

#### **7.1.4 BDZ Personal system and The European Labour Law**

In the Progress Report (Section 5.2.2.5) it was stated that the point had now been reached where it can be seen that European Labour Law had surfaced as an entity on its own. It seems to be emerging from a complex process of distillation of Member State National Labour Laws into something original and distinct.

Since writing this the European Commission have issued a Green Paper entitled 'Partnership for a new organisation of work'.

This document embodies a lot of the strategic thinking that has influenced the recommendations that have been made in respect of the BDZ Human Resources organisation.

**As the BDZ organisation begins to adapt to its new role in the market it will need to adapt most of the current Personnel Procedures to make them more appropriate for the changing market conditions. Equally it will be important to ensure that should the railway be split into the Passenger, Freight and Infrastructure organisations envisaged then the opportunity should be taken to create service conditions for each segment that most efficiently support the particular activities in which they will be engaged.**

It is appreciated that at the moment this can only be done in compliance with the regulations contained in the Bulgarian State Labour Code but if market-forces are to come fully into play it is assumed that these will, over the life-time of the Master Plan, be relaxed.

More importantly than this, however, is the assumption of the acceptance of Bulgaria into the European Union somewhere around the Year 2007. By this time it is reasonable to assume that the EEC Labour Law will have been developed into a much more comprehensive code.

In a state of such regular and rapid change it is critical that the Railway is prepared for any new Labour Law developments and that their interests are properly represented when new legislation is being considered.

**All of these developments will require the BDZ Personnel Planning section (see Section 10.6.6. on the case for a new Personnel and Training Organisation) to be anticipating what changes can be made in the various service conditions of the Railway, which aspects of the possible new legislation should apply to the Railway, which should be excluded and what special legislation may be necessary for the particular and unusual conditions under which Railways operate.**

Whilst the implementation of most of these provisions may seem, at the moment, to be a long way away it may well be helpful to appreciate the direction in which the EEC is moving and the following is a brief summary of the current thinking.

**A BRIEF SUMMARY OF CURRENT EEC THINKING TAKEN FROM THEIR 1997 GREEN PAPER ENTITLED ' PARTNERSHIP FOR A NEW ORGANISATION OF WORK'**

- The traditional organisation of work is changing from fixed systems to a flexible open-ended process of organisational development
- In traditional economic thinking labour is seen as a factor of production and a cost to be reduced. In modern terms people are seen as a key resource , to be developed and valued as a knowledge-creating workforce.
- The skill structure is changing. Good skills in numeracy and literacy as well as with computers are becoming more and more important. There is a need for higher and broader skills.
- The continuous learning updating and upgrading of skills and competencies are a must for all companies.
- Whilst it is acknowledged that developments in productivity may result in a reduction in overall employment in particular activities it is essential if real wages and profits are to be increased.
- The choice is not between being more productive or remaining as at present. It is between being more productive or becoming uncompetitive.
- Working time is becoming more flexible. More than 15% of the EEC workforce now work on a part-time basis.
- Flexibility and adaptability are the key issues.
- In terms of Pay systems the trends are towards broader job descriptions, flexibility and payments based on performance or continuous improvement.
- Introduction of contracts based on Annual Hours. This is particularly relevant to businesses like Railways that operate around the clock and have elements of seasonal traffics
- The specific areas in which policies have been developed which will be of interest to BDZ are as follows:-

Collective Bargaining	Works Councils	Health and Safety
Working Time	Unsocial Hours	Leave entitlements

## 7.1.5 Outline Specification of A Personal Computing System for BDZ

### 7.1.5.1 The background to Personnel Computing within BDZ.

The current situation within BDZ is that there is not a common computing system that holds basic information on either employees or posts.

A number of different systems exist at both Headquarters and the Regional offices and these hold a variety of differing items of data but it does not appear possible to obtain any computerised reports that cover all the employees or positions within BDZ.

In an organisation that is undergoing fundamental change and which will continue to change in terms of organisational structure and the skills and training needs of its workforce this is a hindrance to the proper co-ordination of Manpower Planning , Redeployment and Training.

The calculation of monthly pay seems is undertaken separately at the 4 computer centres and the understanding is that it is not possible to extract any common meaningful Employee or Post data from these systems.

The US\$ 20 million, W B Sponsored, Management Information System Project which is currently under development is based around 3 separate systems the Freight Operating System (FOS) , the Passenger Information System (PIS) and a Financial Management System (FMS).

The FMS system is scheduled to have 336 dedicated workstations with a further 50 being shared with the FO system.

The FMS system is also to be linked into the other 2 systems and appears to contain the basic structure to operate the Payroll systems which are defined as follows :-

- |     |   |
|-----|---|
| PS1 | To hold information necessary for the allocation and payment of salaries of all the employees.  |
| PS2 | To ensure current usage of the accounting information needed for implementation of continuity of accounting.                                |
| PS3 | To enable permanent adaptation to the changes in the regulatory framework of the Republic of Bulgaria.                                      |
| PS4 | To ensure possibilities for operative analysis and control.   |
| PS5 | To allow direct access of users to the created accounting information for its review and updating.  |
| PS6 | Current chronological and regular reporting of the business operations.   |
| PS7 | Summary of the accounting information and production of financial and accounting reports in compliance with the legislation of the country. |
| PS8 | Retrieval of the necessary information from the stored data files in the form of various breakdowns and executive summaries.                |
| PS9 | Storage, recovery and back-up of the accounting information.  |

Clearly item PS1 could also be used as the start of a common BDZ Personnel system.

The only other development on the creation of a common system for computerised Personnel data is the current Headquarters system which was being created within the Training organisation.

The items listed below have been identified for inclusion in the system, which if considered to be successful, could possibly be extended to the whole of the workforce.

Civil Identity Number	First Name
Second Name	Family Name
Sex	Date of Birth
Birthplace	Marital Status
Address	Home Telephone Number
Office Telephone Number	Post Occupied
Grade of Post Occupied	Retirement Category
Category of Post Occupied	Workplace (Division /HQ)
Foreign Languages	Computer Literacy
Scientific Degree	Scientific Title
Education Level	Date of Graduating
Name of Specialism	Educational Establishment
Diploma Number	Pay Group
Salary	Percentage for Years Service
Type of Labour Contract	Shift Pattern
Date of Appointment	Order Number of Appointment
Date of Appointment Order	Contract End Date
Contract End Order Number	Contract End Order Number Date
Railway Title	Pay Rate for Job
Pay for Labour Conditions	Percentage for Post Graduate Studies
Percentage for Scientific Degree	Percentage for Scientific Title
Passport Number	Serial Number of Passport
Passport Issue Date	Passport Issue Office
Military Service Stamp	Total Years of Work (all Companies)
BDZ Years of Service	Service Years Calculation Date
Number of Years within Specialism	Specialism Stamp
District of Birth	Type of Education
Type of Specialism	Type of Profession
Type of Qualification	Post Graduate Study Details
Training Courses Completed	Name of Course
Details of Course	Specialisation Course
Second Higher Education	Family Data

Type of Kinship  
Full Name of Kinsman  
Punishment Data

Civil Number of Kinsman  
Employee Military Data  
Leave Analysis

### 7.1.5.2 Principles of a proposed Personnel Computing System for BDZ

1. The basic information on employees is contained in the payroll system. Experience shows that in order to ensure that a Personnel system is updated currently it must be linked with the input to the Payroll System. If the input to the Payroll system is generated from the Personnel system then there will be an incentive to keep the system updated, because if not staff may be paid incorrectly or not at all. If the systems are not integrated then the tendency will be to leave the update of the Personnel system until time allows and it will quickly become out of date and not used. This is what it is understood has happened to the Headquarters system.
2. The basic data that was being collected for the Headquarters system could form the basis of a good Personnel Computing system but there would need to be some significant formatting and coding changes.
3. The principles of most Personnel Computing Schemes revolve around two separate but closely interlinked and to some extent overlapping sets of data.  
These relate to those items that relate to each post within the organisation and those that are personal to the individual employee.
4. These two sets of data are critical to the efficient operation of the Human Resources Department for the following reasons. The information on posts will enable the organisation to produce establishment plans, to monitor the filling of vacancies, to examine particular aspects of the organisation and to control the changes that are being made in terms of the opportunities for redeployment etc.  
The information on employees is vital to the production of short and long term Manpower Plans, the automatic processing of basic personnel procedures such as retirements, resignations, deaths etc. as well as in the key area of training and education needs and career development.
5. The creation of individual post files containing such information as Job Title, Pay Range, Location, Job Specifications, Qualifications required etc. will, in some cases, enable this data to be checked against comparable data on the Employee files, and in some cases, enable the post data to be transferred to the Employee File to create the record. For instance in the case of the data listed above an individual appointed to a new position could have all this data transferred to his employee file by just inputting a Post Number and a transfer date.
6. The only other issue to be addressed is that of a code to indicate the status of the occupant in their post. There are a number of sophisticated options for this code but in simple terms the main differences are between Permanent and Temporary occupancy.

7. To restate the principles in simple terms they are :-

- Direct integration with Payroll to ensure regular update
- Creation of a Post File with all the relevant data
- Creation of a Person File with all the relevant data
- The linking of the two files with a Post Association Indicator

the principles outlined above are shown graphically in the diagram on the next page.

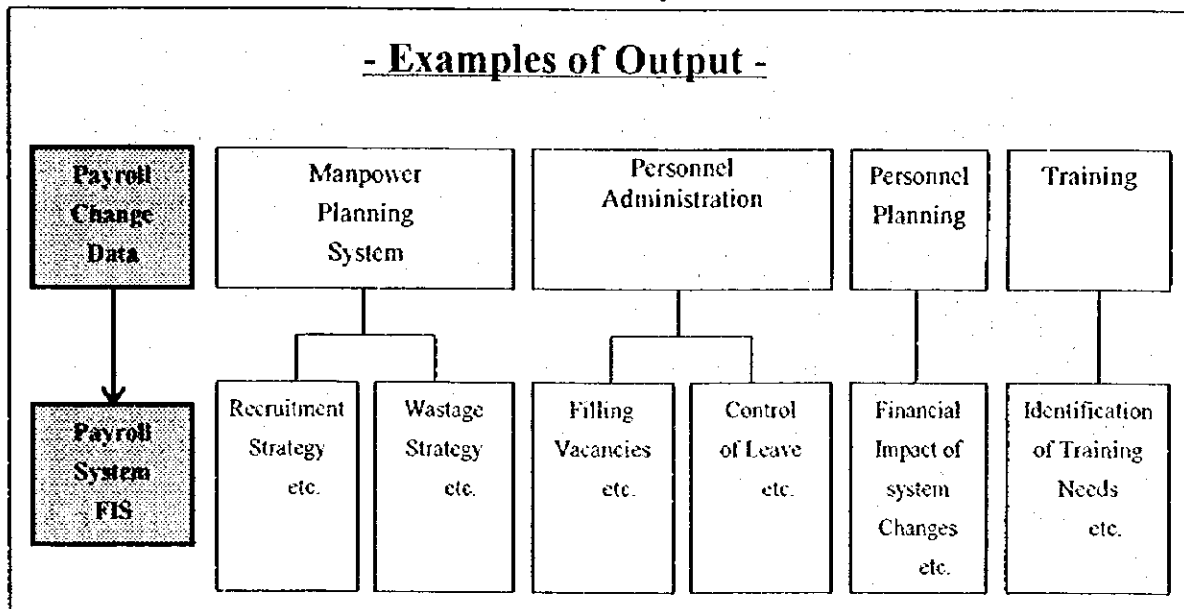
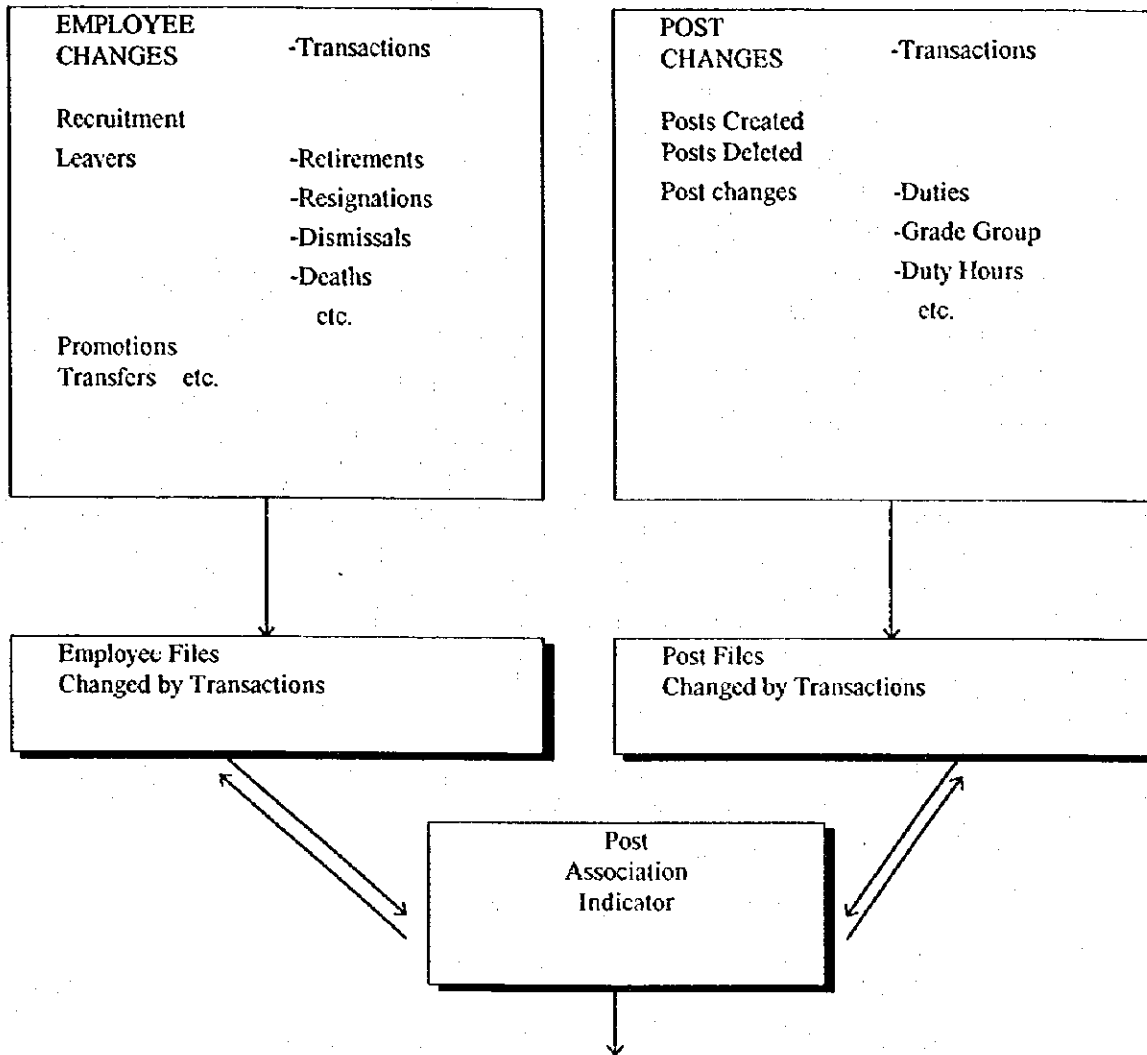
#### **7.1.5.3 Recommendations for Personnel Computing**

The whole issue of Personnel Computing has been discussed with the Deputy Director General (Finance and Personnel) and it has been accepted that there is a need to establish a system on the lines indicated in the foregoing.

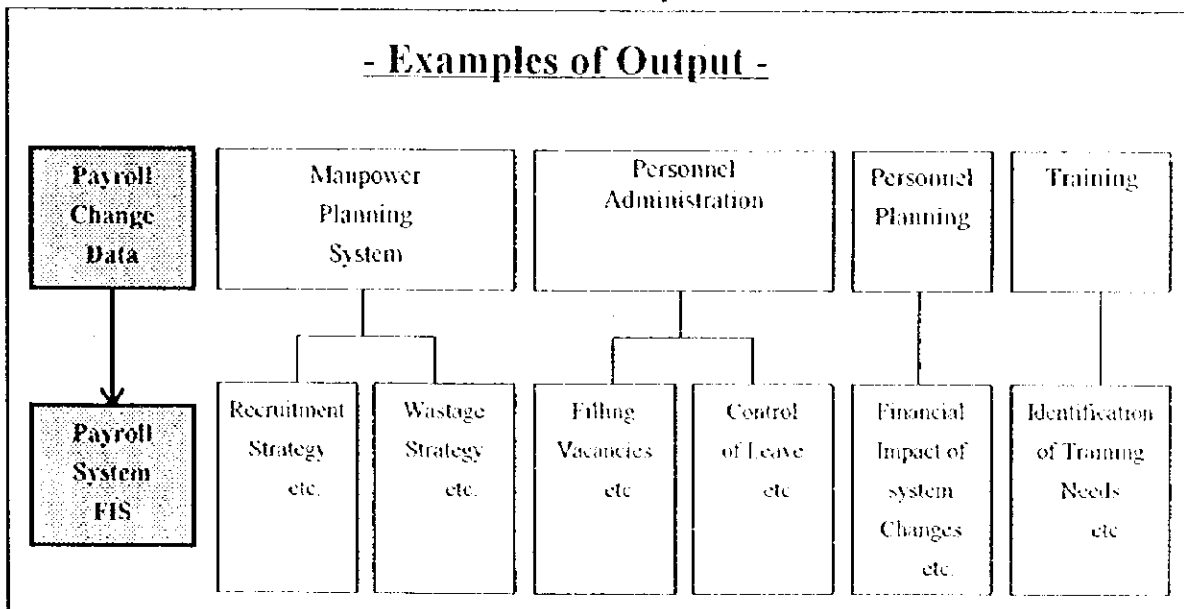
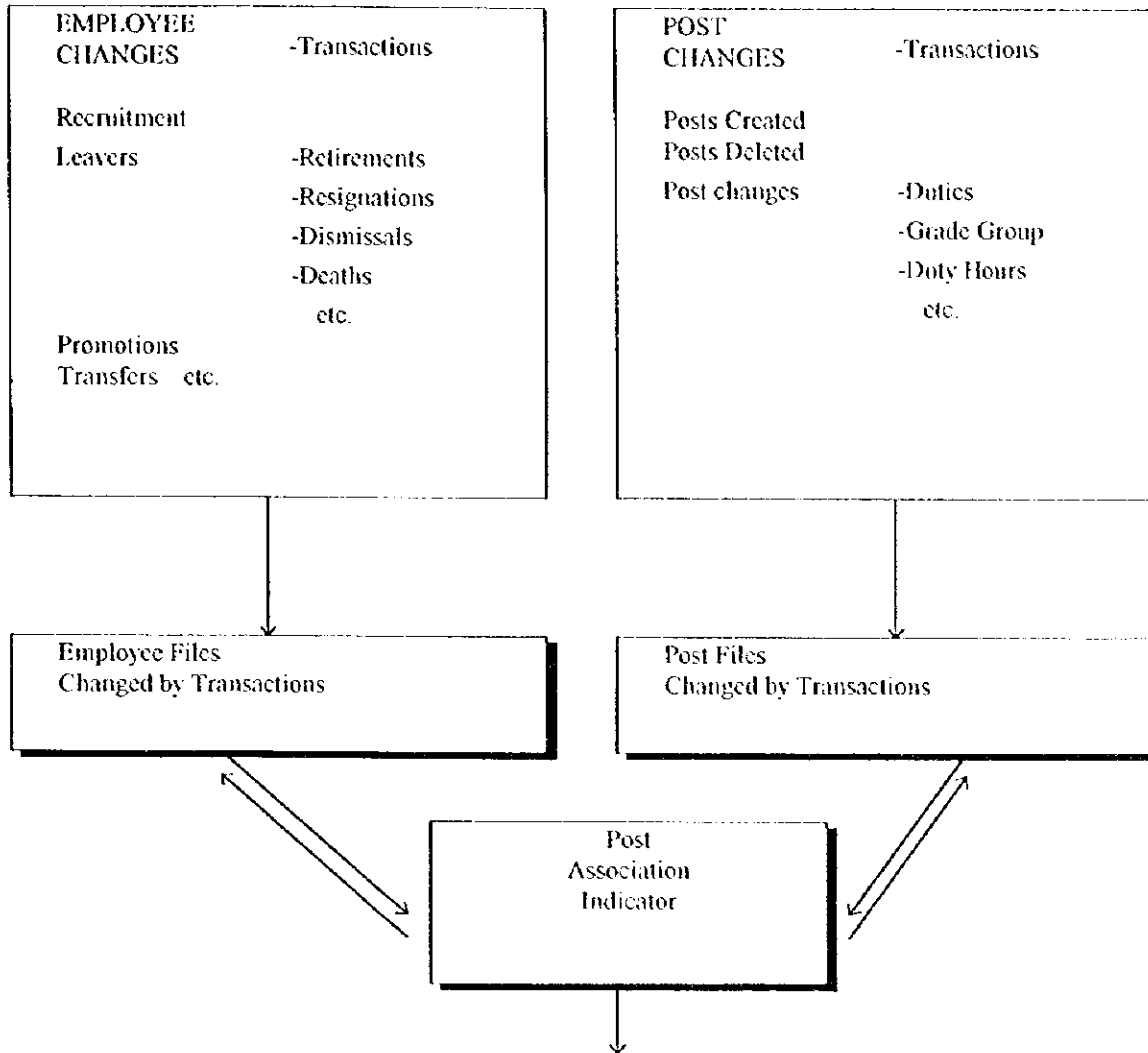
It was accepted that the DDG (Finance and Personnel) would act as a sponsor for the scheme and on this basis proposals for the development of Personnel Computing have been included in the proposed Personnel and Training Organisation. (Section 7.1.6 Personnel Planning).

It is recommended that a start be made using a limited number of data items and linking it into the Financial Management System, where it may be possible to use the dedicated terminals being provided for that system for input and output to a Personnel system.

# OUTLINE OF POSSIBLE PERSONNEL COMPUTING SYSTEM



# OUTLINE OF POSSIBLE PERSONNEL COMPUTING SYSTEM





## 7.1.6 The Personal and Training Organisation.

### 7.1.6.1 Background to the developments in the current Organisation

In Section 5.2.2.6 of the Interim Report the proposal was to create a Personnel and Training organisation suited to play a leading role in the transition of BDZ to a Market-led enterprise. The organisation to be structured to embrace the following activities :-

Contract Negotiations	Disputes	Collective Bargaining
Attitudinal Change	Contract Changes	Service Condition changes
Personnel Computing	Pension Policy	Pay and Reward systems
Recruitment Policy	Incentive Schemes	Productivity standards
Performance Indicators	Redundancy Plans	Manpower Plans
Recruitment & Wastage	Staff redeployment	Personnel Administration
Training and Education	Social Policy	Housing and Social

Since the production of this recommendation there have been several significant developments. There was a review of staffing levels within the BDZ organisation that led to a reduction in the Headquarters Personnel and Training organisation.

This reduced the HQ organisation to ten positions disposed as under :-

Head of Personnel			
Pay Systems	Organisation of Labour	Training and Education	Social
Manpower Planning	Personnel Policies		Housing Pay Rates
	Working Hours		Uniform
Contracts	Contracts		Food and Canteens
	Work Norms		Recreation Centres
3 staff	2 staff	2 staff	2 staff *

\* The social Section was returned to the Personnel and Training organisation under the recent changes.

There was a general view expressed within the Personnel Organisation on their inability to cope professionally with the existing workload and this became clear as the enquiries continued. Examples of this were that with the closure of the Productivity section the responsibility for norm-setting had been transferred to the section dealing with the Organisation of Labour but they were unable to undertake any work on this due to having insufficient staff.

More disturbingly the basis of the recent reductions in personnel were not fully known in the Manpower Planning section.

It is important to record that this does not reflect adversely at all on the staff dealing with these issues who responded to any request for information in a diligent and enthusiastic manner. It merely illustrates that BDZ is already beginning to undergo a period of significant change and

that there are insufficient HR resources to adequately respond to these changes.

So it became increasingly clear that there was a need for re-evaluation of the organisation, not only to cope with the existing workload, but also to take into account the major structural changes that were being planned.

The details of the problems besetting the Personnel organisation were discussed with the three individuals in charge of Pay Systems, Organisation of Labour, and Training and Education and various views were expressed on the best manner in which to organise the work and the number of staff that were required.

The results of these discussions were considered with the Deputy Director General (Finance and Personnel).

Because of the urgency of this problem it was decided to raise this issue specially at the Steering Committee on September 24th when the following points were made:-.

- The need to restructure the Personnel and Training organisation is the most important issue in the Human Resources part of the Master Plan Study.
- The staff are BDZ's most important and expensive asset.
- The biggest task that BDZ have is to convert the staff from old State Railway staff to Businessmen and women.
- This transition will entail an extensive training exercise to change skill levels and particularly attitudes.
- Some staff will not make this transition and will need to be redeployed or eased out.
- Almost every aspect of the current HR procedures will need to be revised over the coming years.
- There is no overall computer based recording system to support the development of these activities.
- The workload needs to be planned , co-ordinated and monitored in a professional manner.

**The Steering Committee fully accepted the points made and acknowledged that changes would have to be made to the Personnel and Training Organisation to enable it to cope with the exceptional workload that was emerging.**

All the Managers with whom this issue has been discussed have appreciated the need for increased resources in the Human Resources Headquarters Department, particularly in the areas of Personnel Planning, Change Management, including a large expansion in Training and Manpower Planning but have anticipated problems in getting support to significantly increase the establishment.

These views have influenced the proposal for revising the Personnel and Training Organisation.

### **7.1.6.2 Proposal for a strengthened Personnel and Training Organisation**

There is no universal formula to precisely determine the number of staff that are required for particular levels of activity but as a broad 'rule of thumb' you could expect to see one Headquarters HR post for every 2,500 staff employed within the organisation.

Applying this formula to BDZ would produce a current establishment of 22 posts reducing to 19 by the end of 1998.

An analysis of the present and future activities of the Personnel and Training Organisation has produced the following groupings :-

#### **1. Payments and Pay Systems.**

- Development and updating of the Pay Policy
- Payment systems and incentives
- Payroll Budget
- Individual salary rules
- Additional payments and allowances
- Job Evaluation and Job Descriptions

#### **2. Manpower Planning**

- Annual and Long-term Manpower Plans
- Analyses of Recruitment and Wastage
- Recruitment Strategy
- Redundancy initiatives
- Redeployment strategy

#### **3. Establishment Planning**

- Planning of Establishments using Work norms
- Analysis of the utilisation of Hours
- Productivity Schemes

#### **4. Employee Relations**

- Focal point for relations with the Syndicates.
- Dispute management
- Collective Bargaining
- Input to contract negotiations
- Improvement of relationships between Management and staff
- Improvement of relationships between Departments
- Improvement of relationships within Departments etc

#### **5. Personnel Planning.**

Review of all Personnel Systems  
Development of Personnel Computing

#### **6. Training and Education**

Training Manager for the whole of BDZ  
Education and Qualifications both National and for the Company  
Programmes for increasing skills and qualifications  
Career Planning  
Staff Development  
Staff Communications  
Co-ordination of the Change Management programme

#### **7. Social Department**

Housing , Uniform, Canteens, Rest Houses etc  
The Department remains unchanged

There are two other groups of 'Personnel' activities not currently represented in the Personnel and Training Organisation and which it is felt should be included in a restructured organisation.

These are Personnel Administration and Health and Safety at Work.

Details of these are shown below :-

#### **8. Headquarters Personnel Administration.**

Recruitment, Pensions, Appraisals , Records etc.

#### **9. Health and Safety at Work.**

Should include all aspects of Safety in the workplace.

This is seen as a critical area in relationships between Management and Syndicates

**Personnel administration** is very much an integral part of the overall Personnel and Training function and it is difficult to see why it should not report organisationally through the D.D.G (Finance and Human Resources). This should ensure a consistent professional approach.

The issue of the organisational reporting lines for **Health and Safety at Work** is not so clear cut, but it is considered that there is a case for including provision for this activity within the Personnel and Training organisation to deal specifically with Health and Safety in the workplace.

Some of these groupings are naturally discrete such as 6. Training and Education , 7. Social, 8. Headquarters Personnel Administration and 9. Health and Safety at Work, whilst numbers 1

to 5 could be linked together in a number of different ways.

There appears to be a logical case for linking together numbers 1, 2 and 3 Payments , Manpower Planning and Establishment Planning and numbers 4 and 5 Employee Relations and Personnel Planning as this would create two powerful groups that would have the status to get things done.

The linking of Payment Systems (with its analysis of job descriptions) , Manpower Planning and Establishment planning would create a group whose main objectives would be the control of manpower and establishment numbers through incentive based payment systems, productivity and redeployment.

The case for combining Employee Relations and Personnel Planning is the deep interest, involvement and impact that the Syndicates will have in both areas.

One further benefit of combining the activities in this way is that it could make a stronger case for creating senior posts within the organisation.

However this particular issue can be left open and this report will make no recommendations on the structure, concentrating instead on the numbers of staff that are necessary to undertake the various groups of activities.

Having carefully considered the current and developing workloads it is recommended that the following staff are provided for the various activity groupings.

**Group 1 Payment Systems and Payments                      Proposed 2 staff**

In addition to the current workload this group will have the responsibility of developing , testing and implementing a new pay system, job evaluations and job descriptions.

**Group 2 Manpower Planning    Proposed 2 staff**

This assumes that the Personnel and Training Organisation will take the lead in the production of annual and long-term Manpower Plans and will be responsible for monitoring the achievement of Manpower targets, advising on staff redeployment and developing the appropriate Recruitment and Attrition strategies.

**Group 3 Establishment Planning    Proposed 2 staff**

This is a partial reinstatement of the philosophy of Work norms but with only two staff to cover all the activities what can be achieved will be limited. It is proposed that these activities should be merged with the work currently being undertaken on the analysis of Working Hours and the other associated initiatives. It may be that a case could be made for more staff to be engaged on this activity on a short-term basis.

**Group 4 Employee Relations    Proposed 2 staff**

This relates to the regular contact between Management and the Syndicates in a time of fundamental change. It will be necessary to establish a relationship of trust and confidence and keep the Syndicates informed and involved with all the developments. The staffing is based on

the concept that this Group will be fostering a new spirit of total involvement at the planning stage between Management and the Syndicates in all the proposed changes

**Group 5 Personnel Planning**

**Proposed 2 staff**

The first task should be the establishment of a Personnel Computing Scheme but as stated elsewhere in the Report there will be a need for a complete review of all Personnel Procedures.

**Group 6 Training and Education**

**Proposed 4 staff**

This proposal may well still be understated as the emphasis that will be necessary on all aspects of training cannot be overstated. An indication of the magnitude of the 'Change Management' exercise can be found in the preceding sections of this Report and if it is accorded its proper priority it may be necessary to further re-examine the staffing in the Training and Education Organisation.

It is worth emphasising that the Change Management exercise must concentrate on the issue of the need for all staff to embrace the business ethic and this should naturally lead to the creation of career development plans and the concept of continuous training.

A subsidiary issue that should be examined is the need to develop a comprehensive two-way communications system between Management and the Employees as this will be very important in the Restructuring process that is being proposed in other sections of this Report.

**Group 7 Social Department**

**Proposed 2 staff (unchanged)**

**Group 8 HQ Personnel Administration**

**Proposed 2 staff(unchanged)**

Duties unchanged but recharted through the D.D.G.(Finance and Personnel)

**Group 9 Health and Safety at Work**

**Proposed ?**

It is not clear exactly what resources currently exist within the organisation for Health and Safety at Work issues but it is recommended that the provision of a Health and Safety in the Workplace expert within the Personnel and Training organisation be closely examined.

**A PRESENT AND PROPOSED STAFFING BALANCE SHEET IS PRESENTED AT THE END OF THIS SECTION.**

**7.1.6.3 The case for the separation of Human Resources from Finance.**

Another issue which should be considered at some stage is the question of whether Human Resources should be represented in the organisation as a dedicated Deputy Director General rather than being linked with Finance.

This debate equally applies to the organisation at Regional level where there tends to be organisational integration and indeed in some cases even post integration with Finance.

It is appreciated that for the immediate future the decision has been taken that the two functions should be combined at the top level. Nevertheless a strong case can be made that both the Finance and Human Resources disciplines should have a powerful independent voice in the top policy making forums.

It has been suggested that there is a natural link between the two Functions with employees representing over 50 % of the organisation's costs, but there is perhaps more validity in the

argument that combining the two can lead to short-term financial solutions prevailing over the greater benefits of a longer-term staff training and development strategy.

Two final points to bear in mind are that the KPMG report originally recommended the creation of a post of Deputy Director General (Personnel) and that most organisations moving from State Regulation to the Free Market tend to see the process of repositioning staff attitudes and skills as the key factors and as such give a high priority to their Personnel and Training Organisations.

#### **7.1.6.4 Obtaining and training suitable staff.**

In proposing an increase in staffing levels it is important to ensure that BDZ take the opportunity of obtaining the best possible HR staff available to strengthen the organisation. The issues that should be borne in mind in this appointment process should include the following :-

- It is necessary to be absolutely clear of what is expected from the occupant of the post. This should involve having a written Job Description and in some ways more importantly a Person Specification.
- Person Specifications will ensure that careful thought is given to the qualities that are required in the individual. These are qualities such as clear-thinking, stamina, innovation, acceptability etc which do not necessarily relate to academic qualifications.
- When it is clear what type of individual is being sought, there should be a detailed trawl through the existing BDZ staff to check whether or not there are suitable people who could be trained for the post. It is important that the trawl is not just confined to existing Personnel and Training staff.
- It may be that there are some cases where the Person Specification will call specifically for someone who has not been conditioned by existing Railway experience, someone who can bring an entirely fresh approach to Personnel issues. This is quite legitimate in the present climate of change but it needs to be kept in balance. It is important to strike a careful balance of experience and outside innovation.
- The key to making successful appointments is following a systematic selection process and to ensuring that there is a proper induction training process for the appointees.
- The induction training needed will clearly vary according to the individual appointed but there appears to be a common need for applicants from within Bulgaria to receive Human Resources training.
- It is suggested that at least two of the new appointees to the Personnel and Training Organisation should be Graduates and should be given an intensive overseas Training Course in Modern Railway Personnel Practices.
- If they are appointees from outside the Railway this overseas training should be preceded by a period of Induction Training within the Railway. This should, ideally, involve exposure to all aspects of Railway management at all levels of the organisation.

- If this approach is acceptable to BDZ it could be possible to obtain some overseas aid money to finance the training requirements.

**PERSONNEL AND TRAINING ORGANISATION      STAFF BALANCE SHEET**

<b>Section</b>	<b>Present staff</b>	<b>Proposed</b>	<b>Increase</b>
<b>Head of Personnel</b>	<b>1</b>	<b>1</b>	<b>-</b>
<b>Payment Systems and Payments } Manpower Planning } Establishment Planning } Employee Relations }</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>Personnel Planning and Computing</b>		<b>2</b>	<b>2</b>
<b>Training and Education</b>	<b>2</b>	<b>4</b>	<b>2</b>
<b>Social and Housing</b>	<b>2</b>	<b>2</b>	<b>-</b>
<b>Personnel Administration</b>	<b>2</b>	<b>2</b>	<b>-</b>
<b>Total</b>	<b>12</b>	<b>19</b>	<b>7</b>



### 7.1.7 Manpower Levels and Pay Levels for The Financial Projections.

The manpower projections for the years of the Master Plan are as follows:-

Year	Staff	Redn	Year	Staff	Redn	Year	Staff	Redn
1997	51200	3399*	1998	47300	3900	*as from July 1997		
1999	46070	1231	2000	44839	1231	2001	43609	1230
2002	42378	1231	2003	41148	1230	2004	39920	1228
2005	38685	1235	2006	38138	547	2007	37592	546
2008	37045	547	2009	36498	547	2010	35952	546
2011	35096	856	2012	34239	857	2013	33382	857
2014	32526	856	2015	31670	856	2016	29954	1716
2017	28238	1716	2018	26522	1716	2019	24806	1716
2020	23089	1717						

### Financial Projections

#### Assumptions for Estimating Payroll Costs.

1. Using the original 1999 Labour cost Forecast of 150,000,000 BGL set against a staffing level of 47,300 equates to an average annual salary within the Company of 3,171, 247 BGL. This figure includes all salary associated costs such as retirement costs and social security contributions.
2. On the basis that the staff savings identified in the Master Plan are all productivity based it is considered reasonable that a proportion of these savings should be returned to the staff in the form of incentives or increased salaries.
3. For the purpose of this exercise the assumption is that 50% of the savings will be returned.
4. It is assumed that all the savings are made for the full year.

Using these assumptions the following figures emerge :-

1999	148,049	2000	146,096	2001	144,146	2002	142,194
2003	140,244	2004	138,296	2005	136,338	2006	135,471
2007	134,605	2008	133,738	2009	132,079	2010	132,004
2011	130,647	2012	129,288	2013	127,929	2014	126,572
2015	125,215	2016	122,494	2017	119,773	2018	117,052
2019	114,331	2020	111,609				

## **7.2 TARIFF POLICY**

### **7.2.1 Introduction**

The review of BDZ's tariffs included an investigation of the passenger and freight tariff structures, the determination of the legal and institutional framework, an assessment of the existing policies and an analysis of profitability by matching revenues with costs. The objective was to assess how BDZ's tariffs should be revised to meet the long term financial needs of the corporation. Tariff policies have been recommended accordingly.

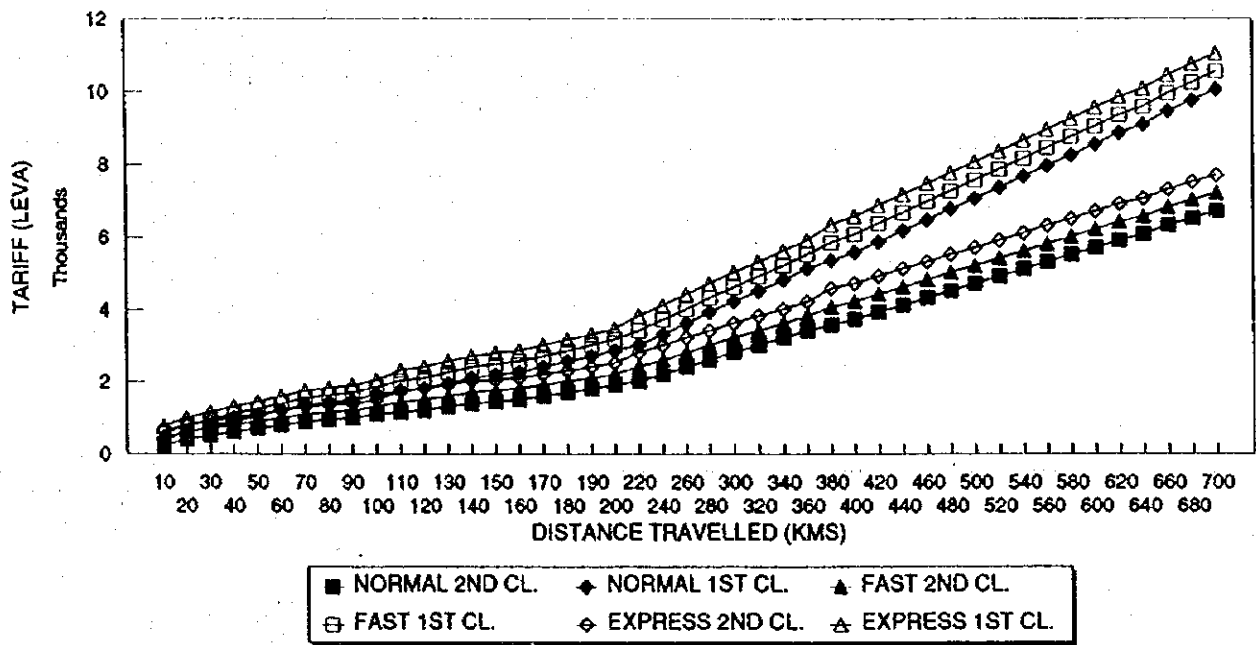
### **7.2.2 Structure of Passenger & Freight Tariffs**

#### **(1) Passenger**

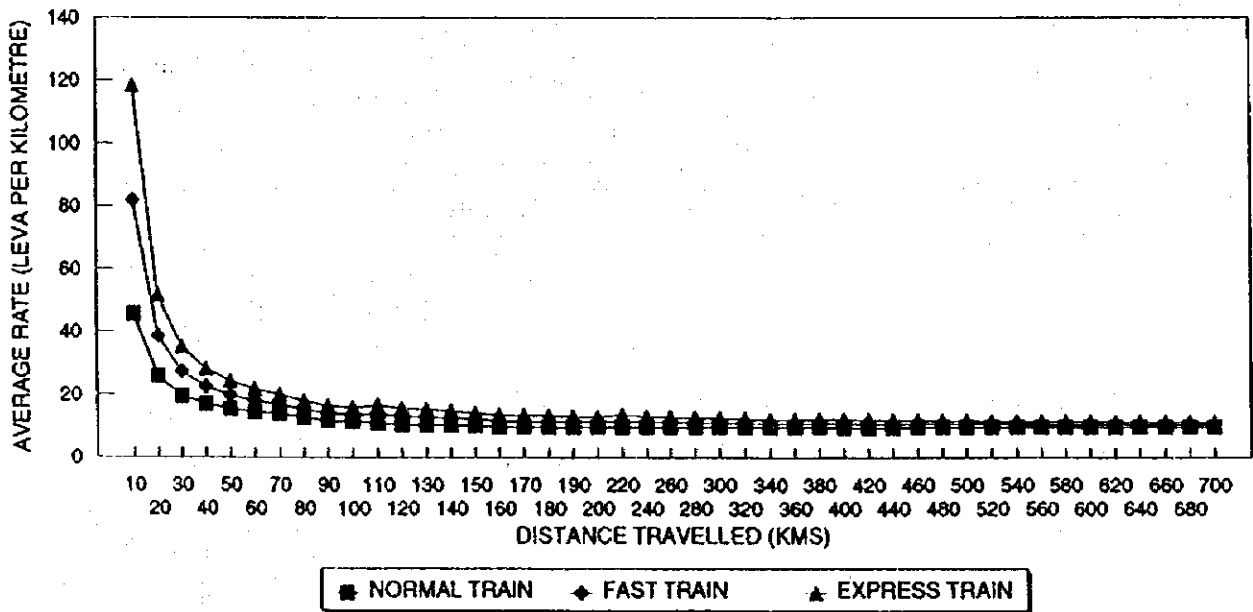
Details the passenger fares for Autumn 1997 were obtained from BDZ and were analysed to illustrate the underlying structure. A comparison was made with a similar analysis of the fare structure applicable during the winter of 1996 to identify the fare changes implemented in the intervening months. From this the following conclusions can be reached :-

- a) All passenger fares are heavily distance related and apply to each route. This is illustrated in the top graph of Figure 7.2.1. The bottom graph reveals that the average tariff rate per kilometre rapidly reduces by distance travelled and is almost a constant rate between 100 and 700 kilometres;
- b) The tariff levels are principally based on those for second class Normal Trains. First class is a factor of 1.5 times the Normal Train tariff.
- c) The additional charges for Fast Trains and Express Trains are supplements to the first and second class tariffs for Normal Trains that increase in four distance bands (1-100 kms, 101 - 200 kms, 201 - 360 kms and 360+ kms). These bands explain the minor kinks in the top graph in Figure 7.2.1 (the major kink at 200 kms simply reflects a change in scale from 10 kms to 20 kms intervals). The fares supplement for Fast Trains produces fares that are 4-6% more than for Normal Trains. The fares supplement for Express Trains produces tariffs that are 8-12% more than for Normal Trains;

**BDZ PASSENGER TARIFF ANALYSIS**  
**COMPARISON OF FIRST AND SECOND CLASS TARIFFS BY TRAIN TYPE**



**BDZ PASSENGER TARIFF ANALYSIS**  
**AVERAGE SECOND CLASS TARIFF RATE PER KILOMETRE**



**FIGURE 7.2.1**

- d) The large disparity between BDZ's fares and those of the bus competition that existed in 1996 has narrowed significantly. Even so, second class fares on most trains are still lower than bus/coach fares - by 10% for normal trains and by 4% for fast trains (fares on express trains are almost identical with bus/coach). Unlike in 1996 first class train fares are now more expensive than for bus/coach;
- e) BDZ's calender (long weekend) fares are 20-21% more expensive than normal weekday fares. It is notable that compared with the last tariff increase in April 1997 calender fares have been increased more significantly than the regular fares (27-32% compared with 7% respectively). This reflects the level of demand and strength of the market at weekends, particularly on Fast and Express Trains;

Within the restrictions of the existing tariff structure and facilities BDZ have already been introducing various marketing initiatives to adjust tariff according to the strengths and weakness of the total passenger market. This includes the following measures :-

- a) 'Calender prices' that are mentioned above to gain additional revenue from the strength of the market at weekends;
- b) 'Relational prices' where fares are reduced to specific destinations suffering severe competition from road services;
- c) 'Seasonal prices' whereby the fare structure is adjusted at certain times of the year. This was implemented in July 1997 ostensibly because of the lower usage during the summer months but also to correct for the downturn in traffic caused by the significant fares increases between February and April (four revisions amounting to over 700%);
- d) 'Train prices' where a supplement is charged on specific heavily used peak only trains to encourage passengers to transfer to adjoining ones.
- e) 'Train category prices' are the supplements for Fast and Express Trains described above. These principally reflect the superior service quality/speed of these services compared with Normal Trains.

As described in the Progress Report, there is a marked difference in the patronage and revenue by different passenger train service groups. Normal Trains are principally used for local rail journeys up to 100 kms. Fast Trains predominate thereafter, with a pronounced threshold up to 200 kms that corresponds with journeys between Sofia and Plovdiv/Pleven. Fast Trains are the

most important source of BDZ's passenger revenue, generating about 60% of the total. Express Trains form only 9% of total passenger revenue. International passengers comprise less than 1% of the total on BDZ. The predominance of local trips by Normal Trains leads to an average passenger trip length of 76.6 kms (in 1996) for the whole of BDZ even though the average for the higher revenue earning Fast and Express Trains is 160 - 200 kms.

## (2) Freight

BDZ produces a series of separate freight tariff tables for domestic traffic, for import & export traffic, for transit traffic, and for loaded and unloaded containers (separated into domestic, import & export, and transit containers).

Domestic freight traffic and containers are charged in local Bulgarian Leva. Domestic traffic tariffs are charged separately per tonne by distance according to three consignment weight categories (15, 20 & 25 tonnes) by the three classes (Class 1,2, & 3) of an internationally agreed commodity code grouping. This domestic tariff structure was revised in January 1997. Prior to that customers were charged by the size of the wagon provided rather than by the volume of cargo transported. Domestic containers loaded and unloaded tariffs are charged separately by size of container (20, 30 or 40 foot length) and by distance.

Import & export traffic and transit traffic differs in that all tariffs are levied in Swiss Francs. Wagonload traffic is charged in Swiss Centimes per 100kg by distance according to four weight categories (10, 15, 20 and 25 tonnes) for the same three train service classifications above. There are separate tariff rate tables for import & export traffic and for transit traffic. Containers are charged in Swiss Francs by container length (20, 30 or 40 foot), and also by distance, by loaded/unloaded, and by import & export or transit traffic.

A graphical illustration of the existing tariffs described above can be found in Appendix A to this section. In addition to the actual tariffs it has also been possible to illustrate the unit rate per kilometre for each of the corresponding tariff tables. From the graphical illustrations the following conclusions can be made about the underlying structure of the tariff rates :-

- a) The domestic freight and container rates are heavily distance related;

- b) Tariffs increase with the quality of service (as measured by the train service classification.)  
NB The tariffs for Class 3 trains were omitted but are less than those of Class 2.
- c) The cost per tonne declines with the size of the consignment providing a bulk discount;
- d) Similar to passenger, both the freight and container tariffs per kilometre rapidly reduce and level out at an almost constant rate from 250-300 kms onwards;
- e) The tariff structure for import & export and transit traffic (both wagonload and container) has a significantly different underlying structure as revealed in the unit rates per kilometre. Unlike the domestic tariff unit with a smooth curve, the reduction is in a series of steps, with thresholds at 120, 500, 1000, and 2000 kms distance. The discount available for longer distance traffic is therefore significantly less. As most of the import & export and transit traffics are by nature long distance it implies that the revenue BDZ receives from such traffic will be significantly enhanced.

In addition to the graphical illustration a separate analysis was undertaken of the structure of the freight tariff to determine the relationships within and between the separate tables. This revealed the following conclusions :-

- a) The domestic freight tariff per tonne is based on the 25 tonne rate using Class 3 trains. The 20 tonne rate is 30%, and the 15 tonne rate is 50%, more than the 25 tonne rate. The tariffs for Class 2 trains are 60% more, and for Class 1 trains 100% more, than the Class 3 rates;
- b) The domestic container tariff rate is based on a full 20 foot container. Full 30 foot containers are charged 50% more than a full 20 foot, and full 40 foot containers are charged 25% more than a full 30 foot. Empty containers are charged at 40% of the full rate for each size of container;
- c) The tariff for wagonload import & exports and transit wagonload traffic is based on the 25 tonne rate for Class 3 trains with transit traffic. The rates for 10, 15, and 20 tonne consignments are respectively 40%, 20% and 5% more than the 25 tonne rate. Tariffs for Class 2 trains are 20% more, and for Class 1 trains 30% more, than for Class 3. Tariffs for import and export traffic are uniformly 45% of the transit traffic rate;
- d) The tariff rate for import & export and transit containers is based on a full 20 foot transit container. 30 foot transit containers are 25% more than for 20 foot, and 40 foot containers are 20% more than for a 30 foot. As with the domestic containers, the rate for

empties is 40% that of full. Again the tariffs for import and export containers are uniformly 45% of the transit rate.

Whilst BDZ publishes tariff tables it also provides discounts to these rates to various freight customers. The actual rate charged is the published rate minus the discount negotiated by the customer. BDZ provides such discounts to most customers based on the volume/frequency of the cargo and the degree of competition. The latter is principally determined from the local knowledge of BDZ's agents at the stations. Tariff agreements, however, are made centrally within BDZ rather than being negotiated between the local staff and freight customers in the regions. Tariff discounts are agreed by the central Tariff Committee.

In addition to the published tariff tables BDZ make additional charges for demurrage and various other activities e.g. loading/unloading, shunting wagons to/from industrial branch lines, cleaning wagons, refrigeration of cargo. These charges are usually a fixed fee per wagon for each activity. They are additional to the haulage charge and will be levied if the various activities are requested by the customer.

Import & export traffic and transit traffic tariffs will be superseded from January 1998 with the introduction of the Unified Balkan Tariff rates throughout nine countries in the region (Bulgaria, Turkey, Romania, Former Yugoslavia, Albania, Serbia, Greece, Syria & Iran). The tariffs will be in Swiss Francs and based on UIC rates, with two commodity group classes. The objective is to increase transit traffic between Western Europe and the Middle East. It will be implemented using the existing legal basis but will subsequently require ratification from the Bulgarian Parliament.

With the introduction of the Unified Balkan Tariff new tariff tables have been developed for the import and export of goods through ports, principally Varna and Burgas. Separate tables will differentiate traffic into three groups according to whether it is carried in foreign owned wagons, in Bulgarian wagons, or is pure transit traffic across the country through border stations. The Unified Balkan Tariff will apply to the second two groups. Whilst final agreement on the rates has not yet been reached they will still continue to be levied in Swiss Francs.

### 7.2.3 Summary of Existing Tariff Framework

#### (1) Legal and Institutional Policy

A review of the legal and institutional framework for tariffs was made in the Progress Report and is summarised here. As a Bulgarian state owned enterprise BDZ's ability to determine the level of passenger fares and freight tariffs is constrained by the legal and institutional framework. Whilst BDZ has autonomy to set fares and tariffs there is an established procedure that BDZ must follow before a tariff revision can be implemented.

This legal and institutional framework is contained in three documents :-

- a) The law of the Bulgarian State Railway issued in Sofia on June 6th 1995 and published in the State Gazette No. 53 on June 9th 1995;
- b) Prices Act published in the State Gazette No. 87 on September 29th 1995 combined with the Regulations for the Application of the Prices Act dated October 6th 1995 and published in the State Gazette No. 91 on October 13th 1995;
- c) The Contract Plan established between the Bulgarian State (represented by the Minister of Transport and Minister of Finance) and the Bulgarian State Railways. This principally sets out the responsibilities of the State and BDZ concerning railway infrastructure and public service obligations, and payment of them by the State. The Plan for the period 1996 - 98 was agreed on 1st February 1996. The Contract Plan for 1997 - 98, whilst agreed by BDZ and the Ministry of Transport, has not been signed by the Ministry of Finance.

The conclusion of the review of the procedure for setting fares and tariff drawn from the above legislative and institutional details are :-

- a) BDZ undertakes their own analysis of passenger fares and freight tariffs;
- b) Proposals are made for fare and tariff adjustments to the Tariff Committee in BDZ;
- c) Revisions to the fares and tariffs are agreed by the Director General of BDZ;
- d) Revisions to the passenger fares used to require the agreement of the Ministry of Transport (MOT). Changes to State Organisations in September 1997 removed passenger



train services from the list of regulated prices under the Prices Act. Whilst BDZ now no longer requires the MOT's approval for passenger price increases they have to comply with a separately agreed revenue to cost ratio with the Ministry for passenger services of 1:2;

- e) Changes to fares and tariff rates need to be forwarded to the National Pricing Commission before they can be implemented;
- f) Compensation payments are provided by the State for restricting the level of passenger fares and for providing social services that BDZ would otherwise not operate. These payments, however, do not cover the full magnitude of the disparity. With the lack of agreement for the current year indicates that the procedure of payments for social services is in disarray.

## **(2) Policy Framework**

A review of the tariff policy framework was made by investigating several studies previously undertaken for BDZ by the EBRD, the World Bank, Travers Morgan and KPMG which investigated BDZ's costs and tariffs. The studies were listed in the Interim Report.

The review of the policy framework was made under the following headings :-

- a) Inflation protection;
- b) Exchange rate fluctuations;
- c) Government support;
- d) Cost attribution/recovery;
- e) Cost allocation models;
- f) Management information system (MIS);
- g) Branch Line unremunerative services;
- h) Market analysis.

The following issues were highlighted and have been updated where relevant:-

### **Inflation protection**

For the financial health of the corporation it is necessary that BDZ's fares and tariffs match the rate of inflation. This is particularly relevant because of the recent period of hyper inflation in Bulgaria. As shown in Figure 7.2.2 overleaf BDZ's internal passenger fares and freight tariffs tend to lag behind inflation. Following several significant increases early in 1997 fares and tariffs have now caught up with the Producer Price Index increase, but fall significantly below the Consumer Price Index increase.

### **Exchange rate fluctuations**

The rapid currency rate changes that occurred late 1996/early 1997 have had important consequences for BDZ. This is because international freight and ports freight traffic is levied in Swiss Francs. The rapid depreciation of the Lev resulted in a very considerable increase in revenue from such traffic. As shown by Figure 7.2.2, since the major changes in February the currency regained some of its lost value almost immediately and has experienced smaller changes since then. Since the implementation of the Bulgarian Currency Board in July the Lev would appear to have stabilised. It is important that the tariff policy should maintain the real value of these freight traffics in the event that any significant Lev appreciation erodes the income to BDZ.

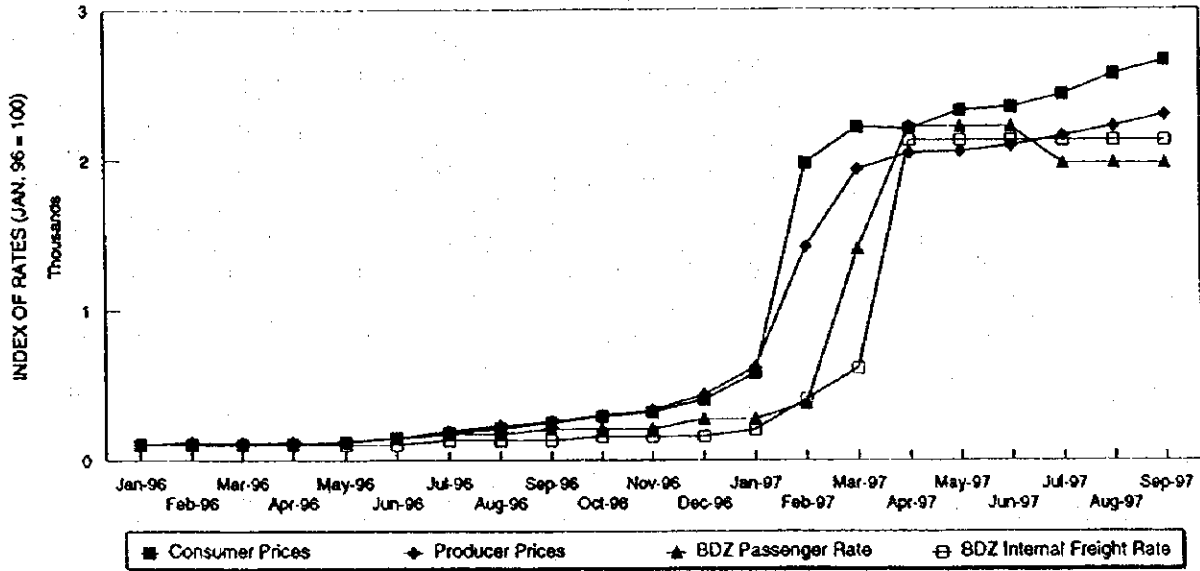
### **Government support**

The lack of agreement from the Ministry of Finance suggests that the difficulties of the performance of the Public Service Obligation (PSO) Contract with the Government referred to in the Interim Report are worsening. The need for an effective PSO arrangements has been commented on previously, in particular by the EBRD, the World Bank, and during the Railway Restructuring Project. It is also a key part of the railway policy of the European Union. In view of the constraints on Government expenditure since the implementation of the Bulgarian Currency Board there is an urgent need to clarify this issue. This clarification should be the responsibility of the Ministry of Transport (MOT). BDZ should consider its response if support payments are not forthcoming.

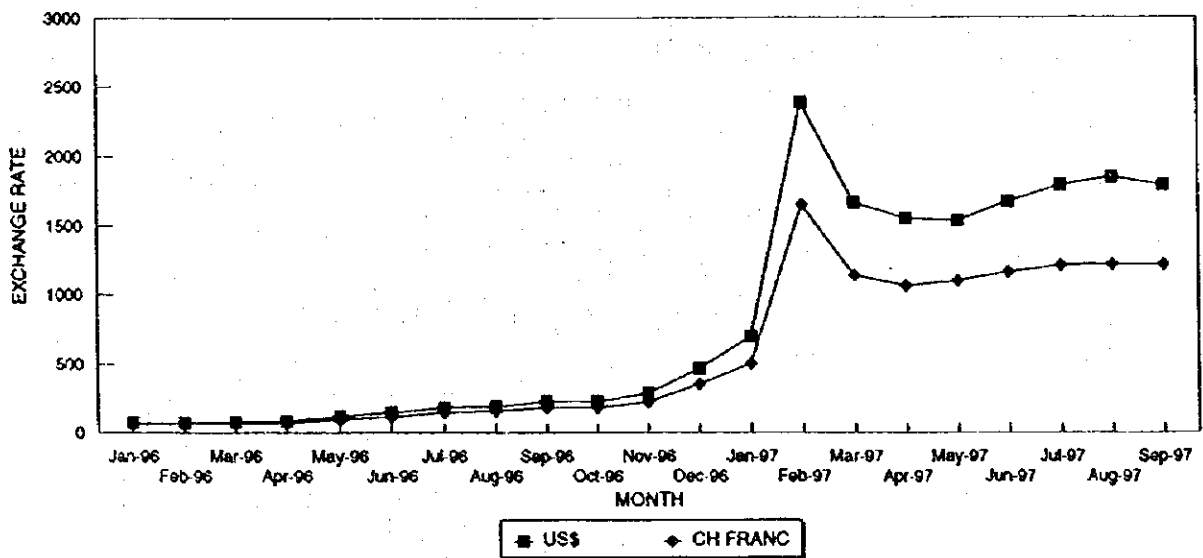
### **Cost attribution/recovery**

The principal system of cost allocation used within BDZ is that provided by the Economic Section of the Railway Research Institute (RRI). The format is in conformity with the 1991 Accountancy Act. Using this system shows that BDZ's freight services are profitable and are being used to

**BDZ TARIFF RATES**  
COMPARISON OF TARIFF INCREASES AGAINST INFLATION



**BULGARIAN EXCHANGE RATES**  
RATE OF EXCHANGE TO THE BULGARIAN LEV



**FIGURE 7.2.2**

cross subsidise the loss making passenger service. Unfortunately the reorganisation within BDZ after the 1991 Act led to the loss of much detailed cost information. Regrettably the ability to determine the costs by individual commodity classification was lost. As monitoring the performance of subsectors of the market is an important business function it is recommended that this ability to determine disaggregate costs be restored.

### **Cost allocation models**

The principal model of allocating costs to individual train services is that produced by the Operating Department of the RRI. This was described in the Interim Report with examples of output runs for typical freight and passenger services. Model runs are undertaken prior to quotations being provided to customers for potential traffic. The system provides the freight department with the level of costs below which tariff levels are not allowed to fall.

BDZ have received a quotation from CPCS Transcom Ltd of Canada (the successor organisation to Hickling) for updating the OSCAR cost model and intend to proceed with updating the existing system. As the model is several years out of date it is anticipated that it will take some time to collect the relevant data. At a meeting in BDZ on 12th July 1997 it was decided that OSCAR will become the principal cost allocation model once it is updated. In the meantime the existing cost systems will be updated and improved. BDZ's freight department have expressed a particular interest in the OSCAR model as it provides four levels of cost output that will allow them to set tariffs for marginal freight traffic.

To prevent the OSCAR model falling into disuse again it is important that personnel be trained to maintain its integrity. It is recommended that a transport economist and a software engineer be given the responsibility to do this. The former will be involved in the way costs are allocated within the model as BDZ's structure changes. BDZ should give serious consideration to the latter position as the Lotus 123 software OSCAR is written in is not used within BDZ and nobody has been identified with the relevant experience in this package. The training of two specialists was one of the principal decisions made at the BDZ meeting on 12th July.

With the identified need to improve the system of cost allocation within BDZ it is recommended that a Costing Committee be established to review the issues involved. In view of the planned restructuring of BDZ it is important that the passenger and freight departments should be

represented on this committee as well as those BDZ sections traditionally involved in costing. As the planned infrastructure organisation emerges it should also participate. In addition, it is recommended that external organisations such as the MOT, KPMG (BDZ's auditors), and an academic institution with expertise in costing be invited to become members. One of the principal initial tasks will be to review the basis of the existing costing models to ensure that the inbuilt formulas are as accurate as possible. With the planned split of the organisation into freight, passenger, and infrastructure many decisions will be required as to how costs should be allocated.

#### **Management information system (MIS)**

As detailed in the Interim Report it has been recognised that there is a need within BDZ to enhance its management information systems and to replace many manual data collection methods. The MIS strategy underway includes three component systems - a Passenger Information System (PIS), a Freight Operating System (FOS), and a Financial Management System (FMS). These new systems will allow costs to be identified by individual business activities and permit a 'bottom up' approach to BDZ costs. Only a small residual of joint costs will need to be distributed amongst business activities. Using a new 15 digit coding structure it will be possible to assess the costs by a hierarchy of BDZ's activities. It should be possible to combine cost and revenue data by business activities, markets and traffic flows. Only when such cost and revenue is matched is it possible to develop a tariff policy with the confidence that the appropriate level of costs are being covered.

It was always expected that OSCAR would be superseded by a new cost allocation/planning model within the FMS. This part of the FMS, however, has not yet been defined and BDZ plan to negotiate this with the successful contractor. If the contractor dictates this process, however, it is unlikely that the new model will meet the needs or be to the long term financial advantage of BDZ. Specifying this model within the FMS would be a valid role for the Costing Committee advocated above. Important issues that need to be included within such a model are :-

- a) To establish a direct link between the railways physical assets and the financial consequences of their use;
- b) It should be based upon the account codes and budgetary systems so that it provides details to the railway functional and business managers on a common financial language;
- c) It should provide an audit trail that enables all costs to be traced back to source;

- d) The introduction of a 'framework of agreement' documenting rules and conventions agreed between the railway businesses and functions about the allocation of joint and common costs
- e) It should be capable of providing financial information at sufficiently short intervals for management to react promptly to current business trends. Within this monitoring process it should be able to produce actual business results compared with what was budgeted, and to identify the reasons for variances at business unit and production levels;
- f) It should be able to provide a reconciliation of expenditure and revenue at all functional and business management levels, and the results of the annual accounts. Revenue, expenditure, and productivity would be optimised at the level of business units;
- g) Be suited to calculate Government funding requirements in respect to the PSO. This is particularly important in view of the current difficulties with the PSO;
- h) Provide the strengths and weaknesses of the overall business for the development of possible privatisation strategies;
- i) Is sufficiently user friendly that it can be used with confidence by headquarters and out based staff;
- j) Can be easily updated with physical and statistical data.

Neither the RRI models nor OSCAR fulfil these criteria. What is needed is something strategically different derived from the actual emerging accountancy costs and revenues that the new FMS will supply. A key issue with any such new computer system such as the FMS is to ensure that the data in the local area is entered correctly. Procedures will need to be developed and personnel trained to maximise the reliability of such data.

#### **Branch Line unremunerative services**

Probably the greatest disparity between revenue and costs on BDZ is that associated with branch line services, reflecting their rural nature and the poor level of passenger and/or freight traffic. Recognising this problem BDZ has proposed a programme of branch line closures and service reductions to the Ministry of Transport. BDZ, however, has not received the authority from the Ministry to proceed with the programme and are awaiting strategic direction as to how to proceed.

BDZ's branch line plan submitted to the Ministry of Transport appears to maximise the passenger/freight revenue from the proposals they have chosen for each line. Only on a few of the lines does BDZ's choice seem unclear. Their proposals, however, are based on the average cost for the whole network and do not represent the avoidable cost, and how much would be saved on each line. To quantify this will require a separate costing exercise for each.

### Market analysis

The Railway Restructuring Project (RRP) recommended that a flexible tariff policy be designed to match the market conditions taking into account the direct and indirect production costs. BDZ's market knowledge should be the basis of seeking traffic that covers its direct costs, contributes to indirect costs and to ensure that charging policies maximise revenue from it. The guiding principle is that customer revenues plus State support for each service equals costs.

As illustrated in Figure 4.6.2 in the Interim Report, rail distances are significantly longer than the equivalent road route. BDZ therefore suffers a comparative disadvantage against bus services and will need to increase average train speeds significantly to compete effectively in terms of journey time. Unlike many western European countries road traffic in Bulgaria is not significantly delayed by the effects of congestion. This will limit BDZ's ability to apply passenger tariffs above those of bus competition.

It is by exploiting the comparative advantages of rail that BDZ can expand its market against road competition. Efficiency of passenger and freight services will be important both to provide a quality service to the customer and to minimise the average cost per tonne/passenger kilometre. As the market strengthens it will be possible to raise tariffs in real terms. Tariff reductions can then be applied selectively to expand the base level of traffic.

There are some commodities e.g. for coal and aggregates where rail is the natural form of land transport and can be classified as a monopoly provider. The railway operator could exploit this situation by raising tariffs substantially, knowing that the firms extracting these commodities have no other option than to pay. Transport costs for these firms are a major component of total production costs and tariff increases will automatically be passed on in terms of higher prices for the products. Whilst acting in a commercial manner and exploiting its comparative advantage BDZ will need to avoid being accused of operating in a monopolistic way for some of its services.

Investigation and analysis of the market is more widespread in BDZ's passenger's department than in the freight department. They regularly monitor the competition from bus services and have adjusted tariffs and services accordingly. An important deficiency, however, in both departments is the lack of systems available to generate and monitor their railway traffic by origins and destinations. This is important not only for planning future services but also an important business function to check on the performance of individual traffic flows and to take corrective action when necessary. It is regrettable that the passenger department's efforts to do this have suffered from the recent cutbacks in staff in BDZ.

An important part of market analysis is to quantify how passenger or freight customers would react to changes in service pattern and/or tariffs. These are commonly known as elasticity measures. Such information is not available in BDZ. These can be derived by 'revealed preference' techniques of investigating data to reveal the effect on actual traffic movements following such changes. Alternatively, stated intention or stated preference survey techniques on customers can be used to test the affect of hypothetical changes in service pattern/tariffs. The on train survey (see Appendix B) conducted in September 1997 was able to derive some elasticity measures for BDZ.

#### **7.2.4 Revenue and Cost Analysis**

The cost and revenue analysis undertaken for the Interim Report combined various data sources from BDZ. The following analyses were undertaken :-

- a) Costs of train movements on different route sections of BDZ's network using the RRI model;
- b) The link between the cost of train movements and average revenue received for freight and passenger services;
- c) The link between the average cost of commodity movements and the average revenue received by each commodity;

The conclusions of the route analysis of passenger and freight services were :-

- a) There is a remarkable similarity in costs per passenger kilometre on BDZ's principal east-



- west routes. Five of the eight results were very similar;
- b) The passenger costs on those routes are also very similar irrespective of train type, suggesting that the costs are influenced more by the route infrastructure and less by the type of rolling stock;
  - c) Higher train speeds increase power consumption costs;
  - d) Diesel traction costs are more expensive than electric traction;
  - e) The costs of fixed infrastructure per train decreases with increased train frequency;
  - f) Routes with difficult terrain have higher fixed infrastructure costs (from bridges and tunnels etc) and traction costs (often requiring more than one locomotive) e.g. Ruse - Svilengrad. Conversely, the costs of routes with easy terrain are significantly lower e.g. the cheapest unit cost for freight is along the direct route from Sofia - Burgas via Karlova;
  - g) The fixed cost element of shorter distance services is a larger proportion of total costs than for longer distance services. This increases their unit costs;
  - h) The significant unit costs of branch line services relates to the infrequent service level, the need for diesel traction, the low number of passengers on the route, and their limited route length. The fixed cost element of these shorter distances services is a larger proportion of total costs.

Comparison of the freight revenue and costs in the Interim Report indicated that due to the rapid increase in revenue from the currency depreciation many of BDZ's freight flows may be covering their costs and returning a profit to the organisation, particularly those commodities with a significant proportion of ports or international traffic. Comparison of the passenger revenue and costs confirmed that the revenue from passenger services is substantially lower than the costs, covering only 35-40%. The conclusion was that, unless compensated by Government, BDZ should seek to raise passenger tariffs substantially to reduce the financial drain on the organisation or with certain services, such as the branch lines, to withdraw them altogether.

The separate commodity analysis in the Interim Report based on the Travers Morgan Transport report of 1994 gave a less optimistic result than by combining the average freight revenue rates with the route costs produced by the RRI model. BDZ's freight services in 1996 were shown to just fall short of covering their full costs, principally due to the decline in volume and income from Petroleum traffic.

The analysis undertaken for this Final Report builds upon the analysis described above. It concentrates on using actual costs produced by the Economics Section of the RRI rather than any of the cost models previously used.

### (1) Passenger

BDZ's passenger information is not categorised into the same level of detail as for freight department. It is not possible to allocate revenue by train service type. Figure 7.2.3 overleaf shows the trend in total passenger traffic and revenue from January 1996. Table 7.2.1 below summarises the average income by quarter years for 1996 and 1997.

**TABLE 7.2.1  
PASSENGER PERFORMANCE STATISTICS 1996 - 97**

	1Q 1996	2Q 1996	3Q 1996	4Q 1996	Total 1996	1Q 1997	2Q 1997	3Q 1997
Passgr No. (Mill)	14.03	15.91	18.13	18.05	66.12	26.11	18.01	20.59
Passgr Kms (Mill)	1088.87	1217.50	1464.11	1294.76	5065.24	1587.50	1355.44	1592.17
Avg Kms Per Passgr	77.68	76.52	80.76	71.73	76.62	60.80	75.26	77.33
Passgr Rev (Mill Lv)	582.06	770.46	1351.59	1778.44	4482.55	4932.38	13667.36	16600.54
Other Rev (Mill Lv)	49.52	57.38	93.99	126.94	327.83	380.57	859.51	960.44
Total Rev (Mill Lv)	631.58	827.84	1445.58	1905.38	4810.38	5312.95	14526.87	17560.98
Rev/Passgr Km (Lv)	0.53	0.63	0.92	1.37	0.88	3.11	10.08	10.43

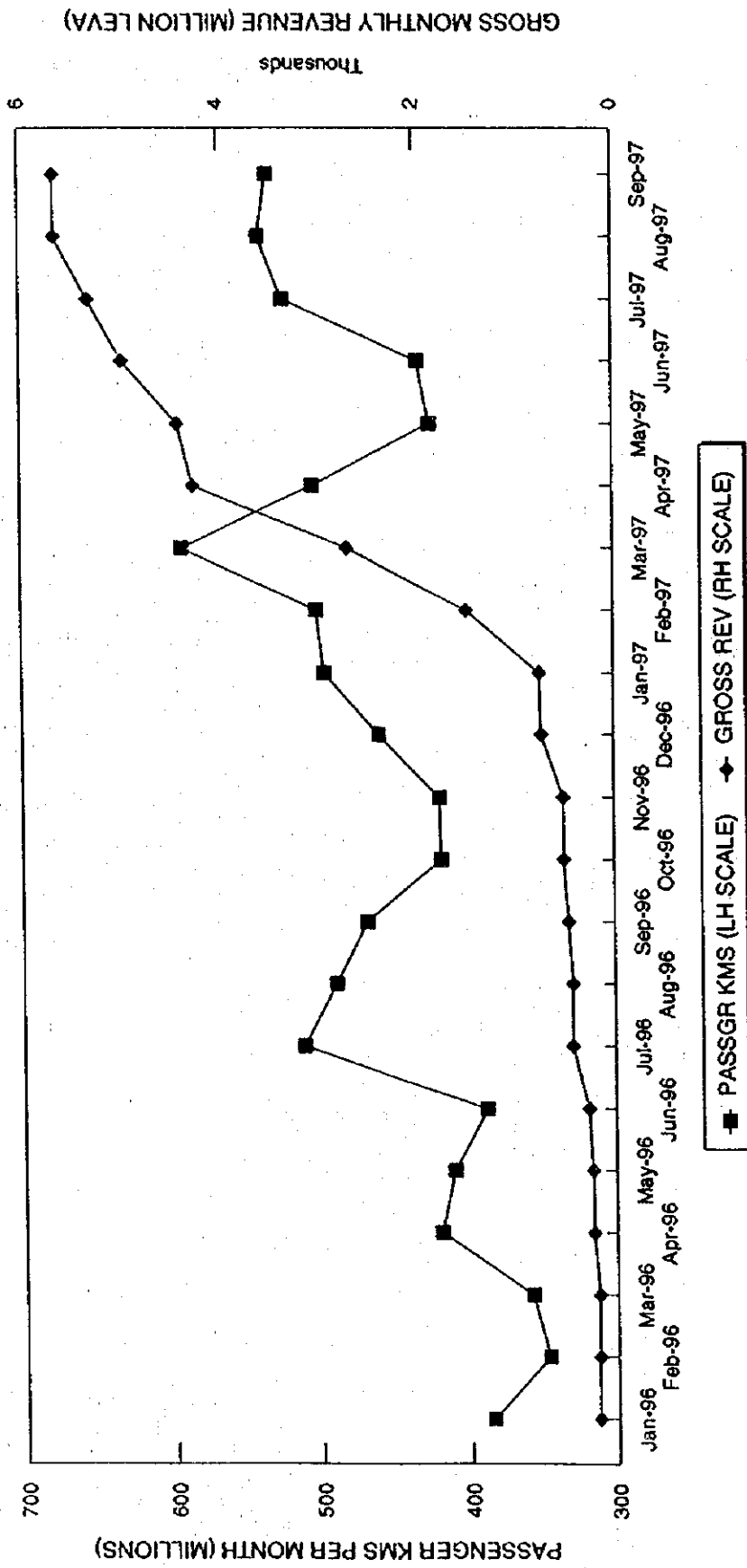
Notes : Other Revenue from Parcels & Postal traffic, and from Sleeping Cars.  
Rev Per Passgr Km calculated from Passgr Rev figure.

In the first quarter of 1997 77% of passengers were on Normal Trains, 21% on Fast Trains and only 2% on Express Trains. In the second quarter the proportions were 70%, 27% and 3% respectively.

From this analysis the following conclusions can be reached :-

- a) Despite the monthly fluctuations in the level of passenger kilometres there would appear to be discernable long term growth in traffic, indicating strength in the passenger market;
- b) The average distance travelled (at about 74-76 kms) is remarkably constant and has been so for more than 10 years. There is an annual peak in July/August reflecting the significant increase in long distance holiday traffic and decrease in shorter distance commuting traffic. Longer distance traffic from Fast and Express Trains is to be preferred as it produces more revenue for BDZ;

**BDZ PASSENGER ANALYSIS**  
TREND IN PASSENGER TRAFFIC & REVENUE



**FIGURE 7.2 3**

- c) There was a very large increase in short distance traffic in late 1996/early 1997 due to the fuel crisis and the rapid increase in inflation at that time. Rail tariffs were comparatively cheap. The rapid tariff increases early in 1997 priced off much of this shorter distance traffic leading to a very significant increase in passenger revenue. Tariffs were reduced in April 1997 to stem the rapid loss of passenger traffic. Nevertheless revenue still continued to grow. Traffic levels rebounded in July 1997.

## (2) Freight

The commodity revenue analysis for 1996 undertaken for the Progress Report was updated for the first half of 1997. Due to recent important and significant tariff changes during this period the revenue analysis was split into quarters years for 1996 and 1997. Table 7.2.2 overleaf updates the 1996 freight commodity analysis table that was in the Progress Report. An additional row was added to the bottom of both halves of the table to show the differences between the 1996 and 1997 values. Figure 7.2.4 illustrates the trend in the principal revenue output measures for 1996 and 1997 (data in Appendix C). From these the following conclusions can be made :-

- a) There has been a significant decrease in both domestic and international traffic as shown by the drop in tonnes and tonne kilometres (by -22% and -15% of 1996 values respectively);
- b) This loss has almost been offset by a significant growth in traffic to/from the ports (by 22%);
- c) There have only been minor changes to the average load carried and average haul length;
- d) There has been a very significant increase in net revenue (by almost 700%). The increase in average revenue per tonne km to domestic freight (at over 900%) reflects the significant domestic tariff increases that took place early in 1997. These are shown in Figure 7.2.4;
- e) Complementing this has been the increase in revenue from ports and international traffic (both over 600%) due to the depreciation of the Lev against the Swiss Franc. With a stabilisation in the currency the growth in income from these two traffics has slowed down. Revenue per tonne kilometre from international traffic actually declined slightly in the second quarter of 1997
- f) Revenue per kilometre for ports traffic that usually exceeded domestic traffic now lags behind it. Even though the volume of this traffic is growing significantly the revenue

TABLE 7.2.2

FREIGHT COMMODITY ANALYSIS FOR JANUARY-JUNE 1997

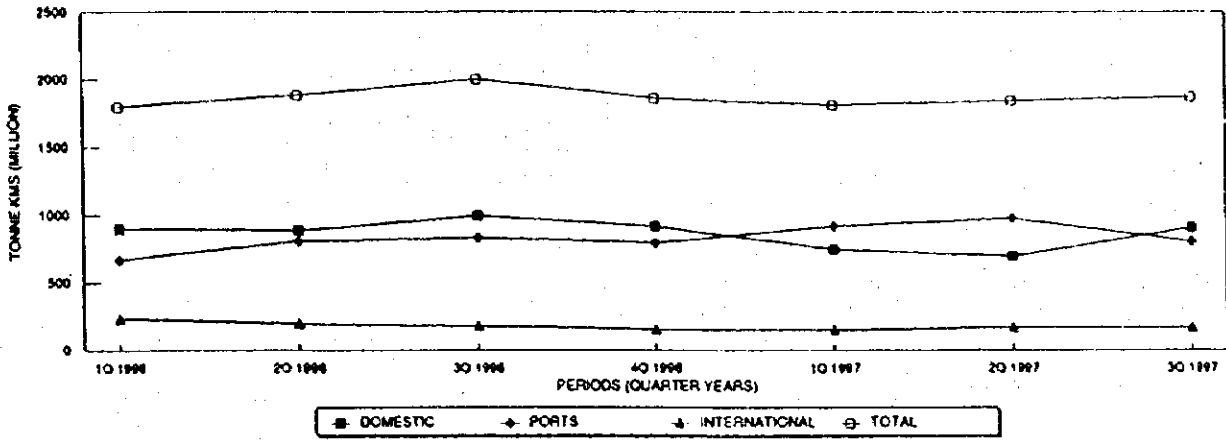
Commodity Code	Commodity Name	Tonnes (000)			Tonnes (Million)			Revenue (Million Level)							
		Domestic With Ports	Purely Domestic Only Ports	International	Domestic With Ports	Purely Domestic Only Ports	International	Domestic With Ports	Purely Domestic Only Ports	International	Total	% Total			
01	Coal	3737	2505	1230	3738	2505	1230	740	26.3%	15178	4304	10780	34	13117	14.0%
02	Crude Oil & Petroleum Products	689	654	14	887	654	14	271	7.4%	8498	5119	286	245	8450	4.7%
03	Crude & Concentrates	1802	77	1524	1811	77	1524	639	14.7%	11809	247	11593	51	11880	14.1%
04	Metals	1576	556	1020	1708	556	1020	870	18.0%	12361	2322	10040	1527	13889	16.6%
05	Machinery & Equipment	17	16	1	48	16	1	16	0.4%	79	37	42	411	488	0.6%
06	Cement	768	322	436	612	322	436	278	6.3%	2970	1168	1782	192	3162	3.7%
07	Bricks & Road Tiles	61	51	10	65	51	10	14	0.4%	210	210	0	14	224	0.2%
08	Timber	289	258	31	322	258	31	81	2.2%	2888	1115	153	638	1907	2.3%
09	Quarry Stone	1105	1102	3	1107	1102	3	64	1.5%	843	793	50	8	861	1.0%
10	Non-Metalliferous Minerals	897	448	179	1324	448	179	187	6.1%	3144	1874	1271	264	3408	4.0%
11	Encrusted Earth	0	0	0	0	0	0	0	0.0%	0	0	0	0	0	0.0%
12	Corn & Fodder	320	292	28	378	292	28	135	3.7%	1823	1442	62	523	2044	2.4%
13	Sugar Beet	0	0	0	0	0	0	0	0.0%	0	0	0	0	0	0.0%
14	Fruit & Vegetables	429	110	318	617	110	318	178	3.8%	2190	217	1972	801	2981	3.5%
15	Ferrous	10	4	6	42	4	6	11	0.3%	48	19	48	320	368	0.4%
16	Alcoholic & Soft Drinks	1088	1025	63	2782	1025	63	977	18.9%	14671	8607	6314	2345	22986	26.4%
17	Other Products	1882	784	1100	3766	784	1100	372	10.0%	22608	27883	44412	1413	10049	100.0%
<b>Total</b>															
<b>Total</b>															
<b>Total</b>															

Note: 1996 Freight Totals Have Been Revised and Compared With January - June 1997

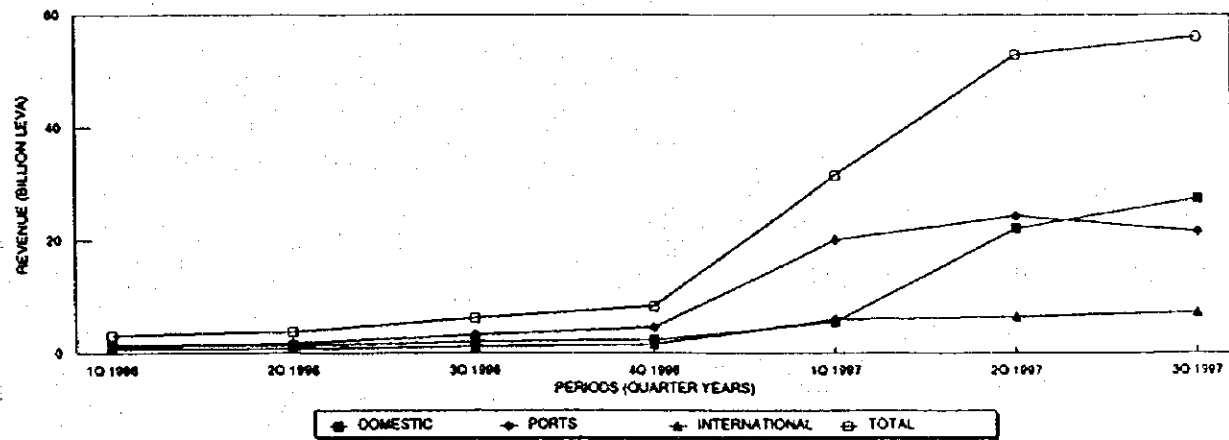
Commodity Code	Commodity Name	Average Load (Tonnes)			Average Haul (Kms)			Average Revenue (Leva Per TonneKms)				
		Domestic With Ports	Purely Domestic Only Ports	International	Domestic With Ports	Purely Domestic Only Ports	International	Domestic With Ports	Purely Domestic Only Ports	International	Total	
01	Coal	84.65	54.55	36.57	34.84	59.83	320.04	50.53	19.52	27.04	54.31	20.56
02	Crude Oil & Petroleum Products	62.04	52.02	49.13	31.99	326.83	178.33	20.15	19.52	47.34	101.38	20.88
03	Crude & Concentrates	96.07	37.55	59.68	59.50	199.48	194.09	32.08	15.97	27.24	27.71	22.08
04	Metals	45.99	39.19	48.05	46.00	268.23	250.15	33.24	15.68	26.15	40.00	24.24
05	Machinery & Equipment	28.87	26.72	29.48	21.12	193.43	348.02	21.38	12.08	124.48	32.87	30.83
06	Cement	65.89	50.41	60.34	293.17	225.47	115.84	19.37	18.38	11.91	30.72	13.84
07	Bricks & Road Tiles	44.83	44.97	41.15	42.84	215.47	271.01	19.06	19.27	0.00	4.35	15.73
08	Timber	78.30	29.51	27.14	29.34	201.61	223.41	14.38	17.19	36.93	59.64	23.69
09	Quarry Stone	64.45	54.49	44.92	39.48	376.66	308.88	14.67	14.67	39.67	17.53	15.26
10	Non-Metalliferous Minerals	87.71	97.04	55.97	57.67	285.65	319.73	17.48	14.45	29.77	34.28	19.21
11	Encrusted Earth	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR
12	Corn & Fodder	81.81	51.88	48.92	29.84	382.81	274.61	12.82	12.82	11.89	32.60	15.18
13	Sugar Beet	28.84	24.94	34.65	34.63	276.68	ERR	7.27	7.27	ERR	ERR	7.27
14	Fruit & Vegetables	34.19	31.51	34.65	24.85	288.58	272.22	6.74	15.89	0.00	25.84	19.89
15	Ferrous	80.86	49.82	52.00	48.60	248.35	240.47	20.84	12.56	50.27	35.52	33.66
16	Alcoholic & Soft Drinks	38.24	39.82	43.07	41.19	342.42	200.55	29.77	29.77	31.77	36.73	32.87
17	Other Products	47.84	39.20	38.59	40.67	282.04	290.01	30.59	29.77	23.47	28.60	23.10
<b>Total</b>												
<b>Total</b>												
<b>Total</b>												

Note: Domestic With Ports Figures Have Been Disaggregated into Purely Domestic and Domestic Only Ports

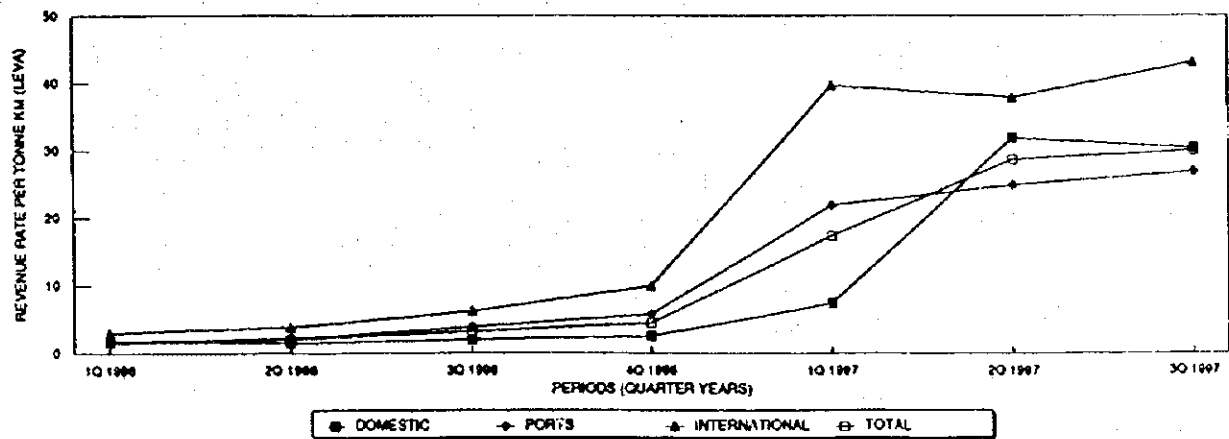
**BDZ FREIGHT TRAFFIC**  
TRAFFIC LEVELS



**BDZ FREIGHT TRAFFIC**  
REVENUE



**BDZ FREIGHT TRAFFIC**  
AVERAGE REVENUE PER TONNE KILOMETRE



**FIGURE 7.2.4**

impact is being eroded by the appreciation of the currency. There would appear to be a clear case for increasing the ports tariffs to maintain the relative differential between domestic and ports traffic.

### (3) Costs

The principal method of cost allocation within BDZ is that prepared by the Economics Section of the RRI in accordance with the 1991 Accountancy Act. The railway departments collate such data and forward it to the RRI for aggregation and analysis. Costs are collected by salaries, social insurance, materials, fuel, electricity, depreciation, miscellaneous activities, and external services (principally performed by contractors) within the departments. To these are added the costs of BDZ headquarters and miscellaneous central functions. The latter includes the Revenue Control Office, RILA, the Computer Centre, Sleeping Car services, Marketing & Forwarding, Magazines, and the Training Centres.

The RRI allocates the costs to passenger and freight train services, and produces a series of unit costs by various operational indices. Whilst operational and traincrew costs can be reasonably accurately allocated, the jointness of infrastructure costs mean that 70-80% are not directly attributable and are added on as a mark up of approximately 100%.

As mentioned above, prior to the 1991 Act it was possible to allocate costs more accurately to activities, in particular identifying costs by specified service groups/commodities. This should be restored under the new MIS. Business managers will then be able to tailor tariffs to the requirements of particular components of the passenger and freight markets.

In spite of the limitations of the existing procedures it may be possible to adapt them in order to identify the short term and long term marginal costs as well as the non variable fixed costs. This should be considered. Whilst initially this will only be for the whole of the freight and passenger business it could gradually be extended to identify costs to subsectors of the market. Examples of the type of costs to be included into each cost category are illustrated overleaf :-

- a) Short term marginal
  - Fuel & electricity for locomotives/EMUs;
  - Drivers and traincrew pay and social costs;
  - Maintenance and repair of specific rolling stock used;
  - Specific material supplies for trains and stations;
  - Specific yard and terminal staff involved in operations.
- b) Long term marginal
  - Specific infrastructure (track, signalling, and electrification) maintenance activities;
  - Depreciation and interest charges on rolling stock used;
  - Signal operations and despatching;
  - Specific business activities at headquarters or at stations;
- c) Non variable
  - Non specific infrastructure maintenance activities;
  - Non specific operations functions;
  - Non specific station and headquarters functions.
  - Depreciation and interest charges on infrastructure and terminals.

This is similar to the breakdown of costs provided by the OSCAR costing system. The difference is that whereas OSCAR relies on unit cost information within the model, the adaption of the system used by the Economics Section of the RRI will be based on emerging actual costs. As mentioned above a 'framework of agreement' will need to be produced by the railway businesses and functions about the allocation of joint and common costs. To do this with the existing procedure will provide important lessons for the specification of the cost model to be introduced within the MIS.

To assist this it is important that the computer facilities within the Economics Section of the RRI are improved to alleviate much of the manual processing of cost data that currently occurs. This will allow more time to be devoted to analysing the cost data.

#### **(4) Correspondence Between Revenues and Costs**

The output measure of profitability mainly used within BDZ is that linking revenue per passenger/ freight kilometre with costs. This is only produced for the whole of the passenger and freight businesses and not disaggregated into any subsectors. Tables 7.2.3 and 7.2.4 below summarise



the results for 1996 and the first two quarters of 1997. They were derived from BDZ's Volume and Revenue Accounts that equate with BDZ's Balance Sheet and include the adjustments made by BDZ's Revenue Control and International Settlements section. In addition, gross and net revenue totals are provided. The latter excludes VAT (levied on domestic services) and (for passenger services only) insurance payments. This explains the differences with the rates detailed in Table 7.2.1 that are derived from consignment notes.

**TABLE 7.2.3**  
**BDZ FREIGHT SERVICES : PROFITABILITY RATIO**

	Total 1996	1Q 1997	2Q 1997
Gross Revenue Per Tonne Km (Leva)	2.90	19.42	30.63
Net Revenue Per Tonne Km (Leva)	2.53	16.97	26.20
Costs Per Tonne Km (Leva)	2.33	11.88	19.90
Ratio Gross Revenue/Cost	1.24	1.63	1.54
Ratio Net Revenue/Cost	1.09	1.43	1.32

**TABLE 7.2.4**  
**BDZ PASSENGER SERVICES : PROFITABILITY RATIO**

	Total 1996	1Q 1997	2Q 1997
Gross Revenue Per Passenger Km (Leva)	0.88	3.11	10.08
Net Revenue Per Passenger Km (Leva)	0.73	2.60	8.15
Costs Per Passenger Km (Leva)	3.18	11.85	28.51
Ratio Gross Revenue/Cost	0.28	0.26	0.35
Ratio Net Revenue/Cost	0.23	0.22	0.29

From this is it clear that BDZ's freight services are profitable and that tariffs are currently more than covering their costs. The revenue to cost ratio improved significantly with the currency depreciation and tariff increases early in 1997. A caution to this, however, is that depreciation charges are based on historic costs and it is known that BDZ is not making adequate allowances for capital replacement. This could increase such costs considerably and is discussed within financial analysis section of the report. If such a change in the cost basis is envisaged, tariff

increases should be planned well in advance rather than to make a single large increase that will have a severe impact on traffic levels.

As shown by Table 7.2.4 the passenger tariff increases early in 1997 led to a significant improvement in BDZ's revenue to cost ratio. Average revenue per passenger increase in the second quarter of 1996 was 11 times higher than in 1996. Cost increased at about 9 fold over the same period, with a very significant growth during the second quarter of 1997. To achieve the agreed ratio of costs to revenue of 1: 2 with the MOT and World Bank BDZ's tariffs will need to increase significantly early in 1998.

### **7.2.5 Recommended Tariff Policies**

#### **(1) Introduction**

From the analysis of BDZ's information sources and the on train survey the following recommendations have been made as to how to develop passenger and freight tariffs. They have been discussed with the passenger and freight department of BDZ. In addition future planned tariff increases are proposed and summarised in Appendix D.

It is clear that tariff improvements have already been introduced and there are proposals soon to be implemented in the freight department. The policies therefore seek to build upon this. The two area of weakness that have been identified are :-

- a) The need to improve on the analysis of costs so that tariff rates can be set by subsectors of the passenger and freight market according to their respective costs. The bottom line profitability of each sector of the market will be identified;
- b) The need to improve on the analysis and monitoring of the market so that the strength of subsectors of the total can be identified and the affects of changes be determined on individual traffic flows. Corrective action can be taken when a decline in traffic on a route is identified.

## (2) Passenger

- a) Market pricing principals have already started to be implemented into BDZ's passenger tariffs. These are developed further;
- b) The long term objective should be that tariffs are set by individual origin/destination station pairs by the strength of the market and train service quality/frequency on each route. The passenger department would like to do this but are dependant on the introduction of the new Passenger Information System that is being implemented. Its introduction should not be delayed. As an interim measure towards this the existing distance related tariffs could be produced separately for each route;
- c) With the improvement of quality and speed of services an emphasis should be made to exploit the first class travel market along with real price increases. The passenger survey identified a distinct first class market. Brand loyalty could be developed amongst the business and commercial community in the principal cities and towns. The surplus first class capacity at weekends could be offered to leisure passengers travelling second class with the charge of a small supplement sold by ticket inspectors on the trains;
- d) Passengers travelling on discount tickets e.g. students and the elderly should be restricted from travelling on peak trains to allow the capacity to be used by those with full fare tickets. BDZ's attempts to do this in the past have been thwarted by political pressure;
- e) Off peak tariffs should be offered outside of the daily peak periods in order to fill surplus capacity throughout the day and increase marginal revenue. The passenger survey identified many leisure passengers travelling on weekday trains who are price sensitive;
- f) The planned introduction of new and refurbished rolling stock should be accompanied by increased tariffs to cover the improvements in service quality and to cover the additional depreciation charges;
- g) There is an urgent need to clarify the Contract with the Government for the support of passenger services. BDZ should consider its response if support payments from the Government are not forthcoming;
- h) A survey budget should be made available for on-going research of the passenger market, either using in house resources or external agencies;
- l) Very large single tariff increases should be avoided. Instead a number of smaller increases should be phased over a period of months.

### **(3) Freight**

- a) BDZ has three distinct segments within the total freight market - International, Ports, and Domestic. These are considered separately;
- b) International Traffic will be subject to the Unified Balkan Tariff Agreement that is due to be implemented in January 1998. BDZ is therefore constrained in the flexibility of tariffs for this traffic. International Traffic, however, produces the highest revenue per tonne kilometre for BDZ and the aim of the unified tariff is to increase the volume of international traffic throughout the Balkan area. The Consultant agrees with this aim;
- c) Ports Traffic is the highest revenue earner for BDZ and has been growing in volume. It is vital for the financial stability of BDZ. Whilst tariffs are levied in Swiss Francs and their value has appreciated with the recent currency rate depreciation, it is important that the January 1993 tariff levels are regularly revised to at least maintain their real value;
- d) Domestic Traffic is the largest volume of traffic on BDZ. The relative difference between the effective tariff rates for this traffic compared with the other two has narrowed with the large domestic tariff increases early in 1997. It is recommended that further real tariff increases be applied according to market conditions;
- e) Many of the BDZ's large customers receive discounts from the published tariff levels. Such discounts are normal but should remain commercially confidential so that competing road hauliers are unaware of the effective charges levied by BDZ;
- f) There is an urgent need to improve the cost basis used in setting BDZ tariffs to ensure that freight services are priced profitably. This is elaborated below. Quotations to potential customers should be processed speedily and should be the responsibility of the freight department.

### **(4) Costing and Cost Allocation**

- a) As the SRAZ/SPRI model developed by the RRI is the only computerised revenue/cost allocation system currently available is important for BDZ's financial health that the inbuilt formulas are as accurate as possible. A Costing Committee should be established to review the basis and structure of the models. This committee should include external members e.g. BDZ's auditors KPMG, as well as representatives from BDZ. It would then be involved in the strategic decisions about cost allocation during the forthcoming

restructuring of the organisation;

- b) BDZ plan to accept quotation to reinstate the OSCAR cost model. This will allow BDZ to undertake more detailed planning and tariff setting. Its different levels of costs are of particular benefit to the freight department when setting tariffs. As the model is now four years out of date it is anticipated it will take some time to do this. BDZ should allocate a transport economist and software engineer to ensure the model's continued integrity;
- c) As the FMS will be the basis of the future financial system it is important to clarify the method of cost allocation that will be used within the new system. This could form part of the remit of the Costing Committee. Prior to the FMS the existing costing procedures centred on the Economics Section of the RRI could be enhanced to identify marginal and fixed costs which would assist in tariff setting.

## **7.3 MARKETING AND COMBINED TRANSPORT**

### **7.3.1 Introduction**

Marketing can be an important tool for the BDZ's future freight business development. It is particularly important in the business areas where there is a severe competition based on the market economy or where there is a business growth potential. In that sense, marketing in the area of freight transport, especially combined transport, will be critical in the future because it is actually the sort of business area. Therefore, in this chapter we focus on (i) marketing of freight transport and (ii) combined transport.

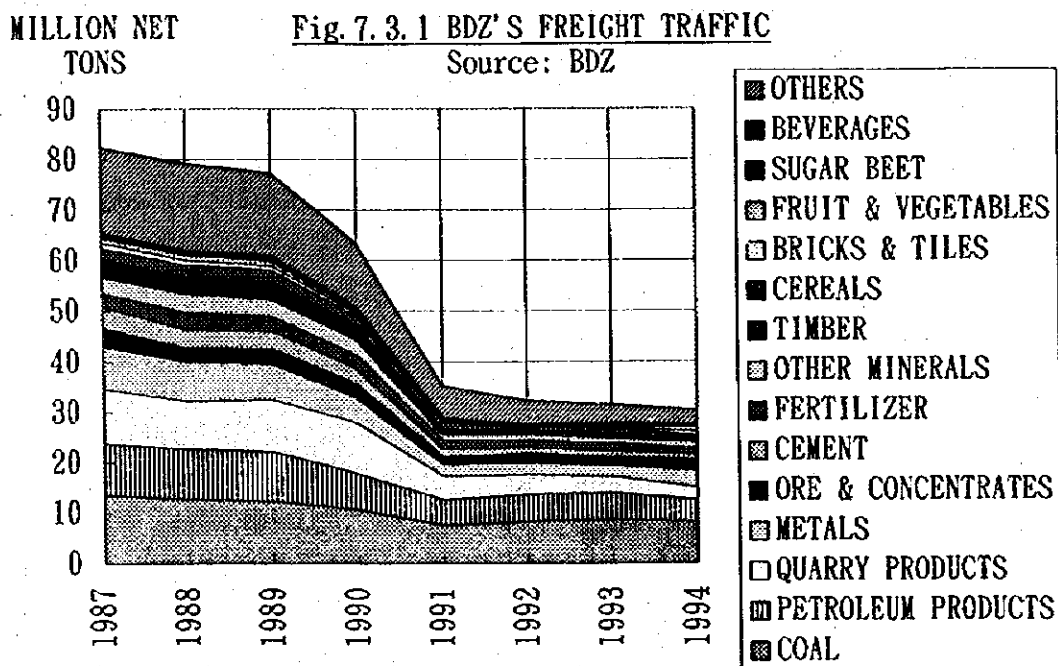
In order to formulate a future strategy for marketing and combined transport, first of all we have to correctly understand the general outlook of the overall Bulgarian rail freight transport market structure (whether it is related to combined transport or conventional wagon-load transport), and observe the BDZ's present marketing and combined transport systems based on that. Then, the understanding and observation are compared with the situations in Europe, the United States, and Japan, thereby contrasting the distance between BDZ and other railway companies. Finally, the implication given from the comparison is used to formulate BDZ's effective future strategies in terms of marketing and combined transport. In addition, brief analysis on the combined transport investment is made.

Therefore, this chapter is mainly divided into three parts. The first part, the basic study part, is the observation on the present situation of the BDZ's marketing and combined transport. The second part is observation on the railway market and combined transport situations in Europe, the United States, and Japan. The third part is analysis and recommendation on the BDZ's future strategy in freight transport marketing and combined transport. Data and information necessary for the observation and analysis were collected through (i) the interviews with several relevant BDZ officials, BDZ's major customers and Bulgarian and European combined transport-related companies, and (ii) the field trips to several inland container/combined transport terminals and such ports as Varna, Burgas, and Rousse.

## 7.3.2 Present Marketing of Rail Freight Transport in Bulgaria

### (1) Freight Transport Market Structure Change

Generally speaking, freight volume transported by BDZ drastically decreased in the 90's. In 1987 the total freight volume was 82.5 million tons, while that in 1994 is only 30.3 million tons, or 36.72% of the 1987 volume. The change is reflected in the BDZ's commodity-wise freight traffic transition (See Figure 7.3.1). The volumes of such bulk cargoes as coal, petroleum products, quarry products, metals, ore & concentrate, cement, and fertilizer have almost halved, and the volumes of other manufactured goods or general cargoes have dangerously decreased to be only about one-fifth of the 1987 ones.



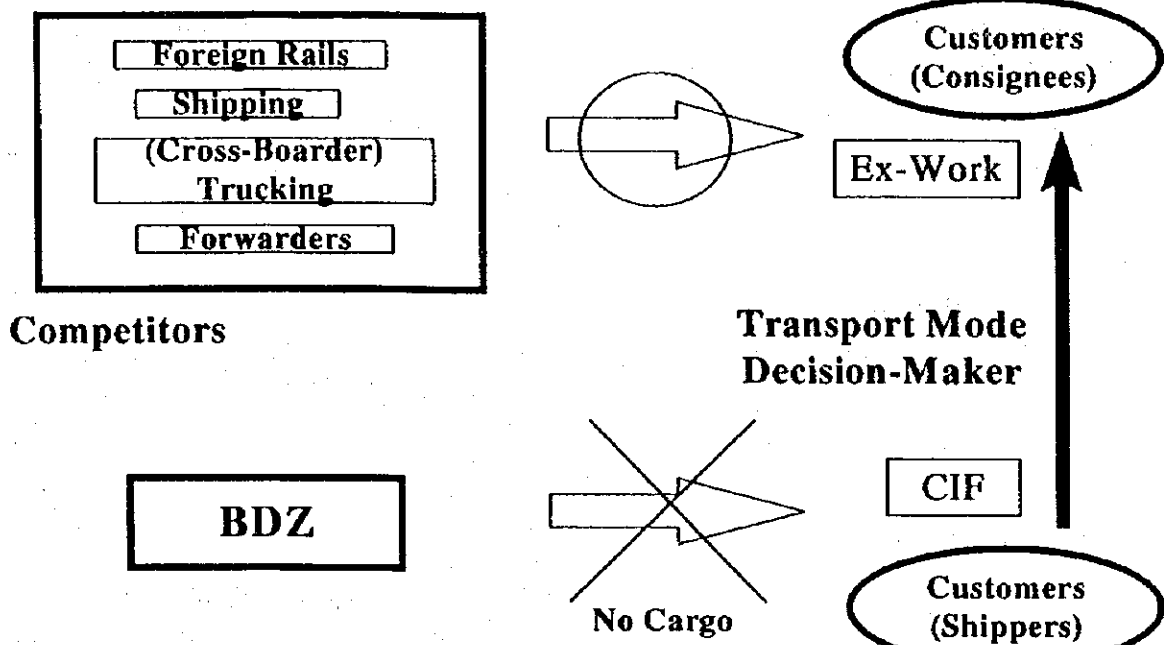
There are some factors which influenced the change. (i) The most influential was of course the democratization which took place in the Central and Eastern Europe and Russia (COMECON countries) and the following economic reforms. As a result, the industrial structures in the region including Bulgaria totally changed. Since Bulgaria's commercial tie with Russia was so close (Russia was the biggest trading partner for Bulgaria), it was not only damaged by its domestic economic and industrial collapse but also by the sudden and huge reduction in the trade with Russia, mostly in import of raw materials and export of industrial products. (ii) Then, severer competition with other freight transport mode, especially road transport, has become apparent. (iii) And, another factor which is not clear superficially, but has been revealed by the interviews with the BDZ's important customers, is the change in the trading and distribution

relations between the manufacturing companies in Bulgaria and their customers in Russia and other Central and Eastern European countries. The third factor is closely related to the first and second factors, and very important for understanding the relation between the change in the COMECON trading structure and that in the Bulgarian transport market structure.

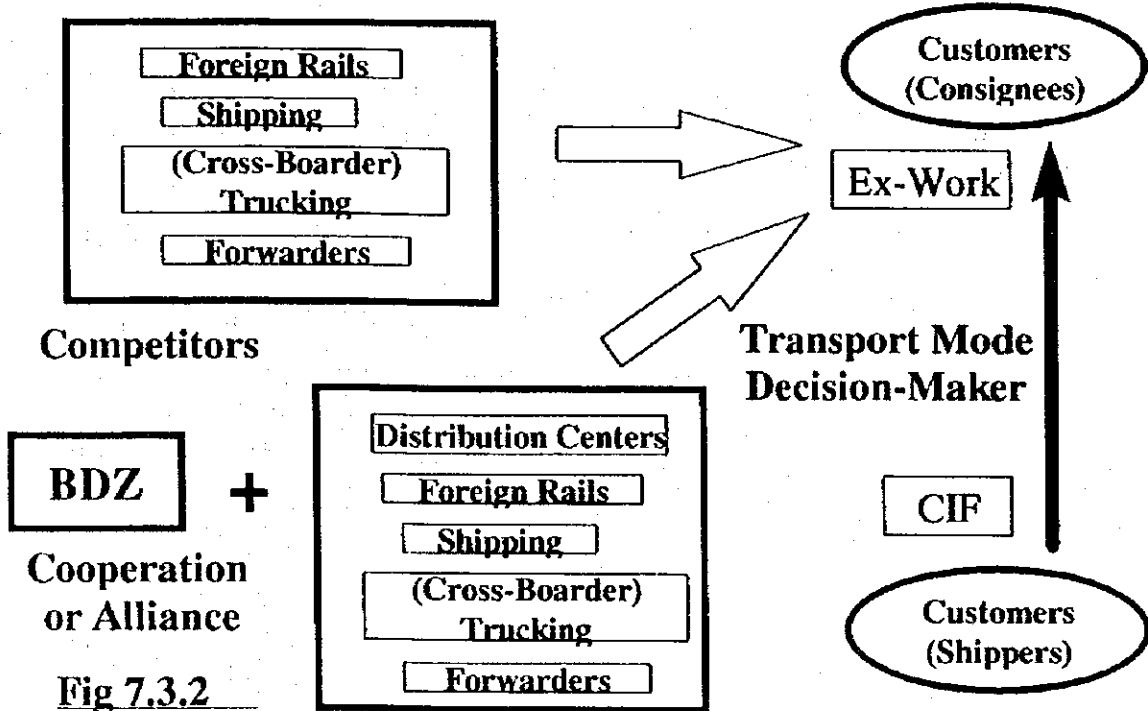
Before the democratization, Bulgarian manufacturing companies, or BDZ's customers, were responsible for the transportation of their products to their customers abroad (mostly large state-owned companies) because the trade and transportation agreements within COMECON countries allowed shippers' side to take initiative in exporting their products and then the trade term was "CIF" (Cost, Insurance and Freight). Therefore, they themselves could decide which transporter to use. Actually, in a centrally-controlled economy, it was large state-owned companies that handle large lots of raw material and products, and they used to order BDZ to transport such cargoes under the CIF term. However, the economic reform disintegrated these large state-owned companies (either abroad or domestic) into some smaller privatized companies, and each of these companies started to import/buy BDZ's customers' products in a small scale. Since BDZ's customers could not sell their products in a large scale, they began to lose their power to control the trade. Each of the privatized foreign/domestic buyers, keen in cost/time-efficient transportation of the products and eager to take initiative in the trade, started to formulate their own way of buying and transporting the Bulgarian companies' products. Then Bulgarian producers were gradually forced out from the transportation of their products, and the trade term has shifted from "CIF" to "Ex-Work." The foreign/domestic buyers changed the transportation mode from rail to truck, which at present is the most cost/time-efficient way of transportation allowing flexible small size distribution required by them. Therefore, even if BDZ's sales and marketing people contact their customers in Bulgaria, the customers cannot make decisions to use BDZ. In fact, these Bulgarian manufactures have lost control on the export/sales of their products. BDZ needs to target the foreign/domestic buyers, or promote "Consignee Sales," as well as to improve their service to the level offered by road transport (See Figure 7.3.2).



# BDZ's Present Market Situation



# BDZ's Future Marketing Approach



## **(2) BDZ's Present Sales and Marketing Systems**

BDZ's sales and marketing system has several points to be renovated to cope with the above-mentioned structural change in the market as stated below.

### **1) Lack of Consignee Sales Function**

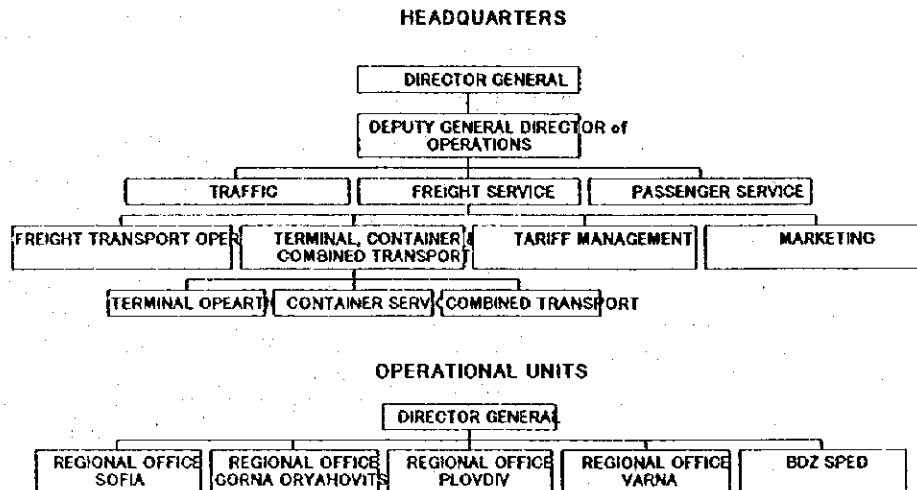
Since BDZ has been heavily dependent on "Shipper Sales," the revenue earned is counted in the regional office of origin. Even if the revenue is earned because of the decision made at the destination side (consignees), it is not counted in the office of destination. In case of international transit cargoes, revenue is counted in the administrative division of the headquarters. Without a marketing function in destination, "Consignee Sales" is difficult to achieve. Whether the destination is in Bulgaria or not, such a function is needed. If the destination is abroad, any sales and marketing agents are necessary there to capture sales from consignees.

### **2) Lack of Customer-Oriented Marketing Expertise**

Sales and marketing are mainly handled regionally by head of the regional office, regional sales manager, and some more regional senior managers when necessary. Their major activity is to contact their customers, confirm volume, negotiate prices, schedule transport based on the production cycle, etc. However, the activity is limited to their domestic (regional) regular customers, and it can be hardly said that they are making a marketing effort to capture new customers. Besides, they prepare their sales data and send them to the headquarters. Nevertheless, the sales data is not statistically well processed customer-wise (both shipper and consignee-wise), commodity-wise, origin/destination-wise in a cross-matrix manner to be useful for the detailed marketing analysis to be done later in the headquarters. This may be due partly to the lack of scientific marketing expertise in both regional offices and the headquarters, and partly to the lack of sufficient information systems and well educated human resources to handle the system. Yet, the most critical is the lack of a marketing function to survey the needs of the customers, either existing or potential, and either domestic (regional) or international, and flexibly reflect the needs in the pricing and operational policies to be made in the headquarters. In other words, there is no real cross-functional, cross-regional, international, and intermodal marketing function extended throughout the divisions in BDZ. BDZ has a separate marketing and forwarding division named BDZ SPED, which has their only office in Sofia with about 20 staff members. However, BDZ SPED only takes care of their own marketing and forwarding business, and is not allowed to take the initiative in the overall marketing within BDZ (See Figure 7.3.3).

Fig. 7.3.3 **BDZ Headquarters/Operational Units  
Freight Service Organizations  
(Marketing and Combined Transport-related)**

Source: BDZ



**3) Lack of Incentive**

There is a lack of incentive in increasing sales. Even if the sales dramatically increases because of any staff's effort, he/she is not additionally rewarded for that. Therefore, no one willingly try to think of how to improve their marketing and thereby earn more revenue from the customers. Therefore, any incentive system should be introduced. It must not necessarily be a cash incentive. In some Japanese companies, there is a system that any staff can make a proposal to the management to improve the marketing, operation, and administration. If his/her idea is excellent and reflected in the company's management policy, he/she receive a public recognition within the company and is given an award. This kind of system can sometimes be an incentive for the staff.

**4) Lack of Flexible Pricing System**

The present Bulgaria's legal restrictions don't allow BDZ to perform marketing with flexible pricing discretion. However, even if the restrictions were lifted, there would be no proper system to relate the price, cost and margin by each operation offered to serve one wagon-wise or container-wise rail transport. Since revenue is calculated by multiplying the tariff rates by the

unit of transport, or tonnage-kilometer of cargoes, cost should also be calculated like-wise in order to know the unit profit, or margin. Or, tariff or pricing structure should be changed so that it may fit the cost structure related to the operational processes. Otherwise, BDZ cannot detect how much profit is contributed from each sales and operation, and thus cannot offer prices as flexibly as road transport does. For this purpose, a cost accounting analysis fitting to cost-based pricing and marketing such as Activity-Based Costing should be performed.

### **(3) BDZ's Present Marketing-Related Organizations**

#### **1) Marketing Sector of BDZ Freight Service Dept.**

The main role of the Marketing Sector is information collection of the BDZ's big, regular, domestic bulk/liquid cargo customers such as Neoxim, Neftxim, Ximko Chemical, Krimikovtsi, Pernik Steel Plant, Kaolin Ceramic, Agrobiochim, Plama, etc. The sector doesn't take much care of marketing of either international, potential, or combined transport-related customers.

It is not the Marketing Sector but the Tariff Committee chaired by the Director General himself that makes the final decisions on the discount policies toward the above-mentioned big customers. The other committee members include the Deputy Director General of Operation, the Deputy Director General of Commercial and Economic Control, Director of Freight Transport, Director of Passenger Transport, Director of Control of Receipt and International Accounting, Chief Legal Advisor, and Director of Railway Research Institute. In that sense the Marketing Sector is not itself a pricing policy-maker, but just an advisor on the matter to the top management.

This fact revealed that the sector doesn't fully control the integrated full-set marketing functions including sales, pricing, yield management, customer management, product (service) management, customer service. It only controls a part of customer management and product (service) management. It is neither "revenue center," nor "profit center."

#### **2) Tariff Sector of BDZ Freight Service Dept.**

The Tariff Sector's main responsibility is management of the Freight Tariff System. The duty is a part of pricing, but the focus is on the administration of the fixed tariffs, not on the strategic marketing-oriented pricing. There are two types of tariffs: one of railway transport services and another of loading/unloading and terminal operations (Tariff Code 541). The former is further divided into two categories: domestic (Tariff Code 530) and international (including ex/import, transit, port-related). BDZ can not only decide 530 and 541, but also the tariffs for international

transport, although the latter must abide by the rules and regulations set by UIC and UIRR. Tariff is also separated depending on whether the transport is wagon-load or container-load. Another important duty is freight rate negotiation and agreement with such international transport organizations as Intercontainer-Interfrigo (Intercontainer), Oe-Kombi (Austrian combined transport operator), etc. for the container and combined transport.

### **3) Freight Transport Operation Sector of BDZ Freight Service Dept.**

The main role of the Freight Transport Operation Sector is customer service for especially wagon-load cargo customers including contact with customer service managers in railway stations and border crossing procedure management, etc. Roughly speaking, it has nothing to do with so-called narrow-sense marketing.

### **4) Combined Transport Sector of BDZ Freight Service Dept.**

The Combined Transport Sector is in charge of documentation, management of operational procedures of container and combined transport including terminal operations such as loading and unloading, operational coordination with such international combined transport operators as Intercontainer, Oe-Kombi, etc. They are also in charge of planning of the most appropriate future combined transport systems. It is neither "revenue center," "cost center," nor "profit center."

### **5) Hierarchical Marketing Structure - The Roles of the Headquarters, Regional Offices and Freight Railway Stations**

The heads and managers of the regional offices and freight railway stations, who are the first to be contacted by most local customers, are not presently entitled to control discount policies to the customers. Basically they themselves cannot decide how much discount rates to offer for the customers located in their districts. They need to consult with the Tariff Sector of the headquarters, and when the customers are big and important ones, they have to follow the Tariff Committee's final decisions. They are not willing to take care of international, combined transport, or potential customers. That is due to the limit of their responsibility, as well as to the lack of incentive (or reward) to do so. This hierarchical marketing structure often leads to the situation where the customers hesitate to contact the regional offices and the headquarters and turn to other transport companies whose first contacting managers can directly negotiate the freight rates with them, thereby resulting in BDZ's loss of cargoes.

### **6) BDZ SPED**

BDZ SPED is a BDZ's operational unit established in March 1995. They have the only office in Sofia. Their roles include marketing and forwarding. Marketing here means a kind of marketing research such as demand forecast, and does not mean marketing management or marketing policy-making. Therefore, rather forwarding involving railway transport, not marketing, is their main business field. The present director of BDZ SPED was a Deputy Director General of BDZ before the establishment of the company.

BDZ SPED has been to some extent successful in international railway-related forwarding businesses by taking advantage of the good business partnerships with a lot of foreign forwarders such as Ferosped of Switzerland, Danzas of Switzerland, Schenker of Germany, Express of Austria, Rondini of Italy, MAV SPED of Hungary, Soyuse VucshTrans Intercommerce of Ukraine, Transrail of Russia.

However, sometimes they cannot compete well with other Bulgarian private forwarding companies due to the lack of domestic branches. Besides, there are no coordination with the Marketing Sector of the Freight Service Dept. The director recommended the Freight Service Dept. of BDZ shift about 1/3 of the customer service managers in local freight stations and the regional offices under control of BDZ SPED in order to strengthen the sales and marketing forces in the combined transport and railway-related forwarding businesses expected to grow rapidly in the future.

In order to be more competitive by vitalizing their human resources, BDZ SPED needs to introduce "incentive system," that is to raise the salary depending on the sales performance. Otherwise, good human resources will escape from BDZ SPED to other private forwarding companies.

### **7.3.3 Present Combined Transport in Bulgaria**

#### **(1) BDZ's Present Combined Transport Services**

##### **1) Rail-Sea Combined Transport of Container**

Bulgaria and BDZ were keen in making a system of rail-sea combined transport of container in the 70's through the 80's. To cope with the increasing volume of industrial products exported from such port as Varna and Burgas to the former Soviet Union, which are fitted to transport in container, Bulgaria tried to develop several inland container terminals equipped with gantry cranes to handle 20' containers in such places as Sofia, Plovdiv, Dimitrovgrad, Stara Zagora, Vraza, Pleven, Gorna Oryahovitsa, Rousse, Varna, Burgas in the middle of the 70's. These container terminals functioned well with a growing number of containers until the democratization in the late 80's. In the 90's most container terminals have become idle with the dramatic decrease of containerized cargoes due to the collapse of the former Soviet Union and the COMECON economy. Therefore, although equipment is rather obsolete, Bulgaria and BDZ have enough capacity of handling container cargoes by rail. The problem now is that the equipment is non-performing and fixed cost-running assets due to the lack of cargoes. Of course, new investment to upgrade facilities and equipment for the future combined transport featuring 40' container and swap body will be necessary, but it should be accompanied by the growth of cargo volume to be handled. Otherwise, BDZ will continue to have cost-running excess capacity.

Meantime, in parallel with the sudden decrease of containerized cargoes, BDZ's relationship with shipping company has become less and less close. Before the democratization, "Bulgarian Water Transport" had centrally controlled either international/domestic shipping businesses or operations of such ports as Varna, Burgas, and Rousse. As the democratization started, it was disintegrated into such area/business-focused state-owned companies as Navigation Maritime Bulgaria (NMB) in charge of shipping, Port of Varna, Port of Burgas, and Port of Rousse in charge of port operations.

Since then, NMB has started to do its container transport business based on its own strategy targeting at newly-born (rather small-size) customers under the brand name of BULCON. In other words, they bought trucks for the inland transport of its container cargoes in order to meet the flexible door-to-door transport request of these customers. They also invested in information systems to control documentation, customs clearance, container inventory, truck movements, ship operations, and organic link among these elements, as well as computerized costing and accounting systems which have enabled efficient marketing and pricing based on

them. They were in an environment where they naturally became aware of the necessity of these strategies because they were faced with the competition in an international market with foreign shipping companies well equipped with these tools from long time before NMB took the strategies.

On the other hand, BDZ has done nothing in this sense, and the gap between NMB and BDZ has dramatically widened to the extent that both parties' cooperation is at present systematically, operationally, and strategically impossible. As mentioned in the section of "BDZs present marketing system," there are not enough statistically well processed data, especially concerning the number of container handled and the characteristics of the containerized cargoes for the moment. BDZ must have a container inventory/cargo data controlling system integrated with the operational system, billing system, and accounting system. Otherwise, the characteristics of the decreased or disappeared containerized cargoes such as how many containers, which commodities, which shippers', which consignees', whether international or domestic, whether import or export, which origins and destinations, and so on, cannot be identified to be reflected in the future marketing policy.

In addition, BDZ's future success in development in container transport largely depends on whether it can have a good cooperative relations with shipping companies such as NMB. Strategically speaking, we don't need to limit the alliance partner to NMB. Strategic alliance with a foreign shipping company such as Sealand will be one of the alternatives, if the foreign company is considered the better partner than NMB. Sealand can be a good candidate because they are a part of CSX, a big rail-sea conglomerate full of rail-sea combined transport expertise and foreign direct investment fund. In any case, it is imperative for BDZ to match their technological infrastructure to that of shipping companies to realize an efficient rail-sea combined transport of container.

Another important element in the promotion of the rail-sea combined transport of container is the development of the large-scale modern container terminals in the port of Varna and Burgas. Some financial institutions and foreign assistance organizations are possible to support the container terminal construction, or any BOT type financing from foreign investors will be an alternative. If this is realized, not only the container handling capacity in Bulgaria will much increase but also the rail-sea combined transport of container will be more convenient, because much smoother direct connection between the rail and ships will become technically possible.

Development of Varna and Burgas should be made so that they will be competitive with other Balkan countries' major ports such as Thessaloniki in Greece, Istanbul in Turkey, and Constantza in Romania, Koper in Slovenia, Rijeka in Croatia, Durres in Albania. Therefore, it is



very important to study these ports. For example, the Korean car manufacturer Daewoo and the electronics company Samsung have expressed their interests in developing the port of Rijeka which is to be their distribution center in Eastern Europe. They expect to transport their parts by sea, control inventory and assemble the cars near the port, and finally transport the products to West/East European countries by rail. Bulgaria also needs to induce foreign manufacturers to either the coastal area or any inland industrial cities and promote rail-sea container transport of their products in order to increase the BDZ's container cargoes.

The future potential of the rail-river combined transport of container centered at the port of Rousse, although might be less important than the rail-sea transport, should be also considered. Now the port of Rousse development is planned and feasibility study is being done. Rail-river transport is important, because the Danube river transport is connected to the sea transport based at the port of Varna by the rail transport. This can be one of the efficient transport mode alternatives for many customers, especially when compared with the one passing through the port of Constantza in Romania.

## **2) International Rail Transport of Container**

Presently international rail transport of container is not fully handled by BDZ. Intercontainer as a trans-European rail container/refrigerated cargo operator is now mainly handling this business on behalf of BDZ. Intercontainer was established on the basis of the investments from the European national railway companies including BDZ (BDZ has a few percent of Intercontainer share.). BDZ functions as the sales agent of Intercontainer in Bulgaria, and provides them with locomotives and flat cars to carry containers when requested. Revenue earned is shared between Intercontainer and BDZ based on the mutual agreements.

The recent BDZ-related container movement performed by Intercontainer, which consists of export from Bulgaria, import to Bulgaria and transit through Bulgaria, is as per Figure 7.3.4. This also includes container movement involving other Balkan countries. The graph shows some important facts and tendencies: (i) the number of containers exported and imported combined in 1995 has become about three times that of 1990, although the number itself is not so big, (ii) there have been more Bulgaria transit containers than imported and exported ones anytime from 1990 to 1995, and in 1995 the number of Bulgaria transit containers is about three times that of import/export combined. (iii) the number of the Bulgaria transit containers is almost equal to the number of the containers heading for or coming from Turkey, which have been gradually increasing, (iv) the embargo on Yugoslavia not only caused a shift of the Yugoslavia transit containers to the Slovenia and Croatia routes, but also contributed to the dramatic increase of Romania transit containers. (v) the number of containers to/from Greece

has been decreasing, and in 1995 it was less than that of containers to/from Bulgaria. As embargo on Yugoslavia was lifted, INTERCONTAINER resumed in 1996 their operations of international container shuttle trains starting from their Central Europe hub terminal in Sopron, Hungary, and going through Yugoslavia (Serbia) down to Thessaloniki, Greece and Halkali, Turkey. Therefore, it is possible that there will be any change in the above tendencies. Figure 7.3.5 and Figure 7.3.6 show the transition in the number of containers to/from Bulgaria transported by Intercontainer by origin/destination countries. It indicates that in both export/import Hungary and Germany occupy quite large shares.

Fig. 7.3.4 BALKAN CONTAINER MOVEMENT  
(INTERCONTAINER HANDLING)

Source: Intercontainer Annual Report 1990-95

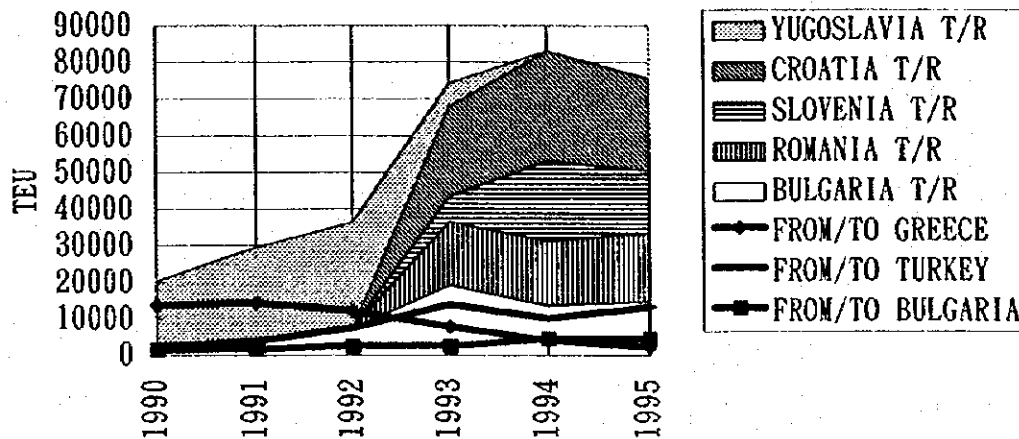


Fig. 7.3.5 CONTAINER MOVEMENT TO BULGARIA  
(INTERCONTAINER HANDLING)

Source: Intercontainer Annual Report 1990-95

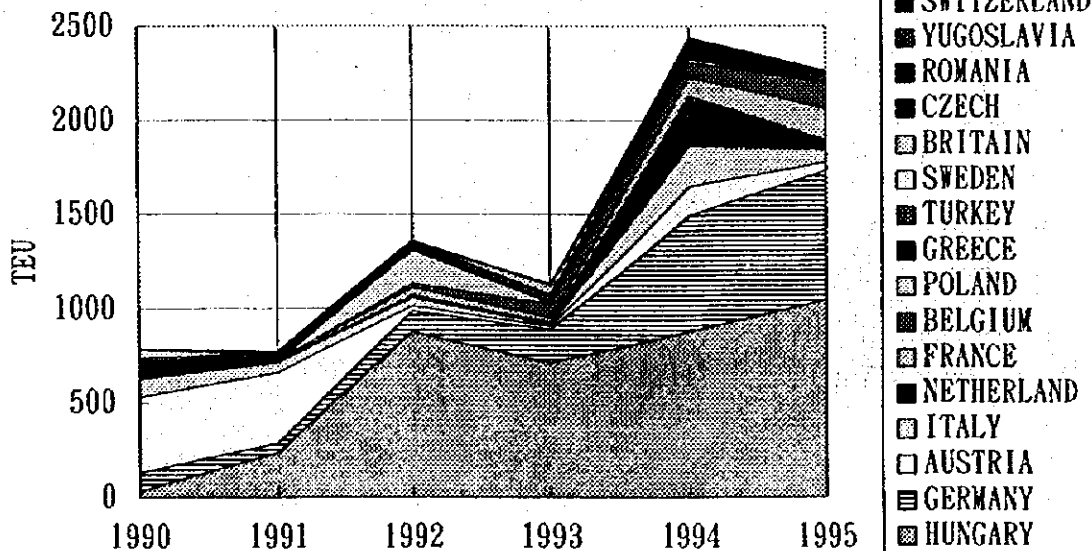
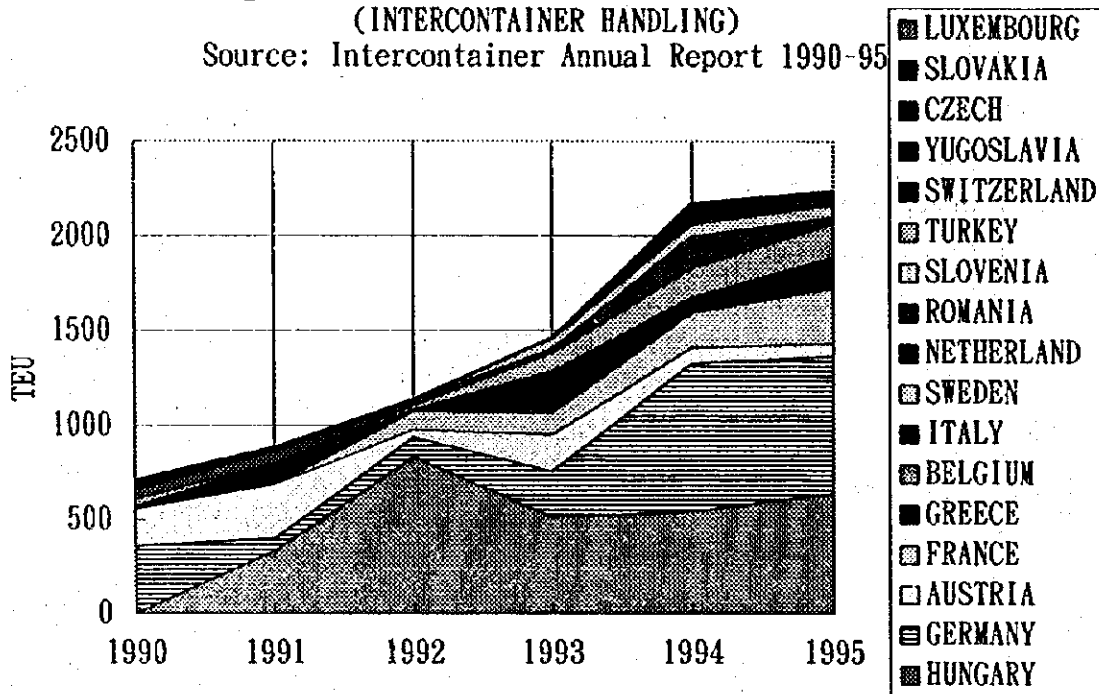


Fig. 7.3.6 CONTAINER MOVEMENT FROM BULGARIA  
(INTERCONTAINER HANDLING)

Source: Intercontainer Annual Report 1990-95



International rail transport of container involving Bulgaria or Balkan countries is expected to further grow in the future in parallel with the construction of the trans-European railway network extended to Eastern Europe. Therefore, it would be one of the most important strategic keys for BDZ to make a good system to take advantage of the increasing container movements. Not only the equipment for container transport but also the modern hub terminal fitting to the direct shuttle train operations are indispensable in this sense, and such terminals as Sopron, Thessaloniki, and Halkali should be studied to understand the physical and operational criteria for being a hub terminal. It was a regrettable decision that BDZ rejected several years ago the INTERCONTAINER's offer to make Rousse one of their hub terminals in the Balkans. Instead, Romanian National Railways accepted it and Bucharest has become the one. Most of the container cargoes ex/imported from/to Bulgaria by INTERCONTAINER are now transported from/to the Bucharest hub, from/to which INTERCONTAINER's shuttle trains are operated to/from another hub in Sopron.

### 3) International Piggy Back Transport ( Ro-La, Swap Body, Semi-Trailer)

BDZ at present is not well equipped with the facilities and machines to perform piggy back transport by themselves. Recently they have been enthusiastically researching what types of

piggy back are desirable for Bulgaria and actually making some test shipments of piggy back, but only on the limited routes (Swap body: Rousse - Gorna Oryahovitsa - Stara Zagora, Dimitrovgrad - Svilengrad; Ro-La and Semi-trailer: Rousse - Sumen - Sindel - Karnobat - Tulovo - Stara Zagora - Dimitrovgrad - Svilengrad). In the future piggy back is expected to be one of the major elements of European combined transport together with container, and BDZ should be ready to be equipped with the necessary facilities and machines as soon as possible. However, for the purpose BDZ must solve the management problems it is facing now and obtain finance from outside financial institutes, because BDZ will be required to make a large scale investment in such facilities as terminals and such machines as rolling stocks and loading/unloading machines fitting to Rollende Landstrasse (Ro-La), swap body, and semi-trailer (including the Reach Stacker and some special type spreaders).

Apart from the physical and operational capability, BDZ also lacks strategic planning and marketing capability in piggy back. A new piggy back transport company named "Bulkombi" has been established on the initiative of Ministry of Transport, with the capital investment from BDZ (the majority holding 41% of shares), Willy-Betz (German trucking company which merged Bulgarian one, Somat), Hungarkombi (Hungarian piggy back company), Cemat (Italian piggy back company), etc. However, it cannot be said that the new company is actively operating at this moment.

There is another important factor to consider in order to implement piggy back in Bulgaria. Balkan countries including Bulgaria are not so concerned about the environmental aspect of piggy back, and no legal and taxation advantage is given to piggy back. That is why piggy pack is not economically feasible in Bulgaria so far.

As for the combined transport going through Bulgaria, an Austrian combined transporter Oe-Konbi is now operating once a week their shuttle train having about 30-40 containers and swap bodies on board from Vienna to Halkali passing through Rousse, Gorna Oryahovitsa, Stara Zagora, Dimitrovgrad, and Svilengrad. There is another shuttle train passing through the same Bulgarian route: the one operated by Intercontainer for exclusively carrying the car manufacturer Opel's auto-parts from Mainz and Dortmund to Turkey.

## **(2) Present Combined Transport Environment Surrounding BDZ**

### **1) Willy Bets-Somat and Bulcombi**

Somat had been a giant Bulgarian international trucking company. They were privatized in 1994, and is now 55% owned by Willy-Betz, a German trucking company, 25% by government,

and 20% by employees. Now Willy Bets-Somat is actively operating internationally with 2,600 trucks including the 1,500 with canvas and the 1,100 refrigerated cargo-fitted. The composition of their business sectors is as follows: (1) business between the third countries: 60%, (2) business by-passing Bulgaria: 30%, (3) import/export from/to Bulgaria: 10%.

Since they are trucking company, their competitors include Hungar Kamion of Hungary, Sovtransavt of Russia, Sovtransavt of Ukraine, Agropromstroi, and the Bulgarian Union of Private Trucking Companies. However, their business field is not limited to trucking. Holding 4 river ships and 3 ocean ships, they are also doing shipping-related businesses. Their interest in rail-truck combined transport is deep, too, and together with BDZ and Hungarkombi they are a co-shareholder of Bulkombi, a new Bulgarian combined transport joint venture. Bulkombi made a trial shipment of swap bodies from Italy to Bulgaria. The operation is now suspended owing to several reasons including the technical and political ones. Willy Bets-Somat's preference in the types of combined transport is, (1) swap body, (2) semi-trailer, (3) RO-LA in this order. They already have 200 swap bodies of the same size as 40' container.

There are some movement to revitalize Bulkombi, a presently inactive Bulgarian combined transport company. BDZ as the No.1 shareholder of Bulkombi has recently bought back some shares from such co-shareholders as Skorpio Shipping and Prime Sped to increase percentage of their share from 34% to 41%. They seem to take the initiative in activating the company. However, there has no specific detailed business plans as to how to re-organize the company and what kinds of services to provide.

## **2) INTERCONTAINER and Oe-Kombi**

Presently international rail transport of container is not fully handled by BDZ. INTERCONTAINER as a trans-European rail container/refrigerated cargo operator is now mainly handling this business on behalf of BDZ. INTERCONTAINER was established on the basis of the investments from the European national railway companies including BDZ (BDZ has a few percent of INTERCONTAINER share.). BDZ functions as an agent of INTERCONTAINER in Bulgaria, and provides them with locomotives and flat cars to carry containers. Revenue earned is shared between INTERCONTAINER and BDZ based on the mutual agreements.

As for the combined transport going through Bulgaria, an Austrian combined transporter Oe-Kombi is now operating once a week their shuttle train having about 30-40 containers and swap bodies on board from Vienna to Halkali passing through Rousse, Gorna Oryahovitsa, Stara Zagora, Dimitrovgrad, and Svilengrad. There is another shuttle train passing through the same

Bulgarian route: the one operated by INTERCONTAINER for exclusively carrying the car manufacturer Opel's auto-parts from Mainz and Dortmund to Turkey.

### 3) DESPRED

DESPRED is a forwarder whose major business fields include container & combined transport. They were separated from BDZ and established as an independent forwarding company in 1947. They are now 75% government-owned and 25% mass privatized. They have offices in Sofia and major Bulgarian cities, as well as their 100% subsidiary Komet located in Germany with some foreign offices in Czech, Hungary, etc.

DESPRED's relationship with such shipping companies as Bulcon, Sealand, Zim (as an official agent), etc. is very close. Their relationship with trucking companies such as Willi Betz-Somat and the Association of Forwarding Companies is also active. In addition, they are trying to make a good use of their strong business partnership with other foreign forwarding companies, especially Danzas with whom they have formed a joint venture named "D&D."

DESPRED has been a BDZ's royal customer, although the relationship is affected by the decreased number of their containers handled by BDZ. The reasons for the decrease include: (1) no BDZ's block trains provided for the routes DESPRED would like to service for their customers, i.e. Sofia-Thessaloniki, (2) problems in the border crossing procedure and the customs clearance, (3) cargo security problems, (4) inflexible negotiations, (5) noncompetitive rates, (6) DESPRED's customers such as Greek shippers unfamiliar with the BDZ rail services. BDZ is now trying to activate the relationship with DESPRED by solving these problems.

### 4) RCL

RCL is a container transport-focused forwarder. (95% of their revenue is from the business with the former USSR countries.) They were established 5-6 years ago by a former BDZ employee in the Container Department. They have the only office in Sofia.

RCL's present relationship with BDZ is a business partner. Their relationship with BDZ SPED is either competitor or customer-service provider. Their business partners include the Russian National Railways, BDZ, Bulcon, Port of Taganrog (Russia), Port of Novorossiysk, etc. They have contracts with container lines such as Sealand, Zim, Evergreen for the transport service via Thessaloniki. They themselves operate a time-chartered 70 TEU vessel, and besides have formed a joint venture with shipping companies to provide a service to the Asof Sea with some 165 TEU vessels. They use truck companies such as Sovtransavto of Russia for an inland

transport from the Russian ports.

#### **5) NMB (BULCON)**

Before the democratization, Bulgarian Water Transport (BWT) had centrally controlled either international/domestic shipping businesses or operations of such ports as Varna, Burgas, and Rousse. As the democratization started, it was disintegrated into such area/business-focused state-owned companies as Navigation Maritime Bulgaria (NMB) in charge of shipping, Port of Varna, Port of Burgas, and Port of Rousse in charge of port operations. Since then, NMB has started to do its container transport business under the brand name of BULCON.

Now BULCON has the following fleets: 6 x 1,050 TEU, 3 x 600 TEU, 2 x 420 TEU, 3 x 7,500 DWT Ro-Ro type, 2 x 9,200 DWT Ro-Ro type, 1 x 100 TEU feeder vessel. In addition, they have bought trucks for the inland transport of their container cargoes in order to meet the flexible door-to-door transport request of their customers. They have also heavily invested in information systems to control documentation, customs clearance, container inventory, truck movements, ship operations, and organic link among these elements, as well as computerized costing and accounting systems which have enabled efficient marketing and pricing based on them.

On the other hand, BDZ has done nothing in this sense, and the gap between BULCON and BDZ has dramatically widened to the extent that both parties' cooperation is at present systematically, operationally, and strategically impossible. This situation makes it difficult for the both companies to make a joint-operation of rail-sea combined transport. However, BDZ's future success in development of its container transport largely depends on whether it can have a good cooperative relationship with such shipping companies as BULCON.

#### **6) Sealand and Their Sofia Container Terminal Feasibility Study**

Sealand is one of the world largest shipping companies. They are a part of CSX, a giant American rail-sea conglomerate full of rail-sea combined transport expertise. They are now making a feasibility study for the construction of a new Sofia container terminal. The study is 50% funded by the U.S. Trade Development Agency.

The expected area and site of the terminal depend on the feasibility study but are expected to be around 7-15 hectares near the Ring Road around the city of Sofia. Necessary facilities/equipment will include top lifters and reach stackers. They don't expect to have any

gantry crane. Sealand's estimation of the terminal construction costs and equipment costs are unknown yet. The expected container handling capacity (crane capacity) will be around 100,000 - 300,000 TEU per year.

Sealand's purpose of the Sofia terminal construction is not to operate the container terminal and thereby make a profit but to secure a common-use terminal in Sofia which they can use to transport their potential container cargoes heading for Sofia and other Bulgarian cities. The expected project formation and financing is as follows: (1) BDZ as an equity holder (more than 50%), (2) Sealand as an equity holder (less than 50%), and such debt holders as (3) municipality of Sofia, (4) EBRD, IFC, OPEC, etc., (5) local banks, (6) other investors.

Sealand's Sofia container terminal feasibility study seems to be still being processed, but it is likely that it has nearly been suspended for the moment for several reasons. The largest reason is that CSX, Sealand's parent company, is trying to form a joint venture called "NDX" with NS Cargo of the Netherlands (the Netherlands National Railway's freight transport arm) and DB Cargo of Germany (the German Railway's freight transport arm) to operate container block trains between Sofia and Thessaloniki, and this plan might somewhat compete or contradict the Sealand's plan. Now CSX/NDX seem to be asking BDZ to offer the operational (locomotive) services for the container block trains and to calculate the operational costs (per container to be carried) to be charged to NDX for the services. However, since BDZ doesn't have any costing systems to calculate train-wise or wagon-wise marginal operational cost, they still remain unable to respond to what CSX/NDX is asking them.

#### **7) Millizer & Munck (M&M)**

M & M is one of the influential European freight forwarders. The headquarters is in St. Gallen, Switzerland. More than 60% of the capital is shared by German investors. It has a subsidiary in Bulgaria, only 10% of whose capital is shared by Bulgarian investor. At present they have a plan to construct a combined transport terminal in Sofia by themselves, and BDZ is curiously watching how the plan will proceed.



### **7.3.4 Rail Freight Transport in Europe**

#### **(1) EU's Policy on Railway Company Restructuring and Trans-European Railway Network**

Based on the EU's "Transformation of the International Railway System as a Part of New European Transport Policy," national railway companies in Europe have tried to restructure their management system. Germany's case is symbolic in this sense. German National Railways (DBAG) was first divided in accounting and financial terms into infrastructure division, passenger division and freight division within the company. It is scheduled to be separated into three different companies, and finally be privatized. On the other hand, in case of French National Railway (SNCF), infrastructure-operation separation and privatization are not on the agenda. Instead SNCF divided in 1994 its organization into 4 profit centers consisting of main route passenger division, metropolitan passenger division, freight division, and small lot freight division. Other countries' national railways are also in the process of restructuring in respective ways. Although there are some difference in each national railway company, it seems to be a common characteristic that rail freight transport division/company will be managed more independently from other divisions/companies. Therefore, it is expected that rail freight transport division/company in each country can have more managerial and financial freedom in marketing combined transport in cooperation with other mode of transport and forwarders, and structuring European cross-boarder transport in cooperation with other countries' rail freight companies. Construction of the trans-European railway network, which is also planned by EU, will further promote this movement. As long as the network is extended to Eastern Europe and the Balkan countries, more dynamic intermodal competition in freight transport can occur in these regions.

#### **(2) Combined Transport in Europe**

##### **1) General Situation**

In order to cope with the future transport demand increase, road traffic congestion, environmental issues, energy savings, and assistance to the surrounding countries (particularly Eastern Europe and the former Soviet Union countries) in international transit transport, EU has promoted combined transport in Europe. Combined transport has dramatically grown for the past 10 years, although at present it only occupies about 4-5% of the total freight transport in Europe. The characteristics of the European Combined Transport is that (i) it is fully dependent on the EU's transport policy, (ii) since about half of the combined transport is done only within the Continent, about half of the combined transport is with ocean containers and the

rest with Piggy Back such as swap body and Ro-La, (iii) strategic marketing and technical development in terminals and equipment must be critical in order to survive the severe competition with the Europe's leading freight forwarders such as Danzas, Kuhne & Nagel, Panalpina (all international Swiss forwarders) and Nedlloyd (Dutch shipping/forwarding conglomerate), (iv) since inland cross-boarder transport is common, expertise is required in customs clearance and documentation, as well as systematic and technical aspects of all transport modes, (v) there are an cooperative organization of combined transport named UIRR (Union of International Road-Rail Transport Companies) consisting of the members from the 15 railway-related combined transport operators such as Adria Kombi of Slovenia, Bohemiakombi of Czeck Republic, Combiberia of Spain, Cemat of Italy, C.R.L. of Great Britain, Hungarokombi of Hungary, Hupac of Switzerland, Kombiverkehr of Germany, Novatrans of France, Oe-Kombi of Austria, Polkombi of Poland, Portif of Portugal, Skan Kombi of Scandinavia, Trailstar of the Netherlands, T.R.W. of Belgium.

The following is the present situation of the railway-related combined transport in Germany and France, which is typical of the European combined transport. DBAG has some combined transport-related subsidiaries and affiliated companies such as Transfracht in charge of combined container transport, Kombiverkehr as a trucking conglomerate in charge of piggy back (swap body, Sattelhaenger, Ro-La), and Intercontainer as a trans-European rail container/refrigerated cargo transporter (less than 20% of capital). SNCF also has combined transport-related companies such as Compagnie Nouvelle de Conteneur (CNC) as a rail container transporter and Novatrans as piggy back transporter mainly focusing on semi remorque (semi-trailer), and Intercontainer as a trans-European rail container/refrigerated cargo transporter (less than 20% of capital). Apart from that, SNCF is eager to technological development in combined transport such as Commutor as a high speed automatic container handling terminal and piggy back DST with 120-160km/h speed.

In the next section we will further analyze some cases of European combined transport-related companies and organizations mostly focusing on Germany and Hungary, which are of significant importance to combined transport in Bulgaria in terms of geographic location and strategic necessity.

## **2) Transfracht**

Transfracht is a container-focused combined transport company 100% owned by DB. Transfracht's business field is mostly focused on container transport linking ocean shipping with railway services. Before Transfracht was composed of the two divisions; domestic (Transfracht: TFG) and international (Transfracht International: TFGI). However, in

accordance with the recent re-organization of DB in terms of passenger, freight, infrastructure separation, TFG was absorbed into DB Cargo, the newly established freight transport rail company. Yet, TFGI still exists as an individual company and has been trying to extend its international rail-sea combined container transport network from Germany to such countries as the Netherlands, Belgium, France, The Czech Republic, Poland, and recently as far as the United Kingdom through the Channel Tunnel.

With TFGI, the marketing company of DBAG in combined transport, the customers are supported by a neutral operator with specialist expertise and experience. Every year TFGI transports an average of 500,000 containers by rail. The company is located in Frankfurt am Main and operates sales offices in Antwerp, Berlin, Bremen, Duisburg, Hamburg and Munich as well as logistics offices in Bremerhaven and Hamburg Waltersdorf. A subsidiary company exists in Rotterdam under the name Transfracht International B.V. TFGI concentrates in combined transport on two major fields of business: (i) the Europe-wide port hinterland transport, and (ii) the Continental cross-border transport.

(i) The Europe-wide port hinterland transport: The transport volume in the European seaports is growing continually as a result of the globalization of the markets. TFGI offers a comprehensive transport service from Dutch and Belgian seaports. In addition to the service by rail, they also offer transportation by ship on inland waterways between Rotterdam/Antwerp and Duisburg. The "InGrid" price system makes the costing of the port hinterland operations simple and quick.

International container transport operations from and to the German seaports are one of the main elements of the distribution policy of TFGI. With "Albatros", the top service from and to the German seaports, The company has become an important component of the seaport logistics. About 200,000 containers which are transported as part of this service speak for themselves.

Direct trains from the seaports Hamburg and Bremerhaven bring the containers with the greatest possible safety and economy to their destination. The customers book the day before by 6pm and TFGI team guarantees the transportation with fixed running times, active monitoring of operations and notification in good time of the containers. The containers which arrive in Bremerhaven and Hamburg at the weekend are also already at the recipient on Monday.

Dortmund, the metropolis of Westphalia, is the location with the ideal transport links to the German seaports and to the Benelux ports of Amsterdam, Antwerp and Rotterdam by ship, rail

and road. The core of this service is Container Terminal Dortmund (CTD) with its high handling capacity. TFGI ensures the speedy movement of your containers between Dortmund and the seaports. Whether by inland water way ship and/or rail and road, TFGI transports the consignments quickly and reliably.

In addition to the rail service, there exists an alternative transport service under the product name Rhine Rail Road by inland waterway ship which also connects Rotterdam and Antwerp with Duisburg, Dusseldorf and Cologne. In this case Duisburg is the hub to the major economics enters in Germany and moreover offers connections to South-East and Eastern Europe. By using this service TFGI combines all the best factors to your advantage: the high transport capacity of the inland waterway with the speed and economy of the railway and finally the flexibility of the road.

(ii) The Continental cross-border transport: It is not just the traffic volumes through the European ports that are growing; the intra-European exchange of goods is similarly increasing. Uppermost in this respect is the development of highly efficient railway complete train-load and shuttle links between the European economic centers. The concept is based on a complete trainload which connects two international main traffic junctions daily. There are currently connections between Berlin and Moscow, Duisburg and London/Manchester as well as between Frankfurt am Main and Paris. Preparations are currently being made for links to Italy, Austria, Sweden, Poland and Spain/Portugal.

With the "Ostwind" container complete train-load TFGI offers a speedy and reliable container link between Berlin - with connecting services from 21 defined German forwarding stations - and 11 stations in Moscow as well as 64 further stations in the CIS via the hub of Bekassovo. The goods are transported without reloading to the desired receiving station. The trains run according to a fixed schedule and with their late final loading and early availability times are integrated into the logistic operations of the forwarders and recipients. Together with the involved partners over 5,000 containers, loaded with 70,000 tons, were transported in 1996.

For the UK transport operations TFGI uses 40 foot containers with a maximum load of 26 tons. They do, of course, also transport the customers' private containers. Duisburg is the terminal at the center of the operations. All terminals in Germany and Europe can be reached from there. The same also applies to the terminals in London, Manchester, Glasgow and Birmingham; again in this case, the further places on the island can be reached within a short time.

TFGI container complete train-load connects the metropolises of Paris and Frankfurt am Main four times weekly. In cooperation with the French Compagnie Nouvelle de Contencurs (CNC)

they have established a transport network which offers a comprehensive service in France and Germany via the terminals in Paris and Frankfurt (M) East. Using special equipment, the goods are transported carefully and in an environmentally friendly manner and indeed also safely and quickly. TFGI's continual monitoring of the operations guarantees the customers a high degree of reliability for the planning of their logistic operations.

In cooperation with partners TFGI operates Europe-wide shuttle train links between Bremerhaven/Hamburg and: Salzburg (Austria); Vienna (Austria); Lovosice (Czech Republic, with radial links to numerous stations in the Czech and Slovak Republic). Attractive final loading and availability times as well as a comprehensive range of pre- and post-carriage services characterize these shuttle train links.

### **3) Kombiverkehr**

Kombiverkehr, the largest combined transport operator in Europe, is a "Kommandit Gesellschaft" or KG in the German term, which means that it is a kind of stock company whose stock is offered to the companies related to them in the business. Each share costs 30,000 DM and only one share is allocated to each shareholder except for DB (the German Railways) who has two shares.

Recently Kombiverkehr changed its organizations. Before it was composed of two different types of organizations: GmbH and KG. The capital held by GmbH was 100,000 DM and the one held by KG was 800,000 DM. Then, the board of management was composed of 7 members delegated from GmbH and 8 members elected from KG. GmbH members includes associations of freight forwarders, road hauliers and shipping companies. KG members includes 250-270 shareholders most of whom are either freight forwarders, road hauliers, or shipping companies doing business with Kombiverkehr as its clients. KG had more power than GmbH and its power has been more strengthened because the GmbH was dissolved and most of its decision-making functions were absorbed by KG. GmbH changed its name to be "Beirat," whose present task is only consulting with the board of management without any power to directly participate in the managerial decision-making process. Now the board of management is composed of 7 members elected from the 250-270 shareholders and 2 members delegated by DB who has exclusively two shares. The shareholders hold the general assembly once a year. In addition, each shareholder participates in discussion in one of the 4 working groups; (i) National Policy, (ii) International Policy, (iii) Operational Policy, (iv) EDP (Electric Data Processing) Policy. While the fundamental and critical business strategy and policy are decided by the board of management, the day by day business is managed by the directors of the divisions.

In the business year 1996 the volume of transport has risen by almost one per cent up to 930,000 consignments. This corresponds to 2,05 million TEU with a total weight of more than 20 million tons of goods. The turnover increased by 0,5 per cent to 523 million DM. Profit after taxes was more than 0,7 million DM. In the business year 1996, international traffic increased by almost three per cent. With a total amount of 655,000 consignments it contributed to secure Kombiverkehr's position as Europe's leading operator in combined transport rail-road. Yet in some areas the company had to overcome the negative effects of strikes and impairments in quality. In international transport, 430,000 consignments were conveyed on unaccompanied trains, which means an increase of two per cent in this segment. On the Ro-La for accompanied combined traffic, Kombiverkehr transported 225,000 complete trucks with their drivers.

Within the European network that has been established by Kombiverkehr and its UIRR-partner companies (Union Internationale des socide transport combiné Rail-Route), unaccompanied combined traffic could prove its advantages as a transport alternative in logistic chains once again. Especially traffic to Eastern Europe has gone through a further increase. In this sector, Kombiverkehr is expanding their range of products by opening up new target areas for combined transport. They have been the first operator to establish a block train to Romania, which is already running three times a week between Regensburg in Southern Germany and Bradu de Sus, an industrial town situated 150 kilometers north of the Romanian capital of Bucharest.

Kombiverkehr is also very interested in extending their combined transport network to other Eastern European countries such as Bulgaria. They prefer unaccompanied transport featuring swap bodies and semi-trailers to accompanied transport featuring Ro-La. Therefore, they are curious about the condition and cargo handling capacity of the cranes in the inland container terminal which BDZ is controlling, and the availability of such equipment as spreaders to handle swap bodies and semi-trailers. However, they are not interested in investing by themselves in procurement of combined transport-related equipment or construction of new terminals in Bulgaria, because they themselves are not in fact an operator but a combined transport marketing company. They would like to cooperate with BDZ in terms of mutually beneficial combined transport service marketing and planning rather than investment in combined transport hardware.

Also on the classic routes of unaccompanied combined transport in Alpine transit, Kombiverkehr made an additional step forwards in 1996. With the connection of the Northern German terminals Rostock, Hamburg, Bremen and Hannover to Verona and Busto Arsizio near Milano, they have completed the net of high quality shuttle trains between German and Italian

economic centers. By these means, they are gaining new potentials that help them to produce at lower costs, because even in Alpine transit they suffered losses in some parts. The abolition of the corridor discount for traffic through Switzerland had the same effect as a price increase and lead to a decline in volume on these routes. On the shuttle-relations via Austria, however, there was an increase of more than eleven per cent. Altogether, Kombiverkehr transported about 250,000 unaccompanied consignments over the Alps.

With several provisions, the company continued the process of heightening the quality in Alpine transit. The purchase of new wagons was part of these measures. Since the middle of June 1997, the first container-flatcars are rolling in two shuttle-trains between Cologne and Verona. Pocket-wagons, which have been specially designed by Kombiverkehr, will be added shortly. Particularly with these pocket wagons, Kombiverkehr aims at new market segments, as they are suited for the transport of volume-optimized semi-trailers.

For an additional section of the market in Alpine transit, i.e. the transport of refrigerated swap bodies, Kombiverkehr's Italian UIRR-partner Cemat introduced a data processing system for the satellite supported transport monitoring. Since the pilot phase in the autumn of 1996, German customers can book these on-line controlled swap bodies for the forwarding of refrigerated goods on the shuttle-trains not only with Cemat, but also via Kombiverkehr.

In the field of global data communications, Kombiverkehr is cooperating with its UIRR-partners at the improvement of service quality. In this context, by the end of 1996, a project was started under the name of "CESAR" (Cooperative European System for Advanced Information Redistribution). This project, supported by the European Union, is aiming at the development of an integrated data processing system for a continuous transfer of data in Alpine transit.

The market introduction of an on-line connection to the Kombiverkehr's customers by means of the company's own data processing system "ALI BABA" has been successful. Those customers already connected to the on-line system are now able to book space directly on Kombiverkehr trains at 20 Kombiverkehr agencies connected to the system. Furthermore, they can call up on-line information on the status of their consignments. By the end of the current business year, the company is reckoning that it will be able to transfer the invoice data on-line as well. With this innovative supplement, Kombiverkehr will be the first operator in combined transport to offer an electronic data-transfer from booking up to the rendering of accounts. This is the next steps of Kombiverkehr's strategy in this field.

With innovative production concepts, Kombiverkehr intends to improve the profitability of

combined transport for the forwarding companies. The idea of an efficient network is the focus of these activities. They do need a national network that contains both 'racing tracks' and routes for the integration of regions with less economic potential. Even the capacity of their Europe-wide trains can be utilized only in an optimal manner, if they succeed in winning new potential by means of gateway- and turntable-systems. For this reason, consignments are being collected in the national net and are transported further in a concentrated manner on the frontier crossing block-trains. This leads to a production profit on both sides.

So the extension of the national terminal-net is extremely important. With governmental subsidies, DBAG has begun to build new terminals by the end of 1996. Crucial to the improvement in the sector of terminals are new technologies, strictly orientated at the market requirements, such as fast handling systems for large terminals or modular construction systems for low-cost terminals at locations with lesser quantities. Kombiverkehr expects new stimulus by the "KV-Technologieplattform 2000+", an initiative fostered by the German ministry of science and technology, which shall coordinate the development of new practice-oriented techniques for combined transport.

In addition to the German commitment to combined transport there is still the need for harmonized terms of competition throughout Europe. If single supportive political measures in favor of a sensible modal split are being challenged, alternatives have to be established simultaneously, in order to deal efficiently with the increasing infrastructure bottlenecks.

Kombiverkehr is taking up the challenge of Europe-wide competition and will steadily expand their leading market position in combined transport. In this connection, the reform of Kombiverkehr's legal structure which has been affirmed by the shareholders in 1996, proves to be very helpful as it strengthens Kombiverkehr's position as a commercial enterprise. Under the condition that the supply of rail service will be continuously adapted to market requirements, Kombiverkehr's board of management expects further growth in 1997. By the end of May 1997, the overall rate of increase in traffic amounted to three per cent.

#### **4) Combined Transport Equipment Manufacturers in Germany and Their Customers**

There are many excellent combined transport equipment manufacturers in Germany. German leading swap body and semi-trailer producers include Kogel Fahrzeugwerke AG, Fahrzeugwerke-Maschinenfabriken Bernard Krone GmbH, and Schmitz Anhänger (Hauptverwaltung) Fahrzeugbau Gesellschaft mbH & Co. German leading crane producers include Kalmar Flurförderfahrzeuge Vertriebs GmbH, Kirow Leipzig AG, Ormig S.p.A., and Kranservice Rheinberg. German leading wagon producers include Waggonbau Niesky AG and



## **Waggonfabrik Talbot GmbH & Co. KG.**

The products of those manufactures are purchased by various customers ranging from railways companies to road hauliers and forwarders. However, rarely such combined transport marketing companies as Kombiverkehr and Transfracht purchase and own the equipment by themselves. As for swap bodies and semi-trailers, mostly road hauliers and large scale forwarders purchase and own them. One good example is Arcus Logistics, a road haulier/forwarder type company and a Koegel's customer, which developed a new type of swap body together with Koegel. Since Arcus Logistic is not so cash-rich, it has reached a leasing contract with Transamerica Leasing Inc., an American railway equipment leasing company, in order to own and operate the new type swap body. The same method could be applied to the combined transport in Bulgaria. As for cranes, such railways companies as DB and other private terminal operating companies purchase and own them. As for combined transport-related wagons in particular, a good example is such a wagon management company as Kombiwaggon, 100% subsidiary company of DB, which purchases and owns wagons on behalf of DB. Kombiwaggon manages combined transport wagons either self-owned or owned by their customers, and arranges carriage of the wagons in close coordination with DB, which in fact physically transport the wagons.

### **5) Hungarokombi**

Hungarokombi is a leading Hungarian combined transport operator. Its largest shareholder is OeKombi GmbH Co KG with 25.92% of the shares, the second the Magyar Kozuti Fuvarozok Egyesulete (the Hungarian Forwarders' Association) with 22.22%, and the third GySEV with 19.26 %, the fourth MAV (Magyar Allamvasutak: the Hungarian National Railways that is now under privatization process) with 14.81 %, and some minor shareholders such as the Magyar Szallitmanyozok Szovetsege (the Hungarian Road Hauliers' Association), Masped Rt, Volancamion Rt, Hungarocargo Kft, each with 4.44 % share.

Hungarokombi is focusing on the arrangement of rail-related combined transport. Their scope of work includes such jobs as service scheme planning, service coordination with business partners (mainly railway companies or terminal operators), contracting with clients (freight forwarders or road hauliers), documentation, operational arrangement, data management with information system, etc. Therefore, they themselves neither own nor operate combined transport terminals and equipment. That is railway companies' or terminal operators' job.

### **6) Gyor-Sopron-Ebenfurt Railway (GySEV)**

GySEV is the Hungary's second largest railway company after MAV. It is providing railway services between Gyor, Hungary and Ebenfurt, Austria via Sopron, the Hungarian side of the Austrian-Hungarian border. It was established in 1872, when the founder gained the concession of the railway line from the Emperor of the Austrian-Hungarian Monarchy. Since then the shareholders have changed several times, and now the largest shareholder is the Hungarian state with 57% of the shares, the second the Austrian state with 33%, and the third the Hamburg Port Storage Company (HHLA) with 6%.

Sopron combined transport terminal is owned and operated by GySEV through RAABERLAG, its 100% owned combined transport management arm. Investment in the terminal for upgrading the terminal to be fitted into combined transport has been made in several phases starting from 1978. The Eastern European Democratization in 1989 promoted the economic link between Western and Eastern Europe, and eventually the Austrian state started their investment not only in GySEV's share but directly in the terminal, which enabled the terminal to be equipped with some Ro-La-related equipment and a mobile crane to handle the increasing number of containers, swap bodies and semi-trailers. The recent investment in the terminal has mostly been financed by the Austrian state, partly by the Hungarian state, and no bank loan has been introduced yet.

GySEV's other subsidiary companies include RAABERFREIGHT, an international conventional cargo forwarding company, RAABERSPED, an international combined transport forwarding company, Hungarokombi, a combined transport operator, etc.

GySEV as an agent of Intercontainer in the Sopron terminal, provides them with terminal services for marshaling, shunting and transshipment of their container cargoes. GySEV also provides Hungarokombi, their affiliated company, the same services as those offered to Intercontainer, but in this case for marshaling, shunting and transshipment of Ro-La, swap bodies or semi-trailers. This enables the Intercontainer's container block train services between Hamburg and Bucharest/Thessaloniki/Halkali and the Hungarokombi's Ro-La services between Wels, Germany and Szeged, Hungary.

## **7) Sopron Freight Station and Combined Transport Terminal**

Sopron freight station, located across the Austrian-Hungarian border, functions as a freight rail traffic hub or intermediary point between the Western Europe and Eastern Europe. It consists of three parts: (i) marshaling yard (200,000m<sup>2</sup>), (ii) covered and uncovered storage yard (15,000m<sup>2</sup> and 125,000m<sup>2</sup> each), and (iii) combined transport terminal (150,000m<sup>2</sup>). The marshaling yard including 16 railway tracks is operated for marshaling and shunting of wagons

in order to transship the cargoes for a variety of destinations. The storage yard is for warehousing the cargoes once to be stored or processed for reshipment. The covered storage yard especially is used as a duty free zone.

There are 6 railway tracks of about 420-470m long in the combined transport terminal. Three of them, featuring a fixed gantry crane and a mobile crane, either equipped with a combined transport spreader, are used for the operation of containers, swap bodies and semi-trailers. Other two, each featuring a mobile metal Ro-La platform, are used for the operation of Ro-La. The rest is used exclusively for the storage of wagons.