

**The future of rail transport
in South Africa in a
deregulated transport environment**



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deregulated transport environment**

by

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of the requirements for the degree of
Master of Economic Sciences (Transport Economics)**

at the

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Declaration

I, the undersigned, hereby declare that the work contained in this study project is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Date: 28 October 1997

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Sinopsis

Op 31 Maart 1990 het die Suid-Afrikaanse Vervoerdienste ophou bestaan en is dit op 1 April 1990 vervang deur Transnet, 'n gediversifiseerde vervoermaatskappy wat deur die Suid-Afrikaanse regering besit word. Van meet af was dit die bedoeling dat die regering die keuse het om Transnet aan die privaatsektor te verkoop.

Die werkstuk bespreek die geskiedenis en gebeure wat aanleiding gegee het tot die ontstaan van Transnet. Daarna word die voor- en nadele van privatisering bespreek, gevolg deur internasionale spoorwegprivatiserings-gevallestudies. Daarna word die ekonomiese teorie wat privatisering onderlê, bespreek. Die skeiding van infrastruktuur en bedryf, wat deur die gevallestudies as een van die mees omstrede en verreikende aspekte van spoorwegprivatisering geïdentifiseer is, word ook bespreek. Laastens fokus die werkstuk op die bemarkingstrategie wat Spoornet behoort na te streef om hoë-waarde vragte te bekom.

Synopsis

On 31 March 1990 the South African Transport Services (SATS) ceased to exist and on 1 April 1990 in its place emerged Transnet, a diversified transport company wholly owned by the South African government. Transnet was founded on the understanding that the government might eventually choose to sell it to the private sector.

This study project report discusses the history and events leading up to the creation of Transnet. Thereafter the advantages and disadvantages of privatisation are identified, followed by international privatisation case studies which provide the basis for a discussion of some of the economic issues behind railway privatisation. The separation of infrastructure from operations, which was identified through the case studies as one of the most controversial and far-reaching concepts of railway privatisation, is also examined. Lastly, the study project focuses on the marketing strategy Spoornet ought to pursue in order to ensure sufficient high-value freight in the future.

Table of Content

Chapter 1: The history of railway development in South Africa up to 1910	1
1.1 The early development of railways in South Africa	1
1.1.1 The discovery of diamonds	2
1.1.2 The Transvaal	3
1.2 The South African Railways and Harbours	5
 Chapter 2: The evolution of the SAR&H to Transnet	 7
2.1 Introduction	7
2.2 Cross-subsidisation	7
2.3 Le Roux Commission (1929)	8
2.4 De Villiers Report on SA Transport Services	10
2.4.1 Four stages of the life cycle of a utility establishment	11
2.4.2 Recommendations	13
2.5 White Paper on National Transport Policy, 1986	13
2.6 Transnet	15
 Chapter 3: The road ahead: Privatisation	 16
3.1 Definition	16
3.2 The rationale behind privatisation	16
3.3 Resistance and objections to privatisation	18
3.3.1 Market failure	18
3.3.2 The bureaucracy	18
3.3.3 The indigent	18
3.4 Methods for privatisation	18
3.4.1 The sale of public sector enterprises and assets	18
3.4.2 Partnerships	19
3.4.3 Leasing out of business rights	19
3.4.4 Contracting out	20
3.5 Actual advantages of commercialisation	20

3.6	Reasons to go ahead with privatisation	21
3.7	Delaying implementation	22
Chapter 4:	Railway privatisation case studies	23
4.1	Introduction	23
4.2	Strategic restructuring of the British railway system	23
4.2.1	Railtrack	25
4.2.2	Passenger services	26
4.2.3	Freight services	28
4.2.4	Rolling stock	30
4.2.5	The rail regulator	30
4.2.6	Assessment	30
4.3	Strategic restructuring of the Swedish railway system	31
4.3.1	Transport Policy of 1979	32
4.3.2	The Guidelines for Railway Policy of 1985	32
4.3.2.1	Passengers	32
4.3.2.2	Freight	33
4.3.3	Transport Policy of 1988	34
4.3.4	Financial arrangements	35
4.3.5	Franchising	36
4.3.6	Comparison to the British experience	36
4.4	Strategic restructuring of the New Zealand railway system	37
4.4.1	<i>Status quo</i> up to 1982	37
4.4.2	New Zealand Railway Corporation	38
4.4.3	NZRC's commercial approach	39
4.4.4	New Zealand Rail Limited	41
4.4.5	Track access	41
4.4.6	Tranz Rail Limited	42
4.4.7	Assessment	44
4.5	Strategic restructuring of the Japanese railway system	44
4.5.1	Background to the restructuring of JNR	45
4.5.2	The JNR Restructuring Act 1986	46
4.5.3	The implementation of the Restructuring Act	47

4.5.4	Public stock offering	48
4.5.5	Main elements of JNR restructuring	48
Chapter 5:	The economics behind rail privatisation	50
5.1	Introduction	50
5.2	Contestability and barriers to entry	50
5.2.1	Three criteria for perfect market contestability	51
5.2.2	Contestability analysis of British Rail	51
5.3	Vertical separation	53
5.4	Horizontal separation	56
5.5	Franchising	57
5.5.1	Potential problems	58
5.5.1.1	The bidding process	58
5.5.1.2	Contract specification and duration	58
Chapter 6:	Separating rail infrastructure and operations	60
6.1	Introduction	60
6.2	The rationale behind separation	60
6.2.1	Sweden	61
6.2.2	Britain	62
6.2.2.1	Promotion of a variety of operators	63
6.2.2.2	Clarify industry relationships	63
6.2.2.3	Specialisation	64
6.3	Spoornet's future infrastructure policy options	64
Chapter 7:	Spoornet's future marketing strategy	67
7.1	Introduction	67
7.2	Spoornet's current market structure	67
7.3	Definition of logistics	68
7.4	Phases of transformation in the quest for competitiveness	69
7.4.1	Predictable service	69

7.4.1.1	Logistics service design	70
7.4.1.2	Service execution	71
7.4.1.3	Customer relationship	71
7.4.2	Global logistics provider	72
7.4.3	Global logistics enabler	72
7.5	Supply chain management	72
7.5.1	Definition of supply chain management	72
7.5.2	Supply chain characteristics	73
7.5.2.1	Inventory	73
7.5.2.2	Total cost	73
7.5.2.3	Supply chain planning	74
7.5.2.4	Alliances	74
7.5.3	Services and activities	74
7.6	Predictable service case study	75
7.7	Trends regarding modal choice	76
Chapter 8: Conclusion		80

Bibliography

CHAPTER 1

THE HISTORY OF RAILWAY DEVELOPMENT IN SOUTH AFRICA UP TO 1910

1.1 THE EARLY DEVELOPMENT OF RAILWAYS IN SOUTH AFRICA

Like the railway systems of most countries, that of South Africa is the indirect product of the great Railway Boom in England, but development in South Africa was hesitant and beset with difficulties (The South African Railways, 1947:9). The terrain was rugged and construction costs were high; not enough local capital was available; and to investors in Europe, such far away ventures seemed prohibitively risky.

As far as can be discovered, the very first reference to the question of railway construction in South Africa was made in the *South African Commercial Advertiser* for October 10, 1838 (*A century of transport*, 1960:1). Railway construction took shape in 1853 with the formation of the Cape Town Railway and Dock Company. It was provisionally registered at the beginning of the following year. The capital of £600 000 was divided into 30 000 shares, 5 000 of which were reserved for the colonial government if it wished to take them up.

According to the Articles of Association “the object of the Company is to introduce into the Cape Colony, a progressive system of railways, and to supply to its capital safe and convenient access and facilities for the reception and repair of shipping, the want of which has been so long and severely experienced as a serious prejudice to the commercial and agricultural trade of the Colony, and to the development of its natural resources” (The South African Railways, 1947:10). It is interesting to note that the principle of state ownership was already allowed for, at any rate in part, by the earmarking of a large block of shares for the colonial government.

The first line to be proposed in South Africa was to run from Cape Town to Wellington. This, however, was merely regarded as the forerunner of a far more ambitious system which would ultimately link up all parts of the country.

On August 6, 1858 the contract for the building of the first railway in South Africa was awarded. No time was lost in starting the work but, through the delay resulting from the negotiations, the glory of opening the first successful line was snatched from Cape Town. The *Natal Mercury*, published in Durban, issued a leading article on January 20, 1859: "We are happy to announce that a project is on foot, for constructing a railway, with locomotive steam power, between the Point and the town ..." (The South African Railways, 1947:13). Within a fortnight the "Natal Railway Company" had issued its prospectus. The first locomotive was formally put into use on June 25, 1860.

Progress was, meanwhile, being made on the line from Cape Town to Wellington. The first sod was turned on March 3, 1859 and trains began to run on the first section to Eerste River in February 1862. By this time the country as a whole was alive to the advantages of railways and a new concern under the name of the Wynberg Railway Company started to build a line to that Cape Town suburb on August 14, 1862 (The South African Railways, 1947:14).

Since revenue for the colonial treasury nearly doubled during the period from 1867 to 1873, the government decided that the time had now come to exercise its power to expropriate the private companies, which led to the termination of the Cape Town Railway and Dock Company as well as the Wynberg Railway Company. The newly-acquired enterprises were placed under the Department of Public Works until growth of traffic and turnover prompted the establishment of the Cape Government Railways.

The most significant change which followed the take-over by the Cape Colonial Government of the original railway companies was the adoption of the 3 foot 6 inch gauge instead of the "broad gauge" of 4 foot 8½ inches, which had previously been in use and which had been copied from the English model. Soon the practice adopted in Cape Town was also followed in Natal, and by tacit agreement the narrower gauge became almost universal, not only in Southern Africa, but in the north of the continent as well.

1.1.1 The discovery of diamonds

Practically no growth had taken place from the time when the routes from Cape Town to Wellington and from Cape Town to Wynberg were opened. The total distance was 65 miles, and so it remained for 12 years, when the discovery of diamonds caused construction to take a great leap forward (*A century of transport*, 1960:10).

The site of the discovery of diamonds in Griqualand West soon mushroomed into South Africa's second largest town, Kimberley. This site, however, was a thousand kilometres from the nearest accessible port, East London, and the problem at once arose of transporting hordes of fortune seekers and labourers to the diamond fields, in addition to daunting quantities of material, food and stores of all kinds. Overnight a rail link became the highest priority, but there were weighty problems of an engineering, economic and political nature.

Economically the proposed line, while assured of lucrative "up" traffic in the form of passengers and freight, would not attract "down" traffic to any significant degree. The whole profitability of the line, in short, would be geared to the diamond fields. With the long-term prospects of those fields still somewhat unclear, however, private enterprise was not willing to shoulder the heavy financial outlay involved in pushing a railway over the formidable coastal mountains and then for hundreds of kilometres to faraway Kimberley. If a railway was to be built, it had to be financed or guaranteed by the government. In the event the task was taken in hand by the Cape government entirely, and in this way a pattern was set for future railway development in South Africa.

State ownership brought in its wake vexing difficulties arising out of vested interests and local politics. Judged on the simple criterion of economics the obvious line was one from either Port Elizabeth or East London as both these ports were closer to Kimberley than was Cape Town, and in any case the still uncertain long-term prospect of the diamond fields clearly demanded that wasteful overlapping or duplication of rail services should be avoided as far as possible. However, local jealousies among the three main ports of the colony were strong and were prominent in the Cape Parliament, which of course would have the final say on railway construction. In the end not one but three lines were built, so that each of the ports would enjoy its own link with Kimberley (Coleman, 1983:101).

1.1.2 The Transvaal

The Transvaal and the Orange Free State did not figure among the railway operators for a long time. As late as 1887 anti-railway conferences met at Ladybrand, Dewetsdorp and Brandfort in the Orange Free State, at which such arguments were used as: all railways (a) are unnecessary; (b) are detrimental to transport riding by wagon; (c) are injurious to horse-breeding; (d) are likely to entail heavy land taxes; and (e) will encroach on property rights.

Nonetheless, the majority of people realised that the day of the ox-wagon was rapidly ending, and that they had to prepare for new methods of transport. The Transvaal Republic and the Republic of the Orange Free State were gradually becoming convinced that they too had to link up with the world by railway.

Attempts in the early 1870s to build a railway line between Mozambique to Transvaal was hampered by a lack of funds. In spite of this, the Transvaal did not give up hope. On June 5, 1876 the Volksraad imposed a "Railway Line Tax" on all farms, and out of this they hoped ultimately to pay for construction. For many years before a single rail had been laid, the railway tax continued to figure in the Transvaal budget.

A revival of interest in steam transport followed the restoration of independence to the Transvaal after the successful campaign of the republicans, which culminated in the victory at Majuba on February 27, 1881. This time the rulers of the restored republic, headed by President Paul Kruger, proved most anxious to have an outlet which did not pass over British soil. This was available at Lourenco Marques, sited on the shores of the great land-locked Delagoa Bay. With the discovery of gold on the Witwatersrand in 1886 this dream came one step closer to reality.

The Netherlands South African Railway Company received the concession to build the line. The company was formally established on June 21, 1887. The Netherlands South African Railway Company met with such difficulties at the start that its hopes frequently ran very low.

In the meantime the Cape of Good Hope had brought its railway line almost to the frontiers of the Transvaal. The route from Natal was likewise getting very near the Republic. The line from Port Elizabeth was at the southern boundary of the Orange Free State and, once it was carried through that country, it would provide yet another means of access to the Transvaal. Knowing that the Orange Free State was still too poor to finance so big an enterprise, the Cape Colony even offered to pay for the construction of a railway over the territory of its neighbour. After a period of hesitation the Orange Free State decided to accept the bid of the Cape to build the line, though it later preferred to operate in its own name.

On the fundamental question of priority of entrance into the Transvaal, President Kruger remained firm. His point of view was that the independence of his country in a large measure depended on the maintenance of at least one outlet which did not fall under British control.

Technical difficulties, as well as the prevalence of fever, slowed down the progress of the Delagoa Bay line much more than had been foreseen.

In 1890 the line from Cape Town reached Bloemfontein, capital of the Orange Free State, and was continued northward. In response to the continuing pressure President Kruger finally agreed to allow the railway line from the Cape to be continued to the Witwatersrand. In 1892 the first train reached the goldfields from Cape Town. The line from Port Elizabeth, which had reached Bloemfontein in 1890, was completed to Johannesburg in 1892, while the line from East London was completed to Springfontein in the Southern Free State in May 1892. Thus, Johannesburg was linked with the three main Cape ports by September 1892. On November 2, 1894 the long awaited service of the Netherlands South African Railway Company between Johannesburg and Mozambique was opened (*A century of transport*, 1960:9).

1.2 THE SOUTH AFRICAN RAILWAYS AND HARBOURS

The South African war of 1899-1902 led to changes in railway operations. From the moment the British forces gained control of the major network of the Orange Free State, it was decided to establish a new organisation, which developed into the “Imperial Military Railways”, ultimately embracing the whole system of the Netherlands Company in the Transvaal and the railways in the Free State. When the four once separate territories of the Cape of Good Hope, Natal, the Transvaal and the Orange Free State united to become the Union of South Africa (1910), the South African Railways and Harbours came into being.

For a while the central South African Railways, Cape Government Railways and Natal Government Railways continued a more or less independent existence, but they were gradually merged and the final “marriage” took place in 1916. Under the new system Johannesburg, as the major commercial centre of South Africa, became the seat of the unified management (The South African Railways, 1947:24).

At the time of unification the main activities of the South African Railways (SAR) were the operation of railways and harbours only, but development in transport later added the operation of steamships, airways, aerodromes, road motor services, grain elevators and other subsidiary services to the original activities (The South African Railways, 1947:51).

By the late 1920s the great era of railway construction in South Africa had reached its end. The rapid development of motor vehicles had an obvious impact on the railways and in particular made further construction of branch lines economically unviable, especially since several of the “agricultural” lines had failed to live up to the rosy promises of their advocates. By 1925 it was accepted SAR policy that further branch lines would not be built, but in their place road transport would be used as far as practically possible.

In the late nineteenth century the railway displaced both transport riding and passenger coach services along the major routes of the country. For obvious reasons the slow and cumbersome animal-drawn vehicles of the day could not compete in cost, carrying capacity, convenience, comfort and time with the railway services. The development of the internal combustion engine at the turn of the century, and the rapid increase in the size and power of motor vehicles, brought about a reversal of the process.

As far as the transportation of goods for reward was concerned, the growth and adaptability of the road haulage industry posed serious problems for the SAR. As the national common carrier, the SAR had made massive investment over the years in infrastructure and rolling stock, and, moreover, it was one of the country’s biggest employers.

CHAPTER 2

THE EVOLUTION OF THE SAR&H TO TRANSNET

2.1 INTRODUCTION

The South African Railways and Harbours (SAR&H) came into existence with the unification of the then four colonies of South Africa in 1910. This included the harbours of Natal and the Cape Colony, as well as the systems of the Cape Colony, Natal, the Orange Free State and Transvaal (Van Rensburg, 1996:5).

The mission of SAR&H consisted of two major imperatives, spelled out in the Act of Union itself:

The railways, ports and harbours of the Union shall be administered on business principles; due regard being had to agricultural and industrial development within the Union and promotion, by means of cheap transport, of the settlement of an agricultural and industrial population in the inland portions.

The emphasis on business principles was intended to avoid problems that South African officials had observed at state-owned railways in Europe, Canada and Australia, where railway lines were constructed for political rather than economic reasons (Spoornet, 1995:3). Reflecting on the mission one can argue that the two parts of the mission, business principles and economic development, were in conflict from the start. The dual mission reflected the crucial role that transport played, and to some extent still plays, in modern societies. Transport was not just another business, but an instrument of national economic policy.

2.2 CROSS-SUBSIDISATION

The principles of SAR&H's mission took practical shape in a policy of setting rates at "what the traffic could bear", whether or not such rates covered costs. Farmers in remote areas could not survive commercially without cheap transport of their livestock and produce. The price they paid was typically below the railway's total cost and in some cases below its variable

cost. Likewise, cheap transport of ores was required to ports to make remote mining ventures economical. The SAR&H had the status of “common carrier”, meaning it was obliged to transport any goods offered. Although it had some discretion in setting rates, the SAR&H was under political and social pressure to charge no more than the shipper or passenger was able to pay (Spoornet, 1995:3).

To make up losses on some commodities, the railways set tariffs well above cost for other commodities. These included typical high-value products such as manufactured goods, liquor and packaged foods. The whole arrangement was referred to as cross-subsidisation and it allowed the SAR&H to break even over the long term.

Cross-subsidisation had one obvious weakness. This weakness would have been exposed in the event of the railways facing competition from other modes of transport.

This was exactly the case with the appearance of economical diesel engine trucks on the scene during the 1920s. Motor transportation assumed increasing importance and, as a result of the tariff structure applied by the railways, profitable high-tariff traffic was diverted to the roads. Since it had not been possible for the railways to convey low-tariff goods without financial assistance from high-tariff traffic, road transportation at that stage began to pose a threat to the economic stability of the railways.

2.3 LE ROUX COMMISSION (1929)

A commission of inquiry was appointed on January 21, 1929 under the chairmanship of Mr Jonathan Calf le Roux to inquire into and report on the whole problem of road motor competition and its effect on the road and rail services of the South African Railways Administration, as well as any measure to be taken in the public interest for the better regulation, coordination and control of road transport (Van Rensburg, 1995:9). This commission reported on December 6, 1929 and recommended a fair degree of control over road transportation. To eliminate “wasteful and destructive competition”, the control of motor carriers was recommended.

As a result of the report of the Le Roux Commission the regulation of road transport was introduced by the Motor Carrier Transportation Act (Act 39 of 1930). The introduction of a

competition-orientated tariff structure for the railways at that stage would not only have been considered revolutionary, but it would not have been to the benefit of the country as a whole.

When the Act came into effect, the control of motor carrier transportation was limited initially to defined areas and to defined routes where competition with the state and other public transportation services was most severe. The sparsely populated areas of the Union remained uncontrolled.

In 1932 the Act was amended and control tightened. Vehicles operated by commercial firms and industrialists in the course of their business as such were then made subject to control and they had to become specially exempted from the obligation to obtain motor carrier certificates to operate their vehicles (*A century of transport*, 1960:171).

In 1941 the limitation of control to defined routes was abolished and motor carrier transportation on all public roads was brought under the provisions of the Act. In 1948 the Transport (Co-ordination) Act was passed which provided for the establishment of a National Transport Commission to which were transferred the functions of the Central Road Transportation Board, together with those of the Civil Aviation Council and the National Road Board (*A century of transport*, 1960:172).

The conflicts inherent in South African transport policy were managed for decades, but they never went away. According to a former Spoornet historian, "Every year from 1930 onward, when the SAR&H budget came up for approval in parliament, industrialists and business interests protested. Shippers of high-value goods were penalised in two ways. Firstly, they paid higher tariffs because of cross-subsidisation, and secondly, they incurred higher inventory holding costs, because rail services were generally slower and less predictable than road services."

These challenges to the regulation of transport in South Africa did not yield any change in legislation until 1977, but they did find another sort of outlet. The 1930 Motor Carrier Transportation Act left room for discretion in the granting of permits for road transport and in practice permits were granted more and more frequently as time passed. In 1957 the railways' estimated share of the South African freight market was 61 percent. Fourteen years later, in 1971, it had fallen to 51 percent (Spoornet, 1995:5).

2.4 DE VILLIERS REPORT ON SA TRANSPORT SERVICES

Changes at SAR&H did not occur in isolation. They were part of a broad trend toward liberalisation of the South African economy, driven in part by pressure from foreign creditors and by the need to remain competitive in the world economy. Beginning in 1975 a long series of National Transport Policy Studies reviewed trends in transport deregulation around the world. Their findings reinforced the growing belief that distorted transport markets hurt the South African economy. One early result was the Road Transport Act of 1977 (Spoornet, 1995:7).

A commission under the chairmanship of Mr Alexander van Breda was appointed on July 21, 1975 to inquire into and report upon the Road Transportation Bill and to make recommendations regarding amendments to this bill.

The Van Breda Commission found that by 1977 neither the private sector nor the South African Railways in particular favoured the complete abolition of statutory control measures in the field of road transportation, but both agreed that gradual deregulation in various fields was desirable. The commission found that qualified deregulation should take place gradually, and that for the railways to enter a situation of freer competition would involve tremendous adjustments in tariffs, which would have a profound effect on the country's economy (Van Rensburg, 1996:13).

The Road Transportation Act, published on June 15, 1977, which came into being on January 1, 1978 replaced the Motor Carrier Transportation Act of 1930. Although it allowed more freedom, it also controlled what may be transported where and by whom. Permits allowing the transportation of goods were granted to an operator by local transportation boards, who had the power to impose certain conditions regarding the permissible type of goods, area of operation and the effective period. Under the principal deregulation, more and more transportation was exempted from the permit system. Certain "exempted goods" could be transported anywhere without permits and transportation of any goods could be undertaken freely in proclaimed "exempted areas" (Ramsden & Marchio, 1993:37-38).

In the 1980s economic problems increased. Due to anti-apartheid sanctions and civil wars in neighbouring Angola and Mozambique, the nation faced an acute capital shortage, forcing the government to prohibit further foreign borrowing by industrial concerns and to regulate capital

investment throughout the economy. The capital spending habits of all state enterprises came under scrutiny. Wim de Villiers, a former chairman of Sasol who was widely respected in top government circles, was appointed to lead a study of Eskom, the state-controlled electricity utility. De Villiers compared Eskom to similar utilities around the world. His findings were that it lagged far behind in efficiency and return on assets. In 1985 De Villiers was asked to conduct a similar study of SATS (Spoornet, 1995:7).

In his report De Villiers pointed out that an evaluation of the then present strategy of the South African Railways pointed to the same trends that were valid for certain utility organisations in other countries. The life-cycle approach is of particular value in this regard. Studies in the USA identified four stages of the life-cycle of a utility establishment in different service industries.

2.4.1 Four stages of the life-cycle of a utility establishment

In the case of a service undertaking, the service is introduced and the form of the utility fixed in stage one.

During stage two the utility system takes on form and grows rapidly by the acquisition of new marketing areas. It is at this stage that cross-subsidisation usually settles in, whereupon the utility usually starts demanding regulation and legality is given to regulation.

Stage three sees the utility reach technological maturity and its market becomes glutted. Competing technologies and services, however, increase and lead to greater cross-subsidisation.

In stage four the system yields to competitive pressure and regulation decreases (South African Transport Services, 1986:15).

According to De Villiers regulation determines the life-cycle of an industry to a certain extent and the industry also responds to regulation. Industries which have reached maturity require a different strategy for financial success than industries which are still growing.

These broad trends in the four stages in the life-cycle of a utility establishment are adequately described in the report of the Royal Commission of Transportation, 1961 (South African Transport Services, 1986:18):

Speaking in general terms and for the moment overlooking individual characteristics, it becomes apparent that the emergence of road transport has removed from the railways the competitive ability and the universal necessity of providing a complete transportation function by rail. ... The railways' role as an instrument of national policy promoting settlement and production of traffic by the incentive of cross-subsidisation through the medium of classified rate structure is obsolete. It follows that the only way to preserve the railway as a viable commercial operation is to have it concentrate on fulfilling those transportation functions in which it has inherent cost advantages. Broadly speaking, these functions can best be performed under conditions of heavy loading, full trains and few stops.

In his report De Villiers pointed out that the growth rate of high-rated traffic was particularly low and that this is obviously the sector where rail has lost its greatest share of the market. These tendencies apply, notwithstanding the fact that the transport market is regulated, for the purpose of protecting the railways against unequal competition in respect of particularly so-called high-rated traffic (South African Transport Services, 1986:28). On page 31 of his report he commented that, as a long-term source of cross-subsidisation, the contribution which may be made by the profit on high-rated rail traffic must be regarded as limited, and added that at best this source will make a constantly decreasing percentage contribution to the total subsidisation required.

At the end of Chapter 1 of his report De Villiers came to the conclusion that should the then current strategy be continued, the state would as a result have to subsidise money shortages that will arise at an ever-increasing rate (South African Transport Services, 1986:33).

The existing strategy has clearly resulted in a considerable distortion of the transport market, and it is obvious that a deregulation of this market will be in the interest of the South African economy.

The analysis showed clearly that the then current strategy which stemmed from the Act was no longer workable.

2.4.2 Recommendations

1. Because rail traffic was likely to be stagnant in the face of freer competition from other modes of transport, the report urged SATS to cut back new rail investments and focus on increasing utilisation of existing assets. It further recommended that railway investments be restricted to services in which rail had a competitive advantage.
2. It recommended that SATS reorganise into autonomous divisions that reflected its major types of infrastructure: railways, harbours, airways, pipelines and road transport.
3. It recommended that suburban passenger services be separated from the rest of SATS and subsidised directly by the government.
4. It recommended that SATS be relieved of common carrier status and be allowed complete flexibility to set tariffs that would provide adequate returns.
5. Finally, the report recommended that SATS operate like a private, investor-owned company. It suggested that SATS become a commercial enterprise under government ownership, earning an appropriate return on capital by costs and managing its assets better (Spoornet, 1995:8).

In 1986 parliament accepted the recommendations of the De Villiers Report and even went one step further. SATS was directed not only to act like a private corporation, but to actually reorganise as a private corporation within four years, with the government as sole shareholder.

At the same time that the De Villiers study was in progress, the National Transport Policy Study (NTPS) finished its work.

2.5 THE WHITE PAPER ON NATIONAL TRANSPORT POLICY, 1986

The purpose of the National Transport Policy Study was to investigate and formulate recommendations towards a revised transport policy for the Republic of South Africa (Van Rensburg, 1996:14). The most notable recommendations were that:

1. the South African Transport Services had to be relieved of the financial burden of providing uneconomic socio-economic services;

2. the South African Transport Services were to be allowed to introduce cost-related rail freight rates;
3. private road hauliers should be made to contribute “their relative proportion” to the provision and maintenance of roads;
4. the South African Transport Services were to be allowed to remain autonomous and be relieved of other obligations imposed on it. It had, for example, to be given the right to refuse traffic or to suspend services;
5. appropriate and sufficient infrastructure for on-the-ground enforcement of road quality matters ought to be introduced;
6. the role and function of the South African Road Transport Services had to be clarified; and
7. operators in all modes were to pay full taxes, licenses and levies on inputs. The South African Transport Services’ reciprocal agreements on these matters were to have been terminated (South Africa, 1986:3-4).

The recommendations of the NTPS were accepted by the government. The recommendations would bring the freight transport policy in line with national policy regarding the desirability for competition, the provision of easier entry into the road transport market, more scope for private initiative, the encouragement of small business development and the creation of a framework for a more efficient and less costly system of transport for the country (Van Rensburg, 1996:15).

The recommendations of the NTPS led to the promulgation of the Transport Deregulation Act (Act 80 of 1988), whereby the Minister of Transport was empowered by Section 5 of the Act, to gradually phase out the restrictions of the Road Transportation Act. As a result, by July 1, 1993 the Road Transportation Act ceased to be in force in respect of all goods vehicles that were not engaged in cross-border transport (Ramsden & Marchio, 1993:39).

2.6 TRANSNET

On April 1, 1990 SATS ceased to exist. In its place emerged Transnet, a diversified, tax-paying transport services company wholly owned by the South African government.

Transnet was structured into five main transport businesses, which are also referred to as divisions: Spoornet (railways), Portnet (ports), South African Airways (domestic and international air services), Petronet (pipelines) and Autonet (road transport). These transport divisions, with separate accountability for profits and return on assets, operate independently. Viamax Logistics, a wholly state-owned subsidiary, forms the sixth transport division. This division was created to offer complete logistical services, which include not only transport, but also international and domestic transport brokerage, warehousing, container packing and unpacking, as well as distribution.

The South African Rail Commuter Corporation was formed as a separate government-owned entity which took care of suburban passenger rail services. While Spoornet is now paid to manage and operate suburban services, the government still remains responsible for setting fares and providing the required subsidies.

Transnet also consists of a number of related businesses, which can potentially be marketed outside of Transnet as well. These include: Transtel (telecommunications), Protekon (civil engineering, project management and construction), Transwork (building and modification of railway wagons) and Connex (a travel agency).

CHAPTER 3

THE ROAD AHEAD: PRIVATISATION

From the outset, Transnet was founded on the understanding that its shareholder, the government, might eventually chose to sell it to the private sector (Spoornet, 1995:11).

3.1 DEFINITION

Privatisation means the systematic transfer of appropriate functions, activities or property from the public to the private sector, where services, production and consumption can be regulated more efficiently by the market and price mechanisms.

This process forms part of a strategy whereby the public sector's involvement in the economy can be limited or reduced so that more capital, means of production and opportunities can be made available to the private sector. This in turn will give the private sector the opportunity to develop and grow optimally with minimum state intervention and regulation (South Africa, 1987:8).

3.2 THE RATIONALE BEHIND PRIVATISATION

The main reason that governments around the world are privatising - apart from improving the performance of the economy - is to raise revenue.

One of the major motivations behind the 1989 privatisation of Iscor was the prospect of state revenue that such a process would generate.

A state can profit in at least three ways from privatisation:

1. it can collect proceeds from the sale of a state-owned firm;
2. by turning a losing government firm into a profiting private firm, it can reduce and even eliminate subsidies; and
3. it can earn revenue by taxing the privatised firm and any new entrants into a deregulated industry.

Privatisation also brings about a more efficient use of resources, as well as promoting economic growth and development. It is a key policy in improving the economies of developing countries.

Many countries have found that state-owned enterprises have failed to generate the high rates of growth that are critical to development. Privatisation increases the quality of goods and services available in the market while keeping it responsive to consumer needs and demands. Through the free market's allocation of resources, privatisation leads to open competitive economies that produce higher income and more permanent jobs. In short, privatisation can be the right step at the right time to liberate the economies of developing countries from the slow growth and stagnation that has plagued so many of them for so long.

South Africa as a developing country would benefit from the liberating effects of privatisation (Vorhies, 1989:23). The fact that privatisation depoliticises managerial decision-making is of special importance to South Africa and hence another reason to privatise previously state-owned and -managed companies. In state monopolies management gets its authority from the state and therefore has to do what that state wants, not what the customers want. The managers of state-owned or state-controlled firms have little choice but to place politicians before consumers. Privatising an industry brings about a change in its institutional organisation. It allows management to make decisions on hiring, capital outlays and pricing in response to the demands of consumers not politicians.

Privatisation can also bring about lower prices and improved services to consumers. From an economic point of view privatisation can only be measured in terms of the net increase in the wealth of society. The question that should be answered is whether it is possible though privatisation to produce a product or service at a lower cost than would be otherwise be the case. Effects on the level of output, the quantity and variety of goods and services available, and the rate of innovation will also be important (Bicknell, 1994:5-6).

A privatised firm can be more flexible in the production and distribution of its products. It thus can better meet consumer demands. Also, as the firm becomes more efficient, it reduces the size and complexity of its bureaucracy. In its desire to keep old customers and attract new ones, the firm is driven to cater to customers (Vorhies, 1989:25).

3.3 RESISTANCE AND OBJECTIONS TO PRIVATISATION

3.3.1 Market failure

The failure of the market to make the best allocation of scarce resources because of imperfect political arrangements is a major argument against privatisation and for central planning and control.

3.3.2 The bureaucracy

At present millions of people are employed by central government, local authorities and various statutory bodies. The ability of the civil service to resist privatisation and deregulation should not be under-estimated.

3.3.3 The indigent

The large number of indigent people, most of them “surviving” outside the formal economy, poses a formidable challenge to privatisation planners. A huge non-income-earning youth component, millions of unemployed people and even more under-employed, depend on subsidies and transfer payments of all kinds for their very existence. A system of subsidisation, necessary as it may seem, increases the demand for subsidies, legitimises growing public institutions and creates dependence in the recipients.

Other arguments against privatisation range from arguments that state that privatisation costs more; contracting out leads to rip-offs and privatisation destroys jobs (Syncom, 1986:25-26).

3.4 METHODS FOR PRIVATISATION

There are essentially five methods for privatisation.

3.4.1 The sale of public sector enterprises and assets

The main characteristic of this method is that the public sector will not retain any further responsibility in respect of those assets, services or activities and that their continuation, scope and price after the sale will be subject to the market mechanisms.

To many people the concept of privatisation means the sale of public sector enterprises. This is probably the case as a result of examples in Western countries, where industries were

nationalised and as a result of poor performance afterwards, became financial liabilities to the state. By relocating such undertakings in the private sector, their profitability could be restored. In this the state was immediately relieved of its liability and the sale of assets also provided it with a non-recurring income.

3.4.2 Partnerships

In instances where it would not be desirable to transfer an existing state enterprise to the private sector in its entirety, such an enterprise could in appropriate cases be managed by a partnership between the state and the private sector.

The structure of this partnership would differ from case to case and could include the following:

- (i) The obtaining of shares by the private sector in existing state undertakings, but with the public institution, as an interim arrangement, retaining its shareholding until such time as full ownership can be transferred to the private sector.
- (ii) The obtaining of shares by the private sector in an existing or new state enterprise in which the public institution maintains a permanent involvement. This kind of arrangement may be applicable in the case of natural monopolies or when, for special reasons, full private ownership is considered not to be in the interest of the country.
- (iii) The phasing out of shareholding by the public institution in undertakings as and when it has fulfilled its responsibility from a development point of view.

3.4.3 Leasing out of business rights

What the leasing of business rights in respect of public facilities means is that the state does not entirely or partially transfer ownership of an asset, but allows the private sector to use a facility to conduct a business for its own account and in turn it will have to compensate the state. It must be ensured, however, that the consumer will receive the benefit of reasonable prices and good-quality services.

3.4.4 Contracting out

Contracting out means that the private sector be allowed to undertake public services or activities on the government's behalf for a payment. However, in such cases the public sector remains responsible for the services or activities. The fact that the taxpayer will still be paying for the services or activity must therefore be recognised. Contracting out/outsourcing can only be justified if the public sector is not itself able to undertake the service or activity or if the private sector can perform it just as or more efficiently or economically (South Africa, 1987:9-11).

3.5 ADVANTAGES OF COMMERCIALISATION

In a previous section the advantages/benefits of privatisation were advocated. After five years of operating as a registered company, Transnet, of which Spoornet is arguably the biggest division, has demonstrated many of the advantages listed under privatisation, through the process of commercialisation.

1. Direct parliamentary control was replaced by control by a Board of Directors to which the best candidates in the private sector were appointed. All highly qualified and experienced in their individual fields of endeavour, these directors steered the company on the commercialisation road without interfering in the actual running of the company.
2. Apart from being more efficient in terms of business, the arm's length control by the government obviously made political intervention more difficult.
3. Commercialisation also brought about a single-minded purpose of running the company on sound business principles in order to achieve an acceptable return, by commercial standards, on capital employed and assets managed. The previous dual role of looking after the interests of the country, while also striving to run the organisation on business principles, fell away.
4. The necessary discipline and motivation to run an efficient business were brought about by the fact that Transnet had to operate in accordance with the Companies Act and effect auditing by auditors in private practice.

5. While the right-sizing strategy embarked upon by the company to align human and asset resources with the requirements of the underlying businesses has resulted in a substantial reduction in operating cost, it has also brought about improved productivity and a better spread of human resources and skills (Moolman, 1995:5-6).

3.6 REASONS TO GO AHEAD WITH PRIVATISATION

According to Moolman (1995), previous managing director of Transnet,

... although the Transnet experience clearly points out the benefits of commercialisation, international experience has proved that privatisation, which essentially involves the return of a permanent transfer of the production of goods and services by state enterprises to private firms, also has its own benefits which cannot be ignored.

In simple terms, privatisation can improve economic performance and help promote domestic and foreign private investment - the lifeblood of reforming countries in the modern global economy. It also provides new economic opportunities for individuals, who can become investors or part-owners in former state-owned companies. In other words, privatisation benefits the public, the private sector, and consumers.

He also pointed out that there are other unique advantages of privatisation that need to be borne in mind.

1. The proceeds can be utilised for affirmative action and other projects which would sustain long-term economic development.
2. The opportunity could be created to give employees and the “people” a shareholding in the enterprise.
3. In the commercialisation phase the risk of political interference by the shareholders remains a reality.
4. Commercialised parastatals do not have the advantage of attracting equity capital and improving gearing.

5. Government control could restrict the expansion of the parastatal, thereby defeating the business objectives and interests of a company.
6. Shareholders and the stock exchange place more pressure on management performance than is the case with commercialisation (Moolman, 1995:10).

3.7 DELAYING IMPLEMENTATION

Two reasons can be put forward for delays in implementation:

1. Problems regarding Transnet's pension fund and medical aid: there are too many pensioners in relation to people working for the company.
2. Some of Transnet's activities may be considered monopolistic - and no sufficient control or regulatory mechanisms exist to handle privatised monopolies (Moolman, 1992:8).

This point, the fact that rail transport is monopolistic, and that no sufficient control or regulation mechanisms exist to handle privatised monopolies, sets the stage for the next chapter.

CHAPTER 4

RAILWAY PRIVATISATION CASE STUDIES

4.1 INTRODUCTION

The deregulation of transport services has spread across all continents over the past decade and embraces all modes of transport. Following from transport deregulation, rail network privatisation has taken place in Argentina, Chile, Japan and New Zealand. In Britain, Germany, Italy and the Netherlands the process is underway. It is also being considered in various other countries, including Algeria, Bangladesh, Bolivia, Brazil, Cameroon and the Ivory Coast (Briginshaw, 1995:11).

Several European countries are looking at proposals for radical changes in their rail organisations. Generally, these involve three elements:

1. Separation of infrastructure from operations. This already exists in Sweden and Britain and is being proposed in Germany and the Netherlands.
2. Privatisation of rail transport operators, with the further possibility of privatising the infrastructure. This idea is under discussion in many countries, but only Britain has so far been able to achieve it.
3. So-called 'open access' arguments for other private operators to enter a market and to compete with the existing operators. Both Britain and Sweden have adopted this strategy (Nash, 1993:317).

The rest of this chapter is dedicated to the analysis of four case studies, namely Japan, New Zealand and Sweden, with special emphasis on Britain.

4.2 STRATEGIC RESTRUCTURING OF THE BRITISH RAILWAY SYSTEM

Before 1 April 1994 British Rail (BR) operated as a vertically integrated industry. BR maintained the track, stations, depots and virtually all passenger and freight train services. BR was subject to a public service obligation and in return BR received a grant to cover the costs

of running uneconomic services covered by this obligation (Montagy, 1995:5). Cuts in state funding, which have led to poor service quality, underinvestment and high fares, led the British government to consider alternative forms of privatisation (*International Railway Journal*, 1992:16). In doing so, they experienced a major conflict between minimising disruption through structural change and maximising the degree of competition (Nash, 1993:317). Any approach which maintained integration of infrastructure and operations would lead to little competition, because the infrastructure itself represents a natural monopoly. Whilst it would be possible to promote competition by granting rights of access to the infrastructure to competing operators, it is always difficult to police such agreements to ensure that the integrated operators are not using their monopoly in the infrastructure market to gain advantage in operations.

In July 1982 the British government published a White paper, *New opportunities for the railways*, outlining its proposals for the privatisation and introduction of competition into BR. The government's objective was to find a way of bringing private sector management and private capital into the railway. What distinguished this process from a real transfer of railway ownership from the public to the private sector was the fact that the government still wanted to retain public control over policy, use of essential assets, public funding and standards of performance and safety (Ashmore, 1993:10).

The main elements of the government's proposals were the following:

- to separate the infrastructure from the operation of train services;
- to set up a single company to own and manage the infrastructure;
- to allow open access to the tracks for freight and passenger operators;
- to franchise existing passenger services;
- to sell BR's freight, parcels business, infrastructure maintenance and other parts of BR as a number of separate businesses;
- to regulate access and competition.

The cornerstone of the policy is the government's desire to provide open access to the track for any rail operator who wishes to compete in either the freight or passenger market.

The 1993 Railways Act provided for the privatisation of British Rail in the form of franchising of passenger services and outright sale of all other parts of the business. The end result was the existing single organisation being divided into more than 80 separate companies.

4.2.1 Railtrack

Railtrack was set up as a separate publicly owned company. Railtrack owns the rail infrastructure including the tracks, stations, depots, signalling and electrification. Railtrack is not only responsible for the maintenance of the infrastructure, but also for controlling operations, signalling and train scheduling. It must ensure that a full national timetable of train services is published for passengers. Its income is not in the form of a public subsidy, but is almost entirely earned from charges to operators who use its infrastructure. In doing so the full cost of utilising the infrastructure is passed on to the operators (Ashmore, 1993:10).

One of the most difficult areas of resolution in the new structure was the question of what should be charged for the use of the infrastructure. The proposals that have been put forward could be summarised as follows:

- Tariffs would not be published; instead they would be based on individual negotiations.
- With regard to freight and open access passenger operators, Railtrack would seek to charge the maximum the traffic can bear, and in doing so would maximise the contribution to track costs.
- Franchised passenger services would obtain the paths necessary to run the service, through negotiations between the franchising authority and Railtrack. Railtrack is under obligation to the first generation of franchised services for making available the paths needed to run the franchised services. In return the franchising director guarantees the total payment for access rights for each franchise. After the first generation of franchises, Railtrack would be under no obligation to provide the paths needed by the franchising director.

In May 1996 Railtrack was privatised by the sale of shares, raising a total of nearly £2 billion.

Initial track access charges for passenger operators were determined by the Department of Transport on the basis of recovering all costs including replacement of assets and a rate of return of 5,6 percent on the modern equivalent value of the asset base. This rate was to be

gradually raised to 8 percent. Charges took the form of a high fixed charge, plus a low variable charge per train kilometre.

Freight charges were to be negotiated on a flow by flow basis according to what the traffic could bear. This would also apply for new open access operators.

A new body, the office of the Rail Regulator, was set up with various responsibilities including regulatory track access charges. In its first review, the rail regulator determined that the track access charges for passenger services were higher than was necessary for Railtrack to meet its commitments and should be reduced by 8 percent immediately, and by a further 2 percent per annum up to the year 2000 (Nash, 1997:1).

4.2.2 Passenger services

The passenger business was not sold, but rather franchised. A competition was held for a government contract which gave the winner both the right and the obligation to run the specified passenger service of the contract (Ashmore, 1993:10).

Before the process of franchising could start, the structures and machinery needed for the transition needed to be put into place. For bidders to know what they were buying, BR was divided into train operating units and a number of other bodies. In doing so they could be managed as commercial businesses and could be sold to franchisees with a track record. Secondly, contractual structures had to be put into place with the maintenance organisation (BRML), with the rolling stock leasing companies and other organisations. The contractual structures have to make provision for through-ticketing between companies and inter-availability of tickets. It is important to take note of the fact that BR's three passenger business sectors - Inter City, Network SouthEast and Regional Railways - disappeared. They were initially replaced by 25 train operating units, which were gradually converted into train operating companies (TOCs).

A TOC is a subsidiary company of BR. Staff are employees of the TOC rather than BR. It needs an operating licence and an access agreement with Railtrack. Every station that is used by more than one TOC also needs an access agreement.

Parallel to the process of conversion into TOCs, the units started to operate as shadow franchises. The objective was to have income and expenditure figures covering at least six

months (Briginshaw, 1994:22). This enabled the private sector to assess the performance of each route before bidding began (*International Railway Journal*, 1993:4).

Responsibility for the franchising process rests with the Office of Passenger Rail Franchising (OPRAF), which sets minimum service standards (the Passenger Service Requirement) regarding frequency, speed, reliability and crowding, as well as controlling certain fares. OPRAF then invites bids in terms of the subsidy per annum that operators will require to run the services. The Passenger Service Requirement stipulated services close to the current (1997) levels of unprofitable services in Britain, but gave more freedom to operators where services were closer to commercial viability (Nash, 1997,2).

The franchising process started with Great Western and South West Trains, which started operation in February 1996 and was completed early in 1997. In almost all the cases the franchise was awarded to the lowest credible bid. The successful franchisees and their bids are shown in Table 1.

Table 1: Rail franchises

Franchise	Franchise	Length of franchise (yrs)	Subsidy (£m)	
			First year	Last year
Great Western	MBO	10	59.9	31.6
South West Trains	Stagecoach	7	60.1	40.3
InterCity East Coast	Sea Containers	7	64.6	0
Midland Main Line	National Express	10	16.5	-10.0
Gatwick Express	National Express	15	-4.6	-22.6
LTS Rail	Prism	15	29.5	11.2
South Central	Connex	7	85.3	34.6
Chiltern Railways	MBO	7	16.5	2.9
South East Trains	Connex	15	125.4	-2.8
South Wales & West	Prism	7½	70.9	38.1
Cardiff Railways	Prism	7½	19.9	13.3
Thames Trains	MBO	7½	33.2	0
Island Railways	Stagecoach	5	2.0	1.75
Regional Railways North West	G&W Holdings	10	191.9	125.5
Regional Railways North East	MTL	7	223.2	145.6
North London Railways	NEG	7½	54.8	16.9
Thameslink	GOVIA	7 yrs 1 mth	-2.5	-28.4
ICWC	Virgin	15	76.8	-220.3
Scotrail	NEG	7	280.1	202.5
Central	NEG	7	198.1	132.6
Cross Country	Virgin	15	112.9	-10.0
Anglia	GB Railways	7 yrs 3 mths	35.9	6.3
Great Eastern	First Bus	7 yrs 3 mths	29.0	-9.5
West Anglia Great Northern	PRISM	7 yrs 3 mths	52.9	-24.8
Merseyrail	MTL	7	80.7	60.0

Note: Negative subsidies indicate payment of a premium.

Source: Nash, CA. 1997. *Rail privatisation: How is it going?* Institute for Transport Studies, The University of Leeds. Working Paper 497.

It is interesting to note that whilst the first two bids promised relatively low rates of reduction of subsidy, bids have become progressively more optimistic. This is illustrated by InterCity West Coast, won by Virgin, which is promising to turn a £77 million subsidy in the first year into a £220 million premium payment to OPRAF in the last year of a 15-year franchise. Whilst the more ambitious bids clearly rely heavily on generating substantial increases in passenger revenue, it appears that substantial cost reductions are also anticipated.

Table 2 summarises the nature of the winning organisations.

Table 2: Franchisees

Franchisees		No of franchises
National Express		5
Prism		4
Virgin		2
Gt Western Holdings		2
Connex		2
MTL		2
Stagecoach		2
Firstbus		1*
Govia		1
GB Railways		1
Sea Containers		1
Other MBOs		<u>2</u>
		25
of which	bus operators	15
	MBOs	3

Note: *Also participants in Great Western Holdings.

Source: Nash, CA. 1997. *Rail privatisation: How is it going?* Institute for Transport Studies, The University of Leeds. Working Paper 497.

The dominance of the bus industry has raised concerns about lack of competition where the franchisee is also the major bus operator in the district.

4.2.3 Freight services

The freight and parcels businesses were sold outright into a competitive market. As from early 1994 new operators were allowed to come onto the tracks.

Rail Freight has suffered particularly during the recession. This could be attributed mainly to the shrinkage in its traditional train load markets rather than being due to switching from rail to road. The government policy is to retain traffic on rail wherever there is sufficient

environmental advantage. With this in mind, they have put forward a package of measures to help rail's competitive position which includes the following:

- Track charges will be determined not according to standard cost-based formulae, but by negotiation. In doing so, Railtrack will not be required to charge marginal freight traffic more than their avoidable cost.
- Secondly, there will be up to a 100 percent government grant made available for track charges where it is necessary to retain traffic on rail.
- Thirdly, there are to be enhanced grants for freight facilities and rolling stock, again justified by their environmental benefits.

The former BR Trainload freight sector was subsequently divided into three separate companies: Rail Express Systems (the post and charter train operator); RailFreight Distribution (the operator of services to the continent of Europe via the Channel Tunnel) and Freightliner (operator of container services, principally to deep-sea ports). These three companies were all offered for sale separately. In addition, open access was provided for any other operator who wished to run services. This included existing freight customers who might wish to run their own trains (Nash, 1997:4).

Once again it is interesting to note that all the BR freight businesses, except Freightliner, were obtained by the same company, English, Welsh and Scottish Railways (EWS). EWS is owned by the consortium Wisconsin Central. Whilst two freight customers (National Power and British Nuclear Fuels) are running their own trains, there is little sign of any other entry into the market. Barriers to entry such as the need to obtain a safety case, access arrangements with Railtrack and a shortage of staff with the necessary skills and knowledge can be suggested to explain the absence of other entrants to the market. Thus rail freight remains almost a monopoly. This situation seems to favour EWS as they claim that there are considerable economies of scale in terms of reduced overheads, better utilisation of assets, etc. from having a single company (Nash, 1997:4).

4.2.4 Rolling stock

BR's passenger rolling stock (excluding that used on international services) has been divided among three leasing companies (ROSCOs). They lease rolling stock to the TOCs. These companies were privatised during 1995.

4.2.5 The rail regulator

Under the 1993 Railways Act it is an offence to operate without a licence. The first licences were granted to BR and Railtrack. It is the rail regulator's duty to issue licences to new operators. There are separate licences for the operators of passenger trains, freight trains, stations, light maintenance depots and Railtrack. There are also licences for open-access passenger and freight operators.

Each operator has to undergo a safety validation process before a licence can be granted. Railtrack access agreements are subject to the approval of the rail regulator, who can demand alterations to be made if, for example, he believes that they are against the interests of users (*International Railway Journal*, 1994:18)

One of the regulator's duties is to protect the interests of rail users. As a result the rail regulator set up a number of committees around the country to deal with complaints (Briginshaw, 1994:22). The rail regulator is also required to promote the use and development of the railway network and to foster efficiency and competition. He is also obligated to avoid overregulation, so that the operators and Railtrack can carry out their business without undue hindrance.

4.2.6 Assessment

It appears from the above that the privatisation process has been completed remarkably smoothly in an extraordinarily short period of time. In part this can be attributed to the pragmatic approach to actual implementation which has seen many departures from original intentions. Examples of these departures include

1. the OPRAF's willingness to award longer franchises in return for promises to invest;
2. open access being limited, at least until 2001; and

3. the existence of a freight monopoly.

There are, however, certain areas which are a source of concern. Surveys undertaken have found that the quality and impartiality of information on fares and services has been poor. Another concern involves the inability of one of the first franchisees to fulfil its Passenger Service Requirements regarding levels of service. This situation evolved as a result of a too rapid reduction in the number of train drivers.

There do remain uncertainties ahead and it is by no means clear that the outcome will necessarily be more favourable than it would have been before the privatisation of BR. The fact, however, remains that few observers would have imagined at the start of the process that it would be possible to complete such a complicated privatisation process within the space of three years (Nash, 1997:5).

4.3 STRATEGIC RESTRUCTURING OF THE SWEDISH RAILWAY SYSTEM

Private railways in Sweden were widespread until the 1940s, at which time most of them were nationalised and the right to operate them was transferred to Swedish Railways (SJ). The main reason for this was that the private railways were generally not remunerative. It was thought that bringing these into the state-owned rail network would improve the situation (Larsson, 1992:2). The state railways' original function was to connect private rail systems that served local regions.

In a study undertaken during the 1970s, in which European rail performance was measured, SJ came out best, much to the surprise of many Swedish observers. The reason for this was the fact that at that time SJ had been a problem child of the Swedish government for a long time. Its market share had been shrinking in both passenger and freight transport and the government had to step in from time to time to restore its financial position. At the end of the 1970s, it was generally accepted by all political parties that something radical had to be done to ensure the survival of the railways without burdening tax-payers even more. During a ten-year period, from 1979 to 1988, three major policy initiatives were taken with important implications for SJ. These three policies were

- the Transport Policy of 1979;
- the Guidelines for Railway Policy of 1985; and
- the Transport Policy of 1988.

4.3.1 Transport Policy of 1979

The key word of the 1979 policy was *samhällsekonomi*, which, when translated simply means “economics”, but which in a Swedish context has the additional meaning of national or social economics. Social marginal cost pricing was provided for in the Government Bill and there was a general backing of social cost-benefit analysis for transport investments. This general view was achieved by reforms of railway transport organisation and pricing.

The total railway network was divided into *Affarsbanenätet*, the commercial network, and some remaining lines, which were maintained for social economic reasons. SJ was entitled to compensation for maintaining the services on those lines. SJ wanted to avoid the word subsidy. It did not want to be looked upon as a “subsidised company”. If central or a relevant local government required the continuation of commercially unviable services, it should by a “collective ticket” for these public goods. The balance of the total costs and revenue was then made up from fares.

During the summer of 1979, important innovations in the pricing policy were made by SJ. These changes were brought about by firstly, the provision of social marginal cost pricing in the Government’s Transport Policy Bill, and secondly and perhaps more importantly, the introduction of substantial off-peak rebates by the domestic airline (LinjeFlyg). The new pricing policy was marketed as “the low-fare policy”, since the new price structure was obtained only by lowering prices.

4.3.2 The Guidelines for Railway Policy of 1985

4.3.2.1 Passengers

The low-fare policy introduced in 1979 was regarded as a success in the immediately following years. A 30 percent higher volume of travel was maintained and the financial position did not worsen, but by 1982 the old problems reappeared. An 8 percent drop in the volume of travel was experienced, while costs continued to increase with general inflation.

Successive increases in fare levels followed and by 1985 the fare level was 15 percent above the 1980 level in real terms. This situation could mainly be attributed to the stagnation in household disposable incomes and the drop in real petrol prices which started in 1983.

There had been a growing feeling, both within SJ and in the government, that the only solution was to transform SJ to a fully developed commercial establishment. This was realised with the adoption of the new Guidelines for Railway Policy by parliament. The most important decision was that SJ was given virtually complete freedom to set prices. This freedom to set prices already existed for more than 90 percent of all freight transport, where charges were negotiated individually with each shipper. Passenger fare changes up to that point in time had to be approved by the government.

4.3.2.2 Freight

After the 1985 decision the individual freight traffic departments were pressurised with the emphasis on individual responsibility for profit. This gave rise to the formation of a special company for combined transport and the setting up of a special division for ore traffic.

These developments were not something new, since reorganisation had already started in the early 1980s. At that stage SJ faced problems that are typical of most railway organisations. These problems included questions like:

- How to defend and possibly increase SJ's market shares?
- How to meet the increased demand for flexibility, punctuality and specialisation?
- How to solve the severe financial problems of part-load traffic?
- How to increase combined transport and make it profitable?

Throughout 1983 and 1984, SJ's eight market sectors experienced a general reorganisation whereby the market sectors became more product-oriented organisations with decentralised responsibility for results.

During 1985 the central management for freight transport was transformed into a management unit responsible for the marketing of all wagon-load and combined transport. At the end of the 1970s part-load traffic was an unprofitable business and in order to rectify this problem, a new

company was created during the period 1980-1982. C-sam, the new company, made use of the new technique: mini-containers. The flexibility and comparatively low cost that were achieved by using this technique were brought about by the fact that the mini-container was easily transferred between the specially designed lorry and the rail wagon. During the period 1985 to 1986 the service was once again reorganised into a new company called AB C-sam. AB C-sam consisted of SJ part-load division and the road haulage subsidiary AB Svelast. In 1987 ASG, a subsidiary company of SJ, took total responsibility of the C-sam mini-container traffic (Cardebring, 1989:334)

4.3.3 Transport Policy of 1988

The single most important reason for the new transport policy was the mounting financial problems of SJ. Another major concern of the 1988 Transport Policy was the environment, as was suggested by the statement that the transport sector should no longer contribute to environmental degradation to the extent that it had done and was doing. No definite countermeasures were proposed.

The Transportation Act of 1988 was based upon a “road mode”, the main features which can be summarised as follows:

1. The railway network was divided into a trunk system of main arteries and country lines.
2. A new state agency, Banverket (BV), was formed which was responsible for rail infrastructure. BV leased truck access to train operators on a marginal social cost basis. BV is also responsible for new investment and maintenance, and acts as regulator over safety and scheduling matters.
3. Statens Jarnvagar (SJ) became a train operator and marketing organisation for both passenger and freight operations. It retained ownership of terminals and rolling stock, also maintaining operating rights over trunk routes for passenger traffic, and trunk and country routes for freight traffic.
4. The levels of passenger service to be operated on country lines were set by the 24 country public transport authorities (CTAs).

5. If SJ or the CTAs did not exploit their transportation rights, then the government and BV could award such rights to other operators.
6. Infrastructure charges paid by train operators would be consistent with the pricing regime employed by the road authority, namely marginal social cost.
7. The state would provide grants for new investments (Shries *et al*, 1994a:27). BV's organisation is highly decentralised. It is divided into five regions and 21 districts. An industrial division deals with purchasing, production and storage of material. An independent railway inspectorate is responsible for safety checks and accident investigations. SJ's organisation has moved from a regional to a product-based set-up, which has led to the creation of four main divisions: passenger, freight, mechanical and real estate.

4.3.4 Financial arrangements

As was indicated earlier, all train operators pay an access charge equal to the marginal social cost. The charge consists of 2 components:

- a) a fixed element, expressed as a rate per rail vehicle axles; and
- b) a variable element, related to vehicle tonne-km.

The variable cost element is differentiated by the type of vehicle to reflect different amounts of wear and tear on the track structures. As was mentioned, the charge is a marginal social cost charge, so that it includes socio-economic costs, e.g. diesel exhaust pollution. Both SJ and BV still receive quite substantial subsidies from the government. In SJ's case these subsidies are for the operation of "socially necessary" passenger and freight services. To cover the differences in BV's revenue and cost, the government funds BV through an annual appropriation. This has increased steadily from 1988 onwards, partly because of increases in investment. The government also pays a subsidy to the CTAs where they have taken over operating rights from SJ (Shries *et al*, 1994a:27).

4.3.5 Franchising

Although franchising is confined to country routes, it is interesting to take note of it, since the process of franchising has been made use of intensively in the privatisation process of British Rail's passenger services.

“Since the reforms under the 1988 Act, most CTAs have taken an active interest in the development of cost-effective rail services and have called tenders for the provision of railway services in accordance with a specification tailored to their view of local/regional needs” (Shries *et al*, 1994a:28).

By 1994 two principal challengers had risen to SJ's monopoly. They were BK-Tag and Linjetag. Both were also operating bus services under contract for CTAs in south and central Sweden. Although both firms bid for contracts, only BK-Tag was successful in winning contracts.

SJ has responded to the competition by cutting its tender prices by an average of 30 percent. It has since secured all contracts for CTA operations and also displaced BK-Tag. It is important to note that although SJ displaced BK-Tag, its initial success is proof that competition can exist via a franchise.

BK-Tag combated entry barriers through changing inflexible working practices, reducing maintenance costs and integrating their road operations with those of rail. The results of these policies were a reduction in BK-Tag's train crew from 250 employees to 43, operating at the same level of service as SJ had previously maintained. BK-Tag also achieved higher vehicle utilisation than SJ did, while obtaining a 10 percent gain in labour productivity through a renegotiated pay structure. It has to be said that the bulk of the rolling stock was provided by CTA, thus helping to reduce the barriers to entry for BK-Tab (Shries *et al*, 1994a:29).

4.3.6 Comparison to the British experience

At this point it is interesting to identify some of the similarities and dissimilarities between the British and the Swedish governments' rail privatisation policies. The benchmarking against British Rail is appropriate, since the proposals put forward in the Railways Act of 1993 for railway privatisation were the most complex and liberal to date.

The Swedish Transportation Act of 1988 is in some ways similar to the proposals contained in the Railways Act of 1993. Similarities include the separation of infrastructure from operations, realistic charges for track access, the payment of subsidy for the operation of “socially necessary” services and the use of a franchise system to reduce costs, improve productivity and services.

The main difference between the two approaches lies in the fact that the Swedish restructuring does not go “as far” as that proposed by the Railways Act in terms of creating a competitive environment. The Act ensures that all of BR’s services, both mainline and local, will be franchised and eventually opened up to further competition through “open access” (Shries *et al*, 1994a:29). Open access at this point in time, however, has been limited, at least until 2001 (Nash, 1997:4).

4.4 STRATEGIC RESTRUCTURING OF THE NEW ZEALAND RAILWAY SYSTEM

As in the case of Britain’s railway reform case study, New Zealand’s railway reform case study will also receive special attention, although for different reasons.

Britain received special attention because of its complex and liberal approach towards the railway reform process. New Zealand, on the other hand, will receive special attention due to the fact that the events and circumstances which preceded railway reform were similar to those of South Africa’s railway reform process.

The need for an in-depth case study of railway reform in New Zealand is further highlighted by a recent newspaper article, “Dancing to the Haka”, in which it is reported that “The Department of Transport seems set to implement a transport policy that will be almost a carbon copy of the New Zealand model” (*Financial Mail*, 1997:66).

4.4.1 Status quo up to 1982

Before the reform process which began in 1982, the railway had been used by the government as a tool of social policy, helping to develop the nation through indirect subsidies to farmers and industrialists by levying non-commercial rates, and through land settlement schemes and apprentice training programmes (*International Railway Journal*, 1991:44). New Zealand’s

transport law limited the distance over which road transport may compete with New Zealand Railways.

This distance has been gradually lengthened over the years and by 1982 the distance over which road hauliers were allowed to compete was 150 km. An increasing range of special exemptions have also been progressively granted.

Though the principles set out to be achieved through this kind of policy were desirable at the time it was drafted, it was a government rather than a railway initiative (Ambler, 1983:30).

The need for change had been clear for many years. The railway operated as best it could while being expected to run loss-making services, hire staff to provide employment for young people, and train apprentices who left to join private enterprise as soon as they had learned their trade. Initiative was stifled, progress slow, innovation discouraged, and huge losses were recovered over a long period.

4.4.2 New Zealand Railways Corporation

With transport deregulation to be phased in by the end of 1983, a much more aggressive commercial approach became necessary.

The New Zealand Railways Corporation (NZRC) came into being with the New Zealand Railways Corporation Act of 1982 on 1 April 1982. The New Zealand Railways Department became a government-owned corporation with commercial, as opposed to social, objectives: to operate so that revenue exceeded costs, including interest and depreciation (Shries *et al*, 1994a:22). It also had appointed a board of seven prominent businessmen from the private sector who managed the corporation.

While the old New Zealand Railways was strong on technical efficiency, it was a producer-led, rather than customer-led, railway. The engineer and not the customer was king. The whole emphasis during the eighties was on “downsizing” and greater “market-led” operations. (Shries *et al*, 1994a:23).

4.4.3 NZRC's commercial approach

Although total transport deregulation was only achieved in November 1983, strong competition from coastal shipping had existed for many years prior to deregulation. Another source of competition came in the form of illegal road operations and from road hauliers seeking exemption from the distance restrictions.

New Zealand Railways had therefore long taken a commercial approach to its business. For example, it had the power to negotiate special confidential rates and contracts for 20 years prior to deregulation. Deregulation, however, compelled them to make a rapid shift in strategy to cope with increased competition. One group of customers which NZR stood a high risk of losing at the time of deregulation was that of freight forwarders, which had been encouraged to use rail for their trunk-haul freight. With these companies being given the opportunity to use road instead of rail, a substantial restructuring of their contractual relationship was needed. These renegotiations involved service quality as well as rates. For this group of customers a special plan was put into place to facilitate an overnight service to compete with road competition.

Other projects that were set in motion included:

- The introduction of a door-to-door service which was previously unavailable for rail users. This was achieved through co-operation with small-town hauliers who have traditionally served rail freight terminals and whose livelihoods were closely linked to the future of rail transport.
- The development of a mini-container concept. This was targeted at less-than-wagonload freight which mostly moved in poorly-loaded wagons and which had poor service quality caused by delays while worthwhile loads were accumulated.
- NZRC also had a policy to concentrate terminal development on a limited network of key sites. The use of "hub and spoke" networks to rationalise stations and freight terminals were put into place. This resulted in a system of six hubs and twelve spokes and allowed the closure of over 300 smaller terminals.

- The NZRC also adopted a more flexible attitude to the use of trunk-haul road transport, which was neither owned by ore sub-contracted to NZR. This strategy was adopted in situations where transport by rail clearly could not meet the customer's needs. In this way NZR retained the confidence of its customers in its ability to serve their total transport needs.
- The introduction of computerised traffic monitoring in 1980, to monitor wagon movements. This proved very reliable and achieved significant improvements in efficiency. This also proved the maintenance regimes for both track and rolling stock and resulted in a reduction of workshops from 8 to 2 and depots from 32 to 17.
- The introduction of higher-capacity rolling stock.
- The formulation of a more formal marketing plan than had existed before. The market was segmented according to the needs of customers. A marketing strategy to give a competitive advantage was developed for each target market. To help this process the commercial departments were restructuring. The sales teams in the field was increased from 16 to 30. The purpose of this new organisational structure was to increase personal contact with customers, especially the all-important core market of larger rail users.

By 1990 the NZRC was achieving operating profit. This could be attributed to the above-mentioned and other restructuring strategies, but in particular to a breakthrough in labour productivity regarding an agreement reached on train crew reductions. This led to single-person crewing of mainline trains. According to Dr Small (1995), the managing director of NZR, the breakthrough could be attributed to the responsible attitude among the rail trade unions: "Initial resistance gave way to a responsible and cooperative attitude, once it became clear the rail system's survival was at stake. The unions' role was to promote job retention and conditions of employment. They were therefore unlikely to initiate the sort of changes needed to restructure the railway. However, they worked with us in a pragmatic and non-doctrinaire way to help build productivity and protect the long-term interests of their members" (*International Railway Journal*, 1991:44). This reform process led to a reduction of staff from 22 000 in 1982 to 4 500 in 1995, and a consequential increase in productivity of 325 percent in terms of tonne-km/freight employee (*International Railway Journal*, 1995:23).

4.4.4 New Zealand Rail Limited

Although NZR achieved operating profit by 1990, they were still short of a net profit due to substantial debt (the result of, amongst other things, redundancy payments). In an attempt to ease the transition of NZRC to a limited company, the government transferred the debt to itself. The operating side of NZRC was set up as a limited liability company called New Zealand Rail Limited (NZRL). NZRC was left with the ownership of the land, road passenger business, speedlink parcel service and other general assets. The land necessary for rail operations was rented to NZRL for a nominal rent. From the outset in 1990 there was no overt political control over NZRL, although it was wholly owned by the government. (*International Railway Journal*, 1995:22). New Zealand Railway Limited's structure centred on three business groups who operated as profit centres. These were Railfreight, Passenger and Operations.

4.4.5 Track Access

A very important point to note at this stage is the fact that NZRL saw it as vital that they have control of their infrastructure, track standards and costs. NZRL has thus remained a vertically integrated business. Control of access to the track was and still is defined by the terms of the lease with New Zealand Rail Corporation for use of the land under the track. Under these terms, other operations have rights to use the track on any section for which tonnage or passenger levels fall below a specified threshold.

Any operators granted access are restrained from causing "unreasonable interference" to NZRL's operations and have to pay for the use of track on a normal commercial basis, including a reasonable rate of return. From the above it is quite obvious that track access is minimalised and definitely not encouraged. This can be seen as a reflection of the government's belief that real and effective competition already exists between road and rail, and ships and rail. NZRL felt that an infrastructure company, at least one step removed from the market, would be unable to judge and respond to market requirements, thus leading to investment in areas which are not commercial priorities.

4.4.6 Tranz Rail Limited

Tranz Rail Holdings Limited was formed to bid for New Zealand Rail when it went on sale in 1993. New Zealand Rail Limited was sold that same year to the Tranz Rail Holdings consortium led by Wisconsin Central Transportation Corporation, a publicly held United States rail holding company; Berkshire Partners LLC, a United States-based private equity firm; and Faw, Rich Wite & Company Limited, a New Zealand private equity firm. The purchase price of NZRL was \$328,3 million. This price included the lease of land for railway operations.

On 18 October 1995 the Company introduced a new corporate identity, replacing the New Zealand Rail name with an integrated group of brands derived from the common Tranz prefix. The operating company name, Tranz Rail Limited, and a visual identity for the Company and its business groups were developed after extensive research.

The latest chapter in the Company's transition from government department to a successful commercial enterprise was the global initial public offering in May 1996, which resulted in the Company's listing on the New Zealand Stock Exchange (NZSE) and in June 1996 in the United States.

Today Tranz Rail is a multi-modal transport and distribution company offering an integrated network of rail, road and sea services as well as distribution and logistics management. The company is investing heavily in its infrastructure, rolling stock and electronic commerce services to ensure the physical and technical elements of its operation are co-ordinated to provide customers with a competitive service in a deregulated transport environment.

Tranz Rail Limited comprises the following groups:

1. **Tranz Link:** Trans Link markets and manages all aspects of freight transport, and generates approximately 70 percent of the company's total revenue. Tranz Link's business is conducted through its five marketing units;
 - 1.1 **Tranz Link Bulk Freight:** Moves high-volume products such as steel, coal, petrochemicals and cement.

- 1.2 **Tranz Link CargoFlow:** Moves New Zealand's major exports such as meat and dairy products, often in containers. CargoFlow also handles containerised imports and operates container storage and repair depots.
- 1.3 **Tranz Link Forestry:** Transports forest products, including pulp and paper, from New Zealand's forests to processing mills, customers or ports of export.
- 1.4 **Tranz Link Distribution:** Provides customers with a total distribution service, including refrigerated transport, warehousing and door-to-door delivery through a network of freight branches.
- 1.5 **Tranz Link Refrigerated:** Provides temperature-controlled transport and distribution service throughout the country.
- 1.6 **Tranz Link Kombi Freight:** Provides freight forwarding companies with line-haul services and the car industry with custom-built rail wagons to move motor vehicles.
- 1.7 **Tranz Link Logistics:** Provides planning services to meet customers' total transport needs including distribution, warehousing, IT systems and shipping.
2. **Tranz Scenic:** Tranz Scenic markets the company's eight long-distance rail services.
3. **Tranz Metro:** Tranz Metro provides the urban commuter rail service in Auckland and Wellington.
4. **Interisland Travel:** Interisland Travel markets interisland passenger services and Interisland Commercial Vehicles service.
5. **Operations group:** The Operations group is responsible for smooth running of the rail network, providing infrastructure services and operating two heavy engineering workshops.

All the above-mentioned groups are supported by the corporate office, which provides functions such as safety, quality, finance, property, communications and business services.

4.4.7 Assessment

Compared to the two previous case studies of railway privatisation, the privatisation of the New Zealand railway system was much more uncomplicated. The results enjoyed by NZRL and later Tranz Rail Limited have been accomplished over a 14-year period. The first ten years were spent “commercialising” and “downsizing” the rail operations. The government was committed to freeing not only the transport market but also the economy as a whole. It placed particular emphasis on freeing the railway’s labour market, removing the railways from the state’s centralised wage-fixing system, limiting the right to strike and giving a stronger legal emphasis to labour relations.

It is important to note that throughout the case studies of Britain, Sweden and New Zealand the issue of changes in both the labour market and in working practices were identified as key areas for improving productivity in the rail industry.

Commercialisation was further helped with the introduction of a market-orientated structure e.g. freight, passenger, property, etc. This meant that very clear business objectives could be set and accountability improved.

The last four years in the transformation process revolved around the privatisation of NZR. Currently Tranz Rail is operating at a net profit:

Tranz Rail Holdings Limited

New Zealand Dollars	(In millions)	
	1995	1996
Total revenue	\$280,6	\$284,8
Total operating costs	\$234,2	\$238,2
Operating profit	R46,4	\$46,6
Operating ratio	84,5%	83,7%
Net profit	\$18,9	\$24,1

Internet, 1997.

4.5 STRATEGIC RESTRUCTURING OF THE JAPANESE RAILWAY SYSTEM

Japan’s first railway, which was build in 1872, was partly constructed by private companies as the government could not fully finance the enormous investment required for railway construction (Suga, 1992:42). The Sino-Japanese War (1894) and the Russo-Japanese War

(1905) led to the passing of the Railways Nationalization Act in 1906. This law resulted in the government purchasing those privately constructed trunk lines which could be integrated into a nationwide network. Due to the fact that automobile transportation was still under-developed, the state-owned railway had a virtual monopoly of land transportation in Japan.

Japanese railways were reorganised in 1949 with the creation of the state-owned corporation, Japanese National Railways (JNR), operating a nationwide network of about 21 000 km. However, the competitiveness of the railways declined with improved performance of automobiles and aircraft.

As a result, its share of domestic passenger and freight transport fell year by year. After posting its first single-year loss in 1964 of US\$230 million, JNR continued to operate at a loss.

Railways have always played an important role in Japan especially in terms of passenger transport. The main reasons for such a strong use of railways by passengers have been identified as high population densities, the issuing of commuting passes by Japanese firms and low levels of car ownership.

JNR's share of the freight market fell considerably from the 1960s onwards. By 1985 JNR only had 5 percent of the freight transport market as opposed to 30 percent in 1965, a drop of 83 percent. The main factor responsible for the decline in freight transport by rail is the fact that, Japan being an island, most raw materials are imported. The most efficient mode of transport is therefore ship and as a result the majority of heavy industries are located on or near the coast.

Despite the favourable conditions for passenger traffic, by the 1980s JNR was reaching a financial crisis point. The result of this was to be the complete restructuring of JNR in 1986.

4.5.1 Background to the restructuring of JNR

In essence four factors can be listed that contributed to the restructuring of JNR:

1. **Long-term debt:** The major cause of the huge long-term debt was continued construction of new railway lines. Pressure for the constructions came mainly from Japanese politicians, who regarded railway's main role as one of socio-economic development. Since JNR was in principle fiscally independent as a public corporation,

JNR had to borrow money to cover the operating deficit and the construction of new railway lines. The repayments and interest charges on these loans put a crippling strain upon JNR.

2. **Overstaffing:** High staff levels put further financial pressure on JNR, with staff levels of 469 693 in 1966 and 276 774 in 1985. This resulted in staff costs of 2 300 billion yen in 1985, which represented 70 percent of operating revenue. Together with a “gold-plated” pension scheme, labour costs were pushing JNR further into financial crises.
3. **Weak management:** After the first recorded deficit in 1964, JNR’s management team tried to improve and recover its financial performance through a series of reconstruction plans. A total of five reconstruction plans were followed, all of which were unsuccessful and abandoned. The central theme of these plans was to balance the budget through a combination of increased fares and increased traffic. Government debt support also featured in some of the plans. A combination of adverse public opinion, weak government support and, once again, strong unions (failure of productivity improvements) ensured that these plans were never successful.
4. **Financial performance of the private railways:** The fourth factor that contributed to the reorganisation of JNR was the financial performance of the private railways in Japan. The apparent financial viability of the private railways and higher labour productivity led to calls from the government and the public for increased productivity from JNR and financial viability via reorganisation of JNR.

Given the fact that private railways gained over half of their profits from the hotels, department stores and real estates that they developed around their railways; the pressure of financial viability for JNR was slightly biased. JNR was prohibited from these activities by law.

4.5.2 The JNR Restructuring Act 1986

JNR privatisation consisted of two phases. In the first phase JNR was converted into a stock company and government control was relaxed. In the second phase all stocks were sold to private investors, thereby completing JNR’s transformation into a privately owned company.

The two-phase approach was adopted as it would have been difficult to sell directly to private investors, as JNR was virtually bankrupt. The objective of the first phase was to create the conditions necessary to induce private investment.

In July 1985 the Supervisory Committee submitted its written opinion concerning JNR reconstruction to the prime minister. This contained the following “strategies for privatisation”:

- **Management form:** The privatisation of JNR was to begin in April 1987. The passenger division was to be divided into six regional companies and the freight division converted into a single nation-wide company. Initially the new companies were to be owned by the JNR settlement corporation, a government agency; of the six passenger railway companies, three operated on the main island of Honshu and one on each of the three islands of Hokkaido, Shikoku and Kyushu.
- **Reducing excess personnel:** The number of excess personnel was estimated at about 93 000, of whom 20 000 would volunteer for retirement and 32 000 would be transferred to the new companies. The excess of 41 000 personnel would be employed by the JNR settlement corporation for up to three years. During this time the government would be seeking new employment for them in local governments and private sector companies.
- **Allocation of long-term liabilities:** It is important to note that throughout all the case studies the governments of the railway companies helped to alleviate debt in an effort to privatise the state-owned companies. Japan was no exception. The new companies - excluding the three island companies - would take on US\$87,7 billion of the estimated total debt of US\$286,9 billion. The remaining debt was to be borne by the JNR Settlement Corporation (Fukui, 1992:43).

In 1985 the privatisation and division of JNR became official government policy.

4.5.3 The implementation of the Restructuring Act

The privatisation and break-up of JNR commenced in April 1987 and was carried out virtually in line with the recommendations of the Supervisory Committee’s report. JNR has been split up into six geographical operating passenger companies (Hokkaido, Shikoku, Kyusyu, East

Japan, Central Japan and West Japan). These are vertically integrated companies and are known as JRs. A nation-wide freight company has been set up, the Japan Freight Railway Company. This company only owns 80km of track and rents access space from passenger companies. The rental fee is calculated on the basis of avoidable costs. The freight division operates as a single nation-wide transport business.

Separate companies for research and development (RTRIF), Railway Telecommunications (RI) and Railway Information Systems (RIS) have been established.

The JNR Settlement Corporation has been set up and is legally responsible for the repayment of most of JNR's long-term debt and, as was mentioned earlier, the reallocation of redundant staff.

Only three of the JRs are profitable, namely JR-East, JR-Central and JR-West. Their profitability can be attributed mainly to the fact that they run through the most densely populated areas of Japan and the fact that they are feeling the benefit of staff reductions and improved management.

The other three JRs receive financial help from mainly two sources, the "Three Island Companies Fund" and the Management Stabilising Funds (MSF). The MSF is a direct subsidy to supplement the revenues of the three islands.

4.5.4 Public stock offering

With the reorganisation of JNR in April 1987, JR stocks were held back by the JNR Settlement Corporation. Initially it had planned to go public and list the stock on the Tokyo Stock Exchange (TSE) in 1991, by which time they expected to satisfy the TSE's requirements for listing. Several obstacles prevented this from being carried out as planned (Okano, 1994:6). On 26 October 1993 JR-East took the lead and offered their shares to the public. JR-Central and JR-West followed soon afterwards (Hughes, 1994:25).

4.5.5 Main elements of JNR Restructuring

The turn-around in the performance of JNR is impressive, although it is tempered somewhat if one considers the size and availability of subsidy that still exists. The main elements in the turn-around of JNR can be summarised in four points:

1. Separation of long-term problems: The long-term problems were twofold, namely the long-term debt and the redeployment of redundant labour. Both these problems were taken care of by JNRSC. This ensured a smooth transfer and established a sound basis of operation even during the reconstruction of JNR.
2. Corporatisation and privatisation: This promoted a commercial attitude among both managers and staff. According to Mr Yamanouchi, chairman of East Japan Rail Corporation, self-responsibility has taken root through privatisation. "Whereas the managers of a national enterprise are apt to react to losses by asking for state subsidies, the managers of a private enterprise perceives losses to be their own fault. I would say that the essence of privatisation lies in the exposure of businesses to the threat of bankruptcy" (Yamanouchi, 1996:1).
3. Deregulation: The separation from government control brought new freedom to managers and increased their accountability and freedom to develop other businesses. According to Mr Yamanouchi (1996:1), "We were also freed from the bureaucratic mode of behaviour. During the age of the national railways, behaviour was guided by the values not of the company but of the bureaucratic organ. Lacking a vibrant competitive drive, the respective components of the JNR organisation became riddled with sectionalism. Each section devoted its energies to securing more personnel and bigger allocations and gave little thought to cutting costs..."
4. Withdrawal of special local railway lines: A total of 3 160 kilometres of extremely unprofitable lines were withdrawn.

CHAPTER 5

THE ECONOMICS BEHIND RAIL PRIVATISATION

5.1 INTRODUCTION

This chapter deals with some of the economic concepts contained in rail privatisation proposals. This is done by discussing four themes of rail privatisation, namely (1) contestability and barriers to entry; (2) franchising and open access; (3) vertical integration; and (4) horizontal integration. The privatisation proposals of British Rail are used throughout this discussion since they are by far the most complex and liberal.

5.2 CONTESTABILITY AND BARRIERS TO ENTRY

One of the central aims of the privatisation proposals in the British Railway Act is to make the railway market contestable by opening it up to competition. It sees competition as the mechanism through which will come efficiency gains, cost/subsidy reductions, innovations and improvements in service quality (Shries *et al*, 1994b:14). To achieve these goals through competition, the rail market has to be contestable. It is important to note that in BR's restructuring process, on-line competition and not so much privatisation *per se* is advocated to achieve these efficiency gains. When looking at the prerequisites for a contestable market, one would find that in the case of New Zealand contestability of the rail market is marginalised and hence efficiency gains originate mainly from the more common benefits of privatisation.

According to the theory of contestable markets it is possible to obtain the benefits of competition without large numbers of competing firms (Shries *et al*, 1994b:14): "If an industry can be made perfectly contestable then the mere threat of competition will encourage existing firms to 'behave', e.g. price at average cost, ensuring costs are minimised for the output produced and setting prices equal to marginal cost too." The crux of the theory is that potential competition will lead to the same, if not better, results than those procured through actual competition.

5.2.1 Three criteria for perfect market contestability

1. Potential entrants and the incumbent have to be subjected to the same regulations, possess similar market knowledge, have access to the same technology and produce output at the same cost with the same perceived quality.
2. Secondly, there must be an absence of “sunk costs” to bring about costless entry and exit into a market. The nature of any assets accumulated have to display the characteristics of being able to be used for the production of other goods or their value will have to be recouped in second-hand markets.
3. “Hit and run” entry must be possible. Either the consumers’ reaction time to price differences must be quicker than the incumbents’, or it must be possible for entrants to enter into secret supply contract negotiations with consumers to secure a period of profitable entry.

If all three above-mentioned conditions are fulfilled, any possible entrant can enter the market, exploit the profit opportunity and leave the market before the incumbent has had time to react. The result is that the incumbent is constrained to set price equal to average cost. If the incumbent sets prices above average cost, then he faces competition from potential entrants.

What needs to be looked into is to what extent a railway market can be made contestable through privatisation. Are the structures that are put into place by privatisation sufficient to ensure the fulfilment of the three criteria mentioned for contestable markets? As was pointed out earlier, the privatisation proposals of BR are by far the most complex and liberal to date, and hence serve as a good example on which to base further discussion.

5.2.2 Contestability analysis of British Rail

- a) The first assumption specifies that both the entrants and the incumbent must face similar costs, similar regulation and have access to the same technology and produce an output of similar perceivable quality. The creation of Railtrack (which owns the track, stations and depots and takes charge of signalling, time-tabling and operational control), ROSCOs (passenger rolling stock leasing companies) and TESCOs (train engineering service companies), and the promise of equality in charges and access/service (which is seen to by

the Rail Regulator) would suggest that potential open access operators will face similar costs.

Discrepancies in costs could possibly occur for the leasing and maintenance of rolling stock if the larger franchisees were able to obtain discounts from the ROSCOs and TESCOs.

Initially potential rail operators also have access to the same technology through the creation of ROSCOs and TESCOs. This situation may also change over time depending on whether franchisees and open access operators decide to invest in rolling stock that is technologically superior to that offered by ROSCOs.

Part of the first assumption also deals with market knowledge. An imbalance between the incumbent and the potential entrants is likely to originate from the difference in market-related knowledge each possesses. The incumbent will possess information on passenger demand and flows, price elasticities and the effect of service changes. Due to the fact that this kind of information will not be available to the potential entrants, their ability to set fares and services at optimum levels will greatly be reduced (Shries *et al*, 1994b:15).

- b) The second criterion deals with the fact that there must be an absence of sunk cost to facilitate costless entry. One of the major elements of sunk costs inherent to perceived natural monopolies is that of infrastructure. The privatisation proposals of BR separate infrastructure from operations, thereby eradicating to a large extent the element of sunk cost inherent in railway operations.

The creation of ROSCOs and TESCOs has also considerably reduced the sunk costs facing a potential entrant, and hence the cost of entry and exit into rail operations. Potential entrants are able to lease rolling stock from ROSCOs and can contract out any major maintenance work to TESCOs. Sunk costs that are associated with terminals have also been removed through the passing of ownership to either Railtrack or independent station operations. A detailed discussion of the economic theory behind the separation of infrastructure from operations follows in Chapter 6.

Two potential sunk costs may occur. The first may manifest itself in the form of the cost of recruitment and training of staff and the second in the form of marketing activities.

- c) The third condition specifies that hit and run entry must be possible. According to Shries *et al* (1994b:16), it is here that the privatisation proposals of BR and for that matter probably any country's railway system, looks prone to failure.

“Hit and run entry” relies upon the incumbent being unable to respond quickly to entry by either reducing price and/or output (Shries *et al*, 1994b:16). BR's privatisation proposals are such as to give advance warning of any potential “open access” entry into the rail market. This would probably be the case with all railway privatisation proposals and not only with BR. An open access operator must recruit rail staff, negotiate with the ROSCOs and TESCOs and satisfy the Regulator that they comply with all the safety requirements, all before rail operations can begin. Such activity is very likely to alert any incumbent franchisee to the possibility of another entrant, allowing them to respond even before entry occurs, which in turn will limit the opportunities for potential new entrants (Shries *et al*, 1994b:16).

Despite some success in achieving the first two conditions for a contestable rail market, privatisation proposals appear to fall short at least of achieving the third condition, that of hit and run entry. Although there is scope for competition in some markets, it will be fair to comment that the rail markets privatised up to now, are not perfectly contestable.

5.3 VERTICAL SEPARATION

“Railways ... are referred to as “natural” monopolies in the sense that a single vertically integrated firm can fulfil market demand more cheaply than two” (Shries *et al*, 1994b:27).

A business firm is said to be integrated when its activities embrace the production or sale of a number of products, or a single product in a number of markets, each of which either could conceivably be produced or served by companies that confine themselves to that single activity. Vertical integration means the carrying on by a single firm of a series of successive functions in the production and distribution process (Kahn, 1991:251/II).

The critical and all-embracing characteristic of a natural monopoly is an inherent tendency to decreasing unit costs over the entire extent of the market. The principal source of this tendency is the necessity of making a large investment merely to be in a position to serve customers on demand. The railroad has to construct a roadbed and lay a track before it is in a

position to carry any passengers or freight at all. The costs associated with these investments may be absolutely fixed and unchanging no matter how many units are sold. To the extent that this is true, average cost per unit declines in inverse proportion to the number sold. This tendency is accentuated by certain common characteristics of many public utility services:

1. these services involve a fixed and essentially immovable connection between supplier and customer or locality;
2. the services are largely nonstorable;
3. the company is under an obligation to supply instantaneously on demand;
4. that the demands fluctuate widely from one point in time to the next.

For these reasons there has to be a heavy investment in capacity sufficient to meet the peak demands, and this is most efficiently provided by a single supplier with a single connection to the customer (Kahn, 1991:120). These views reflect three characteristics of railways:

1. The extent of unavoidable fixed costs of production: studies carried out by the Institute for Transport Studies at The University of Leeds suggest that as much as 33 percent of railway's costs are accounted for by track and signalling and that between 50 to 80 percent of these infrastructure costs are fixed in the short run.
2. Infrastructure constitutes a sunk cost because of the fact that infrastructure assets are geographically specific, have long asset lives, are indivisible and lack a comprehensive second-hand market, so reducing their value to scrap (i.e. they bear no opportunity cost).
3. The multi-product nature of rail industries: they serve different origins and destinations at different times; they also serve different types of both passenger and freight traffic. Given fixed costs and indivisibilities, this will give rise to both a large number of joint costs and possible economies of scope (Shries *et al*, 1994b:27). Economies of scope arises from producing multiple goods or services. Thus economies of scope exist if it is cheaper to produce both good X and good Y together rather than separately. A railway company selling trips to a destination and also selling return trips from that destination can produce transportation more cheaply than one selling only one-way routes (Samuelson & Nordhaus, 1989:981).

The result of these characteristics points towards an industry with declining costs, hence a natural monopoly. To restrict monopoly power and attain a welfare optimal level of output railways have traditionally been state monopolies.

Recently this view has been challenged on three fronts:

1. Firstly, it has been challenged on the basis of the theory of contestable markets, which was discussed at the beginning of this chapter.
2. Secondly, studies carried out found evidence of diseconomies of scope where both freight and passenger trains are running on the same track. "The evidence suggests that the only economies existing are those of density associated with infrastructure not rail operation" (Shries *et al*, 1994:27). Economies of density refer to instances where there are cost economies from serving larger markets which effectively allows the more intensive use of capital (Button, 1993:78).
3. The third challenge has its roots in technical inefficiencies, resulting from state ownership or control. These inefficiencies originate from poor employee motivation and lack of understanding of the firm's production function. Shries *et al*, (1994b:27) indicate that such a view suggests that opening up rail provision to the market would reduce the inefficiencies and provide large savings on the present set-up of a state-owned industry.

This three-pronged attack was incorporated into the policy recommendations to the British government. Firstly, the vertical separation of the rail industry with infrastructure remaining, at least initially, in public control but with operations split into units of various sizes and product homogeneity. Secondly, an open access policy to ensure contestability. Thirdly, privatisation of the industry, an increase in managerial autonomy and a reduced subsidy level (Shries *et al*, 1994b:28).

Without going into too much detail, as the next chapter deals with the separation of rail infrastructure from operations, the main aim of proposals for railway privatisation through vertical separation is to take out the sunk cost and hence the natural monopoly element of rail provision and create a more contestable environment. In doing so, several problems are indirectly created:

1. An increase in transaction costs between the infrastructure company and train operators.
2. Possible abuse of the infrastructure company's monopoly.
3. Position problems of coordinating investment in track infrastructure.
4. Problems of obtaining finance for new investment.
5. Concern about coordinating infrastructure maintenance and the responsibility for any delays caused.
6. Concern about the creation of a situation where operating managers have no control over vital input into their business (Shries *et al*, 1994b:33).

5.4 HORIZONTAL SEPARATION

In some instances privatisation proposals not only created a vertically disintegrated rail industry, but also led to the creation of a horizontally separated rail operation industry. In the case of Britain, 25 train operating companies were formed. The opposite condition of a horizontally separated industry is a horizontally integrated industry, which means that it operates a number of establishments producing or selling the same product or group of products (Kahn, 1991:251/II).

As was pointed out earlier, the only economies existing in the provision of rail services are those of density resulting from the use of infrastructure rather than operational factors. This implies that to minimise operating costs, the size of a rail network does matter to a certain degree. Thus, when horizontally separating a rail operation industry, it is necessary to take care not to divide it into too many/small sections that would not be operating at an optimal level due to the absence of economies of density.

The provision of complementary services is another issue raised by horizontal separatism. The problem arises because of the interdependency between different operators in terms of providing and attracting passengers, e.g. where a bus company relies on a railway company to provide passengers or the other way round. The actions of one company will therefore have repercussions for the other's revenue. A problem occurs when a service is unprofitable for an independent operator, but could be profitable for a more integrated concern. The problem may

be overcome if one operator is willing to pay compensation to another operator to run a particular service, but such an approach requires detailed information and could become very complex if more than one operator is involved (Shries *et al*, 1994b:35).

Further issues raised by horizontal separation can be grouped under the heading of “network benefits” which include:

1. coordinated timetables and publicity;
2. through ticketing; and
3. inter-availability of tickets.

Timetables should have the characteristics of allowing passengers to plan their journeys with a great degree of certainty and minimise passenger interchange time. With horizontal separation the complexities of producing such a timetable increases, especially given open access. Questions pertaining to the allocation mechanism for train paths also come to mind. Will such allocation follow commercial or social criteria?

A huge loss in network benefits for rail passengers will occur if tickets are not made inter-available. This will reduce their choice in railway operators (Shries *et al*, 1994b:37).

5.5 FRANCHISING

The fourth central tenet contained in most privatisation proposals is that of franchising. The process of franchising is designed to overcome the situation where, due to economies of scale, scope and density, the least cost producer is one of natural monopoly. The concept behind franchising suggests that competition for the market can be a substitute for competition in the market. Firms bid for the exclusive right to supply, with the firm offering the lowest price or highest payment awarded the franchise. The bidding process based on lowest price is designed to bring prices down to levels close to expected unit costs of production. Bidding based on highest payment is designed to reflect contestants' expectations of the discounted stream of monopoly rents accruing to the operator over the life the contract (Shries *et al*, 1994b:19).

Theoretically franchising makes a market more contestable, improving both productive and allocative efficiency. It increases market contestability by allowing firms to bid for the right to

supply before they have committed any resources to the attempted entry. Franchising reduces the sunk cost element to purely the costs of constructing the bid. Franchising also reduces the incumbents' scope to adopt predatory behaviour, since the new entrant can take the entire market immediately rather than gradually winning market share. The threat of franchise termination should serve to ensure satisfactory performance during the course of the franchise.

5.5.1 Potential problems

5.5.1.1 The bidding process

The bidding process must be competitive. The number of bidders must be sufficiently large to discourage collaboration amongst the bidders. If the number of franchise bidders remains small and they bid against each other constantly, then the danger of collusion will rise.

Another crucial element in the bidding process is the presence of sunk costs. Sunk costs increase the penalty of entry and exit, thus creating a distortion at the bidding stage.

5.5.1.2 Contract specification and duration

In the event of a contract not being able to be specified simply and comprehensively, the problem of evaluation immediately arises. Where products offered are standardised, the only criterion is that of price. The judging process becomes more complicated where, as in the case of railways, the bidders are likely to offer various quality of services, various prices and to a lesser degree, various service levels.

Tight specification can lead to attainment problems during the franchise contract. In an uncertain environment, where demand, costs, technology and supply conditions are likely to fluctuate, the chances of contract renegotiation will increase.

Lack of specification in relation to quality variables and accounting procedures can also lead to attainment problems. If punctuality, appearance and other such service variables are not well-defined, then the franchise authority may find itself with a service far removed from the one it envisaged.

Another vitally important aspect of franchising is the duration of the contract. A trade-off between short and long contracts can be identified. Long-term contracts give the franchisees

an incentive to invest in capital while being afforded greater opportunity for realising profit streams throughout the franchise life. Longer contracts, however, increase the likelihood of incumbents benefiting from important information advantages and possibly sunk cost advantages. Under these circumstances the possibility for competition will be reduced at the renewal stage. Long-term contracts lack the threat of non-renewal that is characteristic of short-term contracts. As a general statement, one can say that shorter contracts reduce the profit opportunities open to franchises and so reduce the number of bidders and the competitive outcome.

The constant renewal stage of short-term contracts acts as a discipline on the franchisee, leading to better performance and greater cooperation with the franchise authority. A short-term contract may also reduce the scope for strategic behaviour by the incumbent. Short-term contracts would not encourage investment by the rail franchisees themselves.

CHAPTER 6

SEPARATING RAIL INFRASTRUCTURE AND OPERATIONS

6.1 INTRODUCTION

As is mentioned in Chapter 5, studies showed that as much as 33 percent of railway's costs are accounted for by track and signalling and that as much as 80 percent of these infrastructure costs are fixed in the short run.

There are two schools of thought with regards to infrastructure policy. As we have seen in Chapters 4 and 5, one is that of separating rail infrastructure from operations, the other that of keeping an integrated railway structure. The separation of infrastructure from operations is a controversial issue which elicits mixed reaction, but seen in the light of its increasing "popularity", it might be worthwhile looking into it and hence the rest of this chapter will be dedicated to the discussion of this topic.

6.2 THE RATIONALE BEHIND SEPARATION

The issue of separating infrastructure from operations is in itself a consequence of the greater issue around competition in rail transport, which in turn is a direct result of the quest for higher productivity and quality of service. This can to a great extent be attributed to competition from other modes of transport, especially road transport.

European legislation now requires that infrastructure be separated from operations in rail services, at least to the extent of separate accounting. This is required in order to provide for a degree of open access to the infrastructure by third parties for particular types of services. In particular this is aimed at railway undertakings which want to operate international services through a third country and any railway undertaking wishing to provide international inter-modal freight services. A number of railways, which include those of Germany, the Netherlands and Spain, have reorganised to place infrastructure planning and management in separate divisions from the operation of services. Very few countries have placed infrastructure into totally separate organisations. As is discussed in Chapter 4, Sweden and

Britain are the only two countries to date that have followed this model. Although both countries separated infrastructure from operations, they differ fundamentally in the way that they operate.

In Sweden Banverket was established as a publicly owned organisation which is completely separated from Swedish Railways. Banverket's pricing and investment decisions are based on social cost-benefit criteria. Swedish Railways is thus primarily a commercial organisation, but pays only a low charge for infrastructure.

Britain, which was the second country to follow the separation model, established Railtrack, the infrastructure company, in 1994. Britain's approach was different to that of Sweden in the sense that Railtrack was to operate without subsidy as a fully commercial organisation (Nash, 1995:1).

Two completely different starting points can be put forward for the separation of infrastructure in the case of Britain and Sweden.

6.2.1 Sweden

During these 1970s and 1980s, SJ's marketing strove intensely to change its image as "the whole nation's railway" into that of a modern transport enterprise which in competition with other players on the market concentrated on offering its customers the best possible service. During this period the alleged conflict of objectives between SJ's monopolistic role as administrator of the railway infrastructure and its role in the market as a competitor producing transport services came to the fore.

From this debate the idea emerged to apply the so-called road transport model to the railway system. By separating infrastructure installations from SJ and transferring them to an agency not based on business economics, emulating the National Road Administration, it was asserted that there were several positive effects to be obtained (Bruzelius, 1994:20). This led to the introduction of the "road traffic model" on 1 January 1989. This implies that the state, through BV, is responsible for the infrastructure and that SJ pays for the use of the rail network. The state now bears the same financial responsibility for railway infrastructure as it does for road infrastructure and airports. Investments in the infrastructure are made on the basis of socio-economic assessment (Larsson, 1992:3).

The benefits from this arrangement can be summarised as follows:

1. Conflict of objectives between production of infrastructure and transport services were solved by letting socio-economic principles guide planning and pricing of infrastructure services. SJ has total freedom to apply business economic approaches to its activities and is liberated from other demands than those applicable to business activities in general.
2. As a result of low infrastructure cost, resulting from low marginal costs, a high degree of safety and environmental friendliness, SJ was able to live up to the demands to generate profit.
3. The railway's image improved by making means, which had earlier been considered as subsidies, come to be regarded as future-oriented investments in infrastructure (Bruzeliuss, 1994:20).

6.2.2 Britain

Where the separation of infrastructure from operations in the case of Sweden was an attempt at levelling the playing fields between rail and road, the separation of infrastructure and operation in Britain's case was done for a different reason.

The economic rationale behind the British arrangements is to try to instil competition into the rail system wherever possible, by splitting the then British Rail organisation into something like a hundred separate companies. Thus, the natural monopoly of infrastructure provision is separated off from the operation of train services (Nash, 1995:4).

Any approach which maintained integration of infrastructure and operations would lead to little competition, because the infrastructure itself represents a natural monopoly. Whilst it would be possible to promote competition by granting rights of access to the infrastructure to competing operators, it is difficult to police such arrangements to ensure that the integrated operator is not using its monopoly power in the infrastructure market to gain advantage in operations. For this reason the British government decided to adopt an arrangement which replaced BR by Railtrack, the infrastructure company and separate operating companies (Nash, 1993:5).

The claimed advantages of separation of infrastructure and operations in the British context can be summarised as follows:

6.2.2.1 Promotion of a variety of operators

The most commonly claimed advantage of separation is that it aids promotion of competition between individual train operators. At their most extreme, the advocates of this view argue that railways are just like roads; whilst infrastructure is usually a natural monopoly, it can be used by a variety of competing operators.

With regard to freight transport in Britain, there is now completely open access for freight operators. Even though the three freight companies into which the old BR Trainload Freight sector was divided were sold to a single bidder, two existing rail customers are setting themselves up to run their own trains.

As is mentioned in Chapter 4, whilst it was originally intended that open access would similarly be permitted in the passenger sector, this has been postponed to the year 2000. All but one of the TOCs require subsidy. The potential for unsubsidised open access operators in the passenger sector is thus largely confined to “cream skimming” by operating a limited number of services on particular routes and at particular times of the day. The realisation that this situation would increase the level of subsidy to franchisees led the Regulator subsequently to preclude open access up to the year 2000.

Thus, in practice, any advantage that might result from increased on-the-track competition in Britain will be very limited, at least for the first five years after privatisation (Nash, 1995:7).

6.2.2.2 Clarify industry relationships

The argument here is that by placing relationships on a contractual basis, each party should know exactly what quality of service it might expect from the other and at what price. This argument is based on the fact that railway managers do not receive clear signals about the costs of infrastructure. The same can be said with regard to politicians and the general public who do not receive appropriate information upon which to base their decisions as to which lines to support and which lines to close (Nash, 1995:9).

6.2.2.3 Specialisation

It is argued that separation permits a greater degree of specialisation, leading to economies and efficiencies that could not be achieved in an integrated railway. This implies that there are diseconomies of scope from undertaking both planning and operation of infrastructure and train operations in the same organisation. To date there has been too little experience to provide any form of statistical test of this hypothesis. Some of the disadvantages of separating infrastructure from operations can be listed:

1. Loss of control over a major part of an operator's costs and of quality of performance. In practice the degree of control operators have over costs and performance depends on the detail of the access agreements they are able to negotiate.
2. Negotiations over timetabling and access arrangements would be time-consuming and difficult.
3. Substantial difficulties would arise in negotiating arrangements for investment projects.
4. A fourth issue which raised concern has been whether the separation of infrastructure from operations is compatible with the continued safe operation of the rail system.

In practice, all companies involved in the provision of rail services have to produce a statement of their procedures for dealing with safety issues. Figures for 1995 indicated that there was a decline in accidents.

5. As is mentioned in Chapter 5, the separation of infrastructure raises the problem of integrated information and through ticketing.

6.3 SPOORNET'S FUTURE INFRASTRUCTURE POLICY OPTIONS

As may have been gathered from the case studies in Chapter 4, the reform process of railways around the world follows two streams. In the event of Spoornet being privatised it can either opt for the separation of infrastructure from operations (as was the case with Britain and Sweden) or it can adopt a policy of integrated railway infrastructure (New Zealand serves as a good example).

Britain's quest for vertical disintegration appears to be designed to encourage market contestability and to accomplish open access on the railway network, rather than to level the playing fields with road transport. There are those who argue that by separating the infrastructure from the operations, one is fundamentally misunderstanding the nature of competition in rail freight transport. Competition is important, but it is not so much about rail versus rail, but between rail and the other modes.

If Spoornet opts for the Swedish model, other considerations have to be kept in mind. In the case of Sweden, Banverket (BV), the infrastructure company, is a state institution and is responsible for the maintenance and investment in infrastructure. Investments in the infrastructure are made on the basis of socio-economic assessment. If, in the case of South Africa, Spoornet in the future may consider separating infrastructure from operation, considerable attention should be given to the ownership of infrastructure. In South Africa, caution should be taken when infrastructure planning and maintenance are left to the discretion of the government. According to the World Bank's *World Development Report* of 1994, infrastructure investments in developing countries (e.g. South Africa) have often been misallocated - too much to new investments, not enough to maintenance, too much to low-priority projects, not enough to essential services. Inadequate maintenance has been an almost universal failure of infrastructure providers in developing countries. Failings in maintenance are often compounded by ill-advised spending cuts. Curbing capital spending is justified during periods of budgetary austerity. Such cuts have to be compensated for later by much larger expenditures on rehabilitation or replacement. Because inadequate maintenance shortens the useful life of infrastructure facilities and reduces the capacity available to provide services, more has to be invested to produce those services (World Bank, 1994:4). The situation as described above may lead to a conflict of interest between the infrastructure authority and the operators in terms of the quality of service provided. This may be the result of potential differences in priorities. Spoornet currently has full control over the quality of the infrastructure and hence the quality of service provided to its customers.

Changing the *status quo* could jeopardise Spoornet's successful implementation of total sourcing (which is discussed in the next chapter) and the delivery of high-quality service. The adaption of rail terminals to make them more user-friendly and compatible with intermodal transfer requirements will also than be out of Spoornet's control (Pienaar, 1997:9). Integration

of infrastructure and operations was a feature of the privatisation of New Zealand Rail as well. Its managers saw it as essential to maintain this integration in order to have proper control of the quality of their service and costs.

CHAPTER 7

SPOORNET'S FUTURE MARKET STRATEGY

7.1 INTRODUCTION

Up to this point much attention has been given to the privatisation process by examining international case studies, which was followed by a discussion on the economic principles behind railway privatisation. The previous chapter dealt with infrastructure policies and the implication of different infrastructure policies for Spoornet. The remainder of this document deals with the future markets that Spoornet ought to pursue and the strategy needed to obtain these markets. First there is a short discussion on the current markets in which Spoornet is involved.

7.2 SPOORNET'S CURRENT MARKET STRUCTURE

The market in which Spoornet competes is complex, with no clear-cut definition of competitors and clients. Spoornet's market share in the transport industry, in terms of the most pessimistic method of calculating market share, is probably in the region of 10 percent. It is important to take note of the fact that a large portion of this market share is in a specific captured market. No apparent or noticeable competitive advantage outside this captured low-value, long-haul, bulk transport market is yet visible.

In 1994 Spoornet derived 48 percent of its revenue from the conveyance of coal and ore. Because of their very low ratio of value to weight, coal and ore are natural rail commodities for anything but very short hauls.

Management has concluded, however, that Spoornet cannot rely on this traffic indefinitely. Export coal and ore traffic is very price-sensitive. Once the current coal fields in the Eastern Transvaal are exhausted in perhaps 30 years, the next available deposits lie in the north-western Transvaal and Botswana, which are substantially further from the coast. The management of Spoornet recognises the fact that the organisation has to reposition itself in order to compete in local markets with road transport. As an operations manager said: "We must bring traffic back from the highways" (Spoornet, 1994:32).

With this objective in mind, Spoornet set out to become a more logistically orientated organisation to overcome railways' inherent disadvantages to other modes of transport. According to Spoornet's market analysis for 1995/1996, the decrease in the competitive market share of high-value goods supports the hypothesis that Spoornet is unable to penetrate the manufactured products market. Spoornet is apparently not yet ready to compete effectively in markets where

- just in time service,
- door-to-door service,
- predictable and reliable service, and
- total transport packages

are important (Spoornet, 1994:34).

This report further points out that Spoornet is in the mature phase of its life cycle and that the revitalisation of the life cycle is dependent on, *inter alia*, Spoornet's ability to move and grow in the logistics market; the development of intermodal capabilities; the supply of inclusive total transport solutions; seamless service concept; direct relationship with freight owners and protecting the client's clients (Spoornet, 1994:39).

The world-wide trend suggests that mega-carriers are most successful in entering the total logistics market. This is also Spoornet's only route to revitalisation and it will be achieved by a multimodal and seamless approach.

7.3 DEFINITION OF LOGISTICS

Logistics has many definitions. The Council of Logistics Management has defined logistics as follows (Pienaar, 1996:1):

“Logistics is the process of planning; implementing and controlling the efficient, cost-effective flow and storage of raw material; in-process inventory, finished goods and related information from point of origin to point of consumption for the purpose of conforming to customer requirements.”

The term “logistics” is understood in the Spoornet context as follows: “Logistics equates to “Total Source” quoted in the mission statement of Transnet.” Total source means that Transnet will offer inclusive transport solutions to clients. Inclusive transport solutions are multimodal and requires support services (forwarding and clearing, inventory management, etc). Supply chain management is needed to string together multiple services. Supply chain management is therefore another core competence together with a predictable rail service that Spoornet wants to establish as the main strategic drives (Spoornet, 1996:2).

7.4 PHASES OF TRANSFORMATION IN THE QUEST FOR COMPETITIVENESS

Three phases of logistical transformation can be identified in Spoornet’s quest for competitiveness in the higher-value freight market. These are:

1. Predictable service
2. Global logistics provider
3. Global logistics enabler

7.4.1 Predictable service

A key element of Spoornet’s strategy to reposition itself to be able to compete against road transport for higher-value freight markets is the implementation of “predictable service”. A competitive advantage of road transport has typically been more reliable transit time and, to a lesser extent, faster transit time.

The uncertainties surrounding transit time of rail transport in South Africa resulted in part from the “push” philosophy that was traditionally the basis for railway operations. Loaded wagons were labelled as to destination and were allowed to collect goods in yards until full trains could be assembled. Once full, each train was dispatched in the next available time slot in the appropriate direction. Some wagons would end up on through trains, which arrived quickly at their destinations. Others had to be shunted en route. When a train arrived at a switching yard, it was broken down, and wagons were grouped by direction of travel. When enough wagons were collected for a certain destination, they were again pushed on their way.

In contrast, a guiding image for “predictable service” is air travel. Airlines operate fixed schedules with known capacity. Passengers can reserve seats to their destinations, with

modal choice.) But clients' needs have changed. Because of the dynamic changes in the market environment, which place high demands on businesses, there is nowadays much greater emphasis on quality of service. Yet tariff remains an important factor in choice of mode and may even play too great a role due to conservative thinking.

The expectation is, however, that in future tariffs are going to play a relatively smaller role as there is a shift from conventional views on distribution towards a broader and more comprehensive concept of added value within a holistic and integrated logistical approach.

6. Information systems: Information on goods that are being transported must be complete, accurate and immediately available to the client (or to the haulier himself as soon as he realises that some occurrence or other could influence the receiver's situation). The type of information needed increasingly today has to do with (1) the movement of goods through various modes in the chain of transport, (2) tracing of goods, (3) speeding up of delivery and (4) information regarding any problems and new service needs.

Information is of cardinal importance in cases where minimum stock levels are held to reduce overhead costs, or in cases in which the just-in-time principle applies. Accurate and timely information is necessary in order to be able to respond quickly if problems arise so that they can be rectified in time and not delay the manufacturing process or any transactions with clients (Lungström, 1985:86).

From a marketing point of view it is important for a haulier such as Spoornet to present all types of information to clients in a user-friendly way. Channels of communication should also be easily accessible to clients and it is desirable that the haulier (no matter how large the business) should be open to requests for information.

The extent to which Spoornet is going to attract and keep new clients in the future will depend largely on the extent to which the company will be able to offer the above six critical variables optimally according to individual clients' needs in the form of an integrated logistical service. A logistical service means the ability to supply a comprehensive and effective service package that can include door-to-door transport, storage, documentation and information services in a single transaction or one-stop service.

Of the above-mentioned factors, information systems are most probably the factor that has the greatest potential for future development due to the fact that they have not yet been widely implemented (in South Africa). Rail transport as a mode has a great advantage over other modes in view of the fact that rail transport enterprises (such as Spoornet) already have information networks as part of their infrastructure and operating systems. But Spoornet will have to guard against conveying information, which is in fact readily available, to clients in a bureaucratically aloof way or inadequately or too late.

CHAPTER 8

CONCLUSION

Tager (1997), Chairman of Transnet, said at a recent speech made at a meeting of the Chartered Institute of Transport in Southern Africa: "Business is not static. It is in the nature of business that there is continual assessment and often restructuring. Our shareholder, the government represented by the Minister for Public Enterprises, is pursuing a policy for the restructuring of state assets. As in any commercial company the shareholder determines the policy governing Transnet. Restructuring is not a euphemism for privatisation, but it certainly includes privatisation in the full sense of the word".

Whatever the outcome for Spoornet will be with regards to privatisation only time will tell. What we do know at this point in time is that the government is in the process of selling some of the other divisions of Transnet or parts of them to the private sector. Of more importance, however, is what route the government will take in the event of deciding to privatise Spoornet - specifically with regard to the infrastructure policy.

It is of paramount importance that decision-makers will understand that infrastructure and operations should not be separated in a quest for on-rail competition to ensure that the railway system will operate efficiently.

In the event of policy-makers opting for on-rail competition, even the most liberal restructuring plans will not be sufficient to ensure contestable markets due to the existence of barriers to entry.

If, on the other hand, infrastructure and operations are separated in the name of levelling the playing field between infrastructure cost of road and rail transport, care should be taken insofar as making the government responsible for infrastructure maintenance. Perhaps it would be in the best interest of the operating company to see to the maintenance of the infrastructure themselves and apply for a subsidy from the government for infrastructure costs.

Although an integrated infrastructure constitutes a monopoly situation, road transport will be the regulating mechanism that will ensure the efficient operation of the railway system.

For these and other reasons mentioned in Chapter 6, it is advisable that infrastructure should remain integrated with operations.

Whether rail transport in South Africa is privatised or not, the concept of being a logistical leader in the transport industry needs to be understood and needs to be pursued, if high-value freight is to be claimed back from road transport. Spoornet is aware of this fact, but still has to go a long way to fulfil their vision of being a global logistical enabler.

Because of the new opportunities that have arisen due to the economic deregulation of freight transport, it is possible that the choices of clients will not be geared towards a single mode, but they will rather select from the intermodal and other logistical services that transport suppliers or hauliers can offer. By resorting to intermodal transport, clients can make use of the best features of the different modes in a complementary way in order to meet their transport needs in the most satisfactory way.

The future railway system of a South Africa “with a future” will in all likelihood be

- an economically viable and *highly* efficient service that is free of state subsidies, except in situations where services are provided on a concessionary basis;
- a regional service which will slowly expand its operations to other countries;
- an intermodal service which participates in, or is linked to, specially designed total logistics services;
- a service where all bulk export operations and general freight services are ringfenced and managed as separate divisions with different operating philosophies; and
- a service which is still dominated by a large organisation such as Spoornet, but where small regional railway companies could develop (given the improved economic conditions) and play an important role in smaller regions of the country.

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