
<th>Redundancies</th>
<th>Expenditure on Redundancy</th>
<th>Expenditure on Redeployment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986/7</td>
<td>2671</td>
<td>1994</td>
<td>20.09</td>
<td>8.56</td>
</tr>
<tr>
<td>1985/6</td>
<td>4466</td>
<td>2971</td>
<td>30.89</td>
<td>10.27</td>
</tr>
<tr>
<td>1984</td>
<td>9417</td>
<td>7164</td>
<td>69.82</td>
<td>8.22</td>
</tr>
<tr>
<td>1983</td>
<td>9431</td>
<td>6989</td>
<td>54.82</td>
<td>5.32</td>
</tr>
<tr>
<td>1982</td>
<td>13,247</td>
<td>7698</td>
<td>73.36</td>
<td>3.35</td>
</tr>
<tr>
<td>1981</td>
<td>10,526</td>
<td>5722</td>
<td>48.40</td>
<td>-</td>
</tr>
<tr>
<td>1980</td>
<td>3673</td>
<td>1188</td>
<td>12.70</td>
<td>-</td>
</tr>
</tbody>
</table>

Explanatory notes:

1. Expenditure on redundancy is the cost of severance payments to redundant employees, excluding the cost of "special early retirement pensions" for those aged 55 and over (men) or 50 and over (women). SERPs cost £12.82m in 1985/6 and £1.55m in 1986/7.

2. Expenditure on redeployment is the cost of moving staff to new jobs within British Rail to avoid redundancy, excluding retraining costs. Retraining expenditure associated with redundancy cannot be separately identified in the total training account.

3. After 1984 B.R.'s financial year was changed from a calendar year basis (1st January - 31st December) to a fiscal year basis (1st April - 31st March).

4. The figures for 1982 - 1984 include British Rail Engineering Ltd., those for 1985/6 and 1986/7 exclude B.R.E.L.

5. Expenditure on redundancy for 1980 and 1981 includes expenditure on redeployment.

Source: BR
### Analysis of Redundancies During 1987

<table>
<thead>
<tr>
<th>Age</th>
<th>%</th>
<th>Grade Group</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20</td>
<td>5</td>
<td>Management &amp; Senior Management</td>
<td>65</td>
</tr>
<tr>
<td>20 - 24</td>
<td>29</td>
<td>Clerical Staff</td>
<td>123</td>
</tr>
<tr>
<td>25 - 29</td>
<td>67</td>
<td>Supervisors</td>
<td>92</td>
</tr>
<tr>
<td>30 - 34</td>
<td>43</td>
<td>Professional &amp; Technical staff</td>
<td>7</td>
</tr>
<tr>
<td>35 - 39</td>
<td>29  --24</td>
<td>Train Drivers</td>
<td>464</td>
</tr>
<tr>
<td>40 - 44</td>
<td>42</td>
<td>Guards</td>
<td>87</td>
</tr>
<tr>
<td>45 - 49</td>
<td>45</td>
<td>Signalmen</td>
<td>49</td>
</tr>
<tr>
<td>50 - 54</td>
<td>73</td>
<td>General Traffic workers</td>
<td>200</td>
</tr>
<tr>
<td>55 - 59</td>
<td>275 --76</td>
<td>Track workers</td>
<td>60</td>
</tr>
<tr>
<td>60 - 64</td>
<td>781</td>
<td>Signal &amp; Telecoms Engineering</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engineering Workshops</td>
<td>192</td>
</tr>
<tr>
<td>Total</td>
<td>1389 100</td>
<td>Other manual workers</td>
<td>27</td>
</tr>
</tbody>
</table>

**Total** 1389 100

**Notes:**

1. This is an analysis of people who left BR's employment on redundancy terms during the calendar year 1987.

2. The top four grade groups are white collar staff, the others are manual workers.

3. The figures exclude British Rail Engineering Ltd. and certain other subsidiary businesses.

**Source:** BR
Country: United Kingdom

9. UK Ports

Organization of UK ports: 300 ports and harbors in UK, 100 of commercial significance, most of which are members of the British Ports Association.

There are three types of ports in the UK:

- **Public Trusts**, set up by individual act of Parliament. They are owned and administered by self-governing statutory bodies;

- **Municipal Ports**, owned and managed by local authorities;

- **Company Ports**, owned by public or statutory companies. They include for instance Felixtowe, Liverpool, Manchester, the Sealink Group and, slightly different, associated British Ports Holdings PLC who administer 19 ports.

- In addition, the British Waterways Board, the only remaining nationalized sector of the ports industry, owns four ports and operates in two of them.

Several of the larger ports, e.g., London, have significant port operations which are managed autonomously and which are financially independent from the port authority concerned.

Size of problem: In 1966 about 54,000 registered dock workers in UK ports, in 1987 down to 11,500, a decrease of 80%. 12% of these still estimated as surplus.

Reasons for Redundancy: 1) Change in trading patterns; decline in deep sea traffic, increase in short sea traffic (EEC); 2) Technological change, i.e., containerization, development of unit loads, bulk cargoes, ro-ro. 3) Labor practices, e.g., definition of dock work, restriction in access to profession with consequent high labor costs.

Redundancy Schemes 1/:

Between 1966 and 1984 successive versions of National Voluntary Severance Scheme. Depending on years of service (which dropped from 25 years maximum to 15 years maximum) and fitness to work payments ranged from max. £1,500 in 1969 to £25,000 in 1985. Instead of a lump sum payment, monthly payments were also offered but rarely chosen by the dock workers.

As of October 1985 the Scheme was renamed National Employees Release Arrangement (NERA).

1/ See annex for more detailed description.
Terms equal to those of previous scheme, except for port of London and Liverpool where maximum amount payable was increased to £35,000.

**Parties to Agreement:** 1969 - 1985 Employers and Unions.
October 1985: Employers only.

**Administration of Scheme:** National Dock Labor Board, in accordance with 1967 Dock Workers' Employment Scheme.

**Procedure:** Employer applies for reduction in his registered labor force to local board, whose decision was subject to approval by National Board. Once approval was given, the RDW was in "temporarily unattached status" and considered in the employment of the National Board which, subject to certain conditions, continued to pay the Registered Dock Worker. Every effort was made to find a new job of the same type in the port or within a day's travel distance. If this failed, the RDW could opt for a severance scheme.

**Beneficiaries:** Only registered Dock Workers who make up between about 1/3 and 1/4 of total work force in the port.

**Financing:** Port employers through special levy.

**Government:** Rebate to employers up to limit of general redundancy scheme plus special actions such as London and Liverpool and special action 1985-1988, 100%, 75%, 50%. In addition, all interest free loans from government granted to the National Dock Labor Board to date, i.e., about £45 million, will be cancelled.

**Protection against recurrence of problem.** Hardly any recruitment.

**Consequence:** Average age increases steadily. At present: 46.3 years.

**Other aspects:** Attempts to shift work and functions from ports covered by national dock labor agreement to other areas with consequent loss of work opportunities for registered dock workers. Thus, for instance, the total number of the non-scheme ports' labor force, expressed as % of the total UK ports work force increased from 19.5% in 1983 to 27.6% in 1986.
### SEVERANCE SCHEMES AND TERMS: MAY 1969 TO PRESENT

<table>
<thead>
<tr>
<th>DATE</th>
<th>PART A TERMS</th>
<th>PART B TERMS</th>
<th>MAX NUMBER OF YEARS OF SERVICE PAID FOR</th>
<th>MAXIMUM PAYMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 1969</td>
<td>National Voluntary Severance Scheme (NVSS)</td>
<td>£60 per year of service Minimum payment: £240</td>
<td>£1,000* plus £20 per year of service</td>
<td>25 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(* The high basic payment was to encourage unfit men to leave the industry.)</td>
<td></td>
</tr>
<tr>
<td>March 1972</td>
<td>NVSS</td>
<td>£80 per year of service Minimum payment: £320</td>
<td>£1,000* plus £40 per year of service</td>
<td>25 years</td>
</tr>
<tr>
<td>June 1972</td>
<td>Special Voluntary Severance Scheme (Funded by government)</td>
<td>Basic Payment: £2,000 Payment per year of service: £80</td>
<td>To apply: 4 Sept 1972 - 4 Feb 1973 Applicants to be registered dock workers in the prescribed categories: a) unfit men, being those who are certified by the National Dock Labour Board's Medical Officer, where necessary after medical examination, which may include a second medical opinion, as unfit to carry out substantially all the dock work ordinarily available in the port, or, in the case of specialised employment ordinarily available with their employer; b) men aged 55 years and over at the date of severance.</td>
<td>25 years</td>
</tr>
<tr>
<td>February 1975</td>
<td>Basic payment: £250 Payment per year of service: £200 Minimum: £650</td>
<td>: £2,000</td>
<td>: £130</td>
<td>25 years</td>
</tr>
<tr>
<td>September 1976</td>
<td>Basic: £250 Per year: £250 Minimum: £750</td>
<td>: £2,000</td>
<td>: £162.50</td>
<td>20 years</td>
</tr>
<tr>
<td>Date</td>
<td>Description</td>
<td>Details</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>March 1977</td>
<td>Basic: £1,000 ; £2,500 20 years</td>
<td>20 years £ 7,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Per year: £ 300 ; £225</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>January 1979</td>
<td>Basic: £1.200 ; £3,000 20 years</td>
<td>20 years £ 8,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Per year: £ 365 ; £275</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>August 1980</td>
<td>Basic: £1.500 ; £3,700 20 years</td>
<td>20 years £10.500</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Per year: £ 450 ; £340</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>February 1981</td>
<td>Special supplementary payment to RDWs aged 63 or</td>
<td>£16,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>under volunteering for severance in the ports of London and Liverpool to</td>
<td>give a maximum supplement of £5,500. Financed by the Government.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>August 1981</td>
<td>Available only to applicants under</td>
<td>N/A 20 years £ 5,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Part A: i.e. fully fit men.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Available to RDWs aged 63 or under who volunteered for severance between</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 Sept &amp; 31 Oct 1981</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 1982</td>
<td>Special National Severance Scheme</td>
<td>N/A 15 years £22,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1)</td>
<td>Available to Part A applicants only</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>between 19 April &amp; 28 May. Later extended to 24 Sept</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Basic: £3,000 ; £3,700 20 years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Per year: £ 250 ; £275</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2)</td>
<td>Revision of the NVSS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Part A and Part B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Basic payment: £2,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Payment per year: £700</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>March 1983</td>
<td>Available to Part A applicants only.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special National Voluntary Severance Scheme</td>
<td>Basic: £3,000  Per year: £1,300</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>June 1984</th>
<th>Basic: £3,400  Per year: £1,440</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>October 1985</th>
<th>Basic: £3,400  Per year: £1,440</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Employers Release Arrangement (NERA)</td>
<td>Available 28 Oct 1985 to 31 March 1988. No division into Parts A &amp; B, but it stated that unfit men were eligible.</td>
</tr>
</tbody>
</table>

N/A 15 years £22,500

N/A 15 years £25,000

N/A 15 years £25,000

SOURCE: NATIONAL ASSOCIATION OF PORT EMPLOYERS

SER/EH/MAY 1987

(NVSSRDW)
<table>
<thead>
<tr>
<th>Year</th>
<th>Number of RDWs taking severance (NVSS) or early release (NERA)</th>
<th>Cost to Severance Func</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Cumulative total (1000)</td>
</tr>
<tr>
<td>1969</td>
<td>3,006</td>
<td>5,071,578</td>
</tr>
<tr>
<td>1970</td>
<td>3,545</td>
<td>5,839,247</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1971</td>
<td>2,415</td>
<td>8,966</td>
</tr>
<tr>
<td>1972</td>
<td>3,102</td>
<td>12,068</td>
</tr>
<tr>
<td>1973</td>
<td>8,389&lt;sup&gt;1/&lt;/sup&gt;</td>
<td>20,457</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>20,487</td>
</tr>
<tr>
<td>1974</td>
<td>28</td>
<td>20,515</td>
</tr>
<tr>
<td>1975</td>
<td>2,248</td>
<td>22,763</td>
</tr>
<tr>
<td>1976</td>
<td>1,611</td>
<td>24,324</td>
</tr>
<tr>
<td>1977</td>
<td>1,000</td>
<td>25,374</td>
</tr>
<tr>
<td>1978</td>
<td>1,025</td>
<td>26,399</td>
</tr>
<tr>
<td>1979</td>
<td>2,112</td>
<td>28,511</td>
</tr>
<tr>
<td>1980</td>
<td>2,556</td>
<td>31,067</td>
</tr>
<tr>
<td></td>
<td>1,483&lt;sup&gt;2/&lt;/sup&gt;</td>
<td>32,515</td>
</tr>
<tr>
<td>1981</td>
<td>4,785</td>
<td>37,335</td>
</tr>
<tr>
<td>1982</td>
<td>2,787</td>
<td>40,122</td>
</tr>
<tr>
<td>1983</td>
<td>1,494</td>
<td>41,616</td>
</tr>
<tr>
<td>1984</td>
<td>1,304</td>
<td>42,920</td>
</tr>
<tr>
<td>1985</td>
<td>328 (NVSS)</td>
<td>43,248</td>
</tr>
<tr>
<td></td>
<td>202 (NERA)</td>
<td>43,450</td>
</tr>
<tr>
<td>1986</td>
<td>1,353 (NERA)</td>
<td>44,803</td>
</tr>
</tbody>
</table>

<sup>1/</sup> Severance paid by the Government – nationally i.e., all U.K. Dock labor scheme ports.

<sup>2/</sup> Severances in the Port of London – paid by the Department of Employment (i.e., the Government). Paid in 1978, 1979 to February 1980 – the figure shown includes payments in the 3 years.

<sup>3/</sup>

<sup>4/</sup> The Employer paid L 5,358,214 of this amount, the Dept. of Transport. Government paid L 19,579,276 for severance in London and Liverpool and the Department of Employment paid L 12,457,540 for release in other UK ports.

Source: British Ports Association.