

*Prepared for:*

**World Bank Rail Restructuring Seminar, Ankara Turkey**

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*Date*

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**Restructuring Options for Reform of the Rail Sector in Turkey**

## **Restructuring the Rail Sector in Turkey**

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  - Financial Implications
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## Introduction

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## **TCDD and the Government of Turkey have made significant progress towards rail sector reform.**

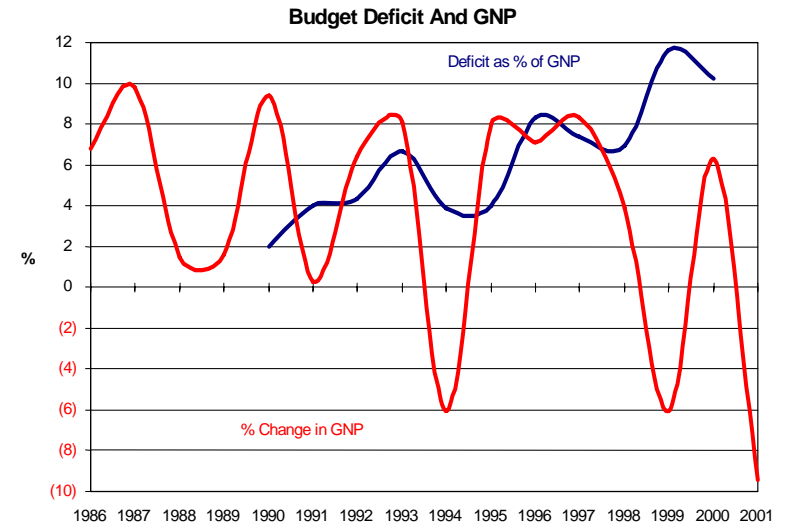
- **Completed a number of external studies**
  - Restructuring Strategy Study (BAH)
  - Options for Reform (World Bank)
  - Gap Analysis (EU)
- **Completed a number of internal studies**
  - Organization Structure Reform
  - Freight and Passenger business planning studies
  - Reorganization Plan
  - Strategy and Proposed Changes in Transport Law
- **Preparing for EU entry**
- **Now Need to Move Forward**

## Background

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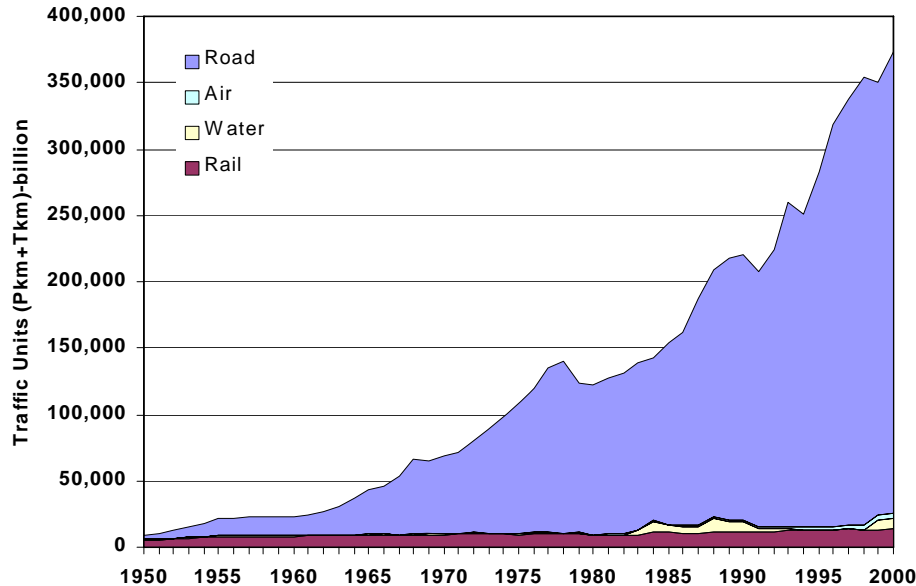
## Cost of rail services to the Government of Turkey has been climbing during a period of economic and financial difficulty.

- **Turkish State Railways – TCDD:**
  - Owns and operates state railway including infrastructure, freight, and passenger businesses
  - Seven largest ports
  - Manufactures and repairs locomotives, wagons and passenger coaches
- **Cost to government has been more than US\$10-billion over last decade.**
  - Climbing steadily for last seven years
  - Approaching US\$1 billion a year
- **Cost to the economy of Turkey may be higher since ports are profitable and cross subsidize rail services.**
  - Between 1990 and 2001, TCDD losses plus subsidies cost the country US\$ 7.5 billion

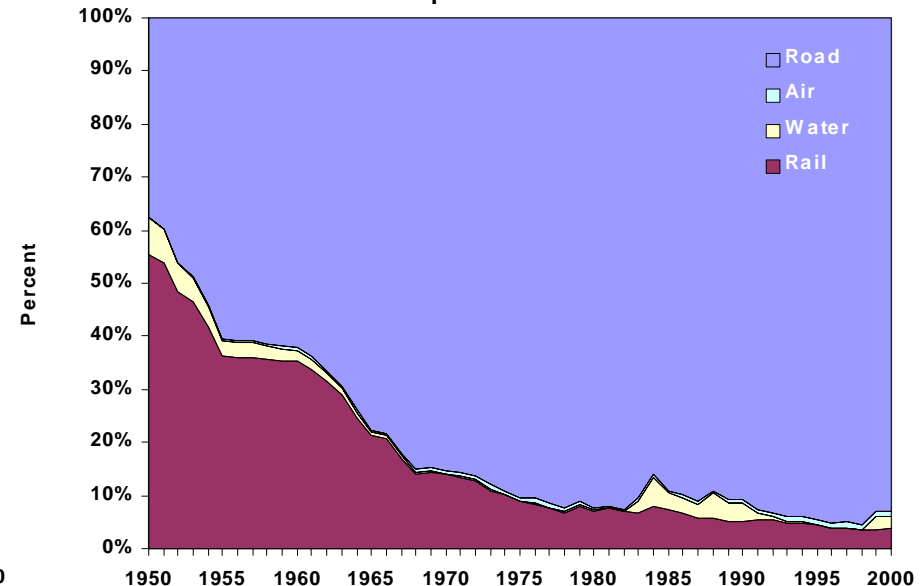


### But rail is becoming less important to the Turkish economy.

Transport Market Size



Transport Market Shares



- **Rail traffic represents about four percent of over all market, down from 50 percent in 1950.**
  - Even so, Freight traffic has been growing at about 2.3% per year
  - Intercity passenger traffic has been growing at about 1% per year
  - Suburban services have been declining at about 3% per year
- **Road transport has become the dominant mode for both freight and passenger traffic, just as it is in most other countries.**

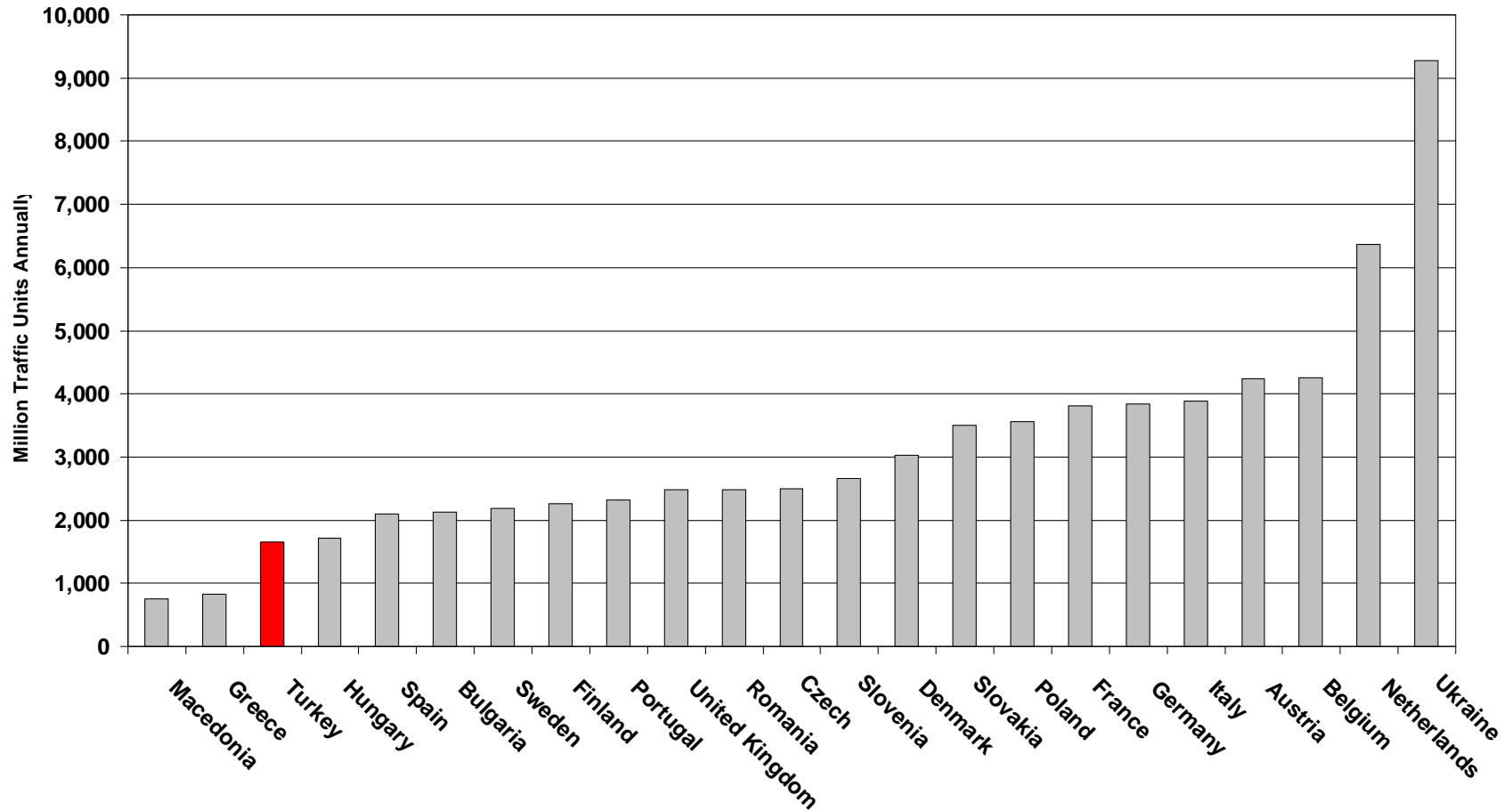
## TCDDs network has very little traffic except in a few places



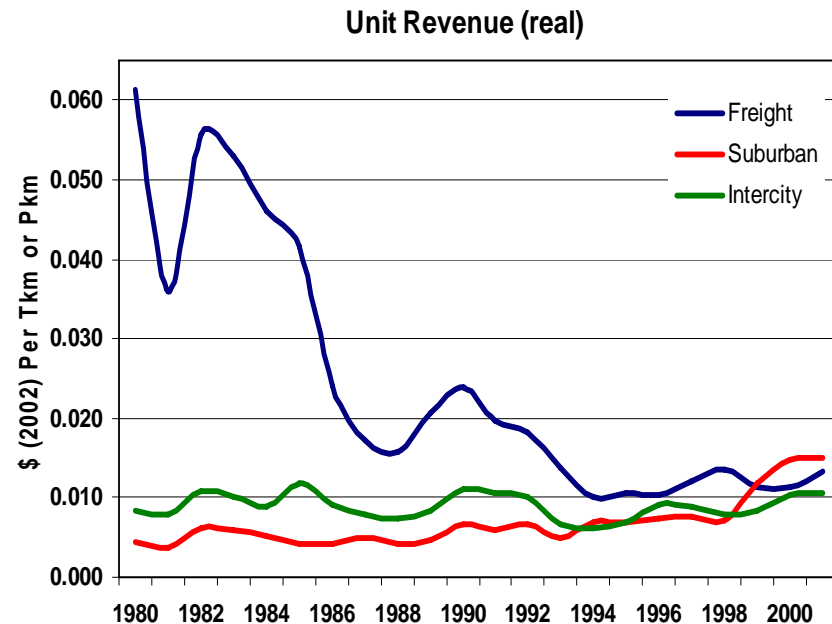
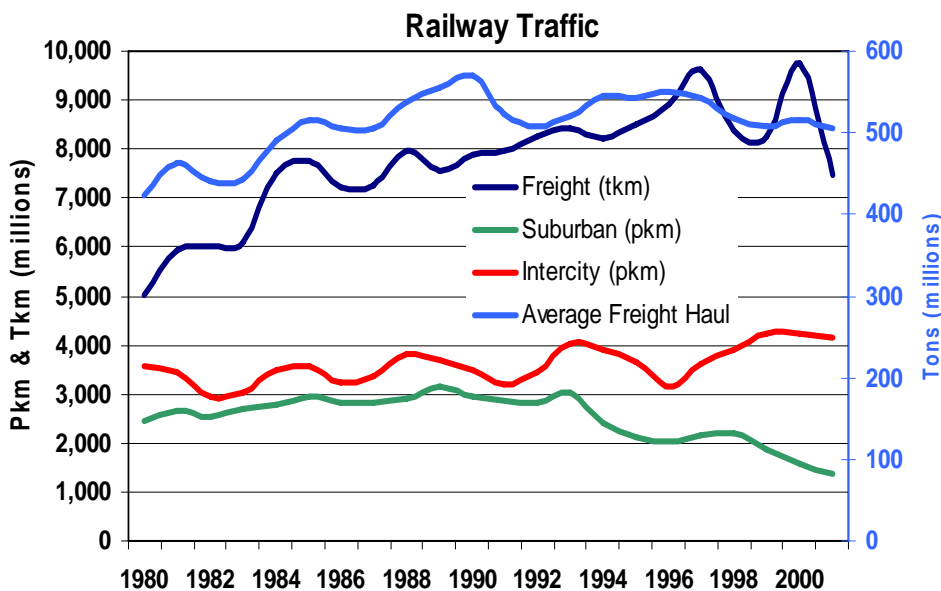
- Traffic density is high in urban areas where density is on the order of 20 million traffic-units per kilometer; outside these areas, densities are about 5 million traffic-units per kilometer on the heaviest lines, less than 2 million traffic-units per kilometer on average.



## TCDD has a light density network.

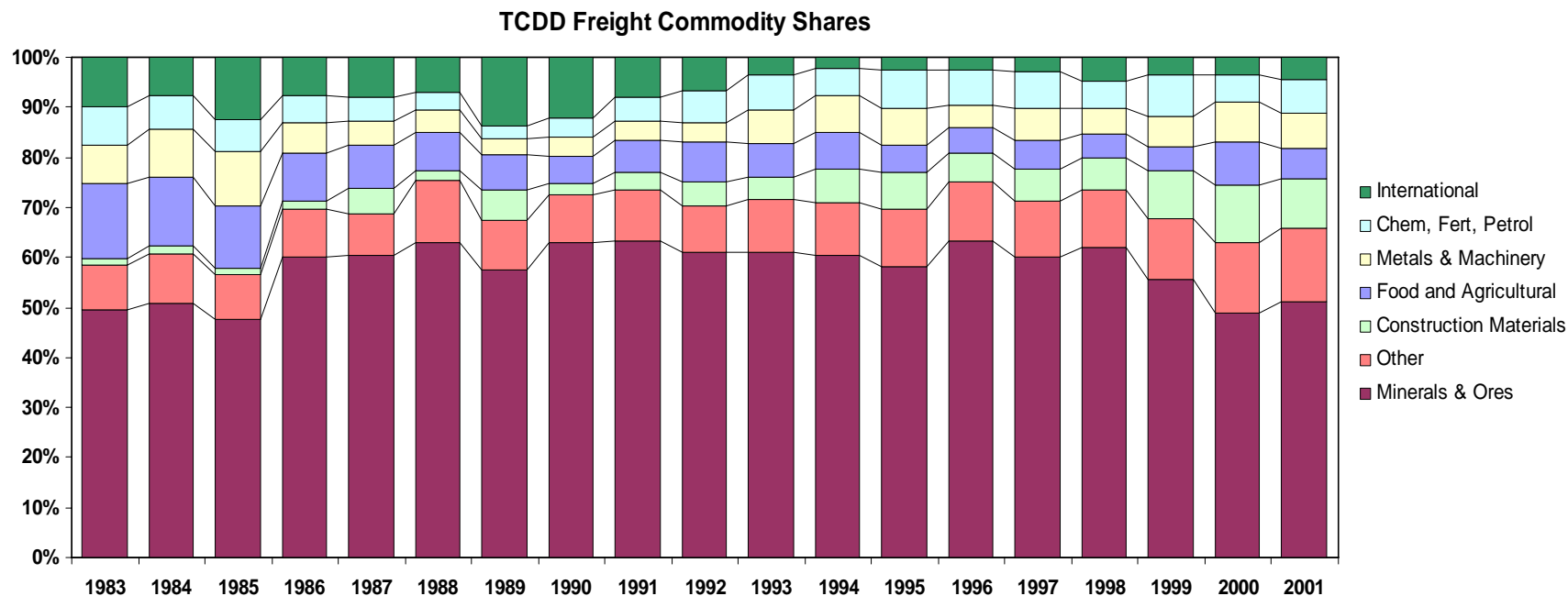


## Freight traffic has been growing slowly, but unit freight revenue has been declining.



- Freight traffic has increased by about 2% per year but freight unit revenue has been declining at 5% per year.
- Suburban services have been declining by about 3% per year while unit revenue has been increasing at about 3% per year.
- Intercity passenger services have been increasing by 1% per year while unit revenue has been increasing 3% per year.
- Overall, real revenue has declined while traffic has increased.

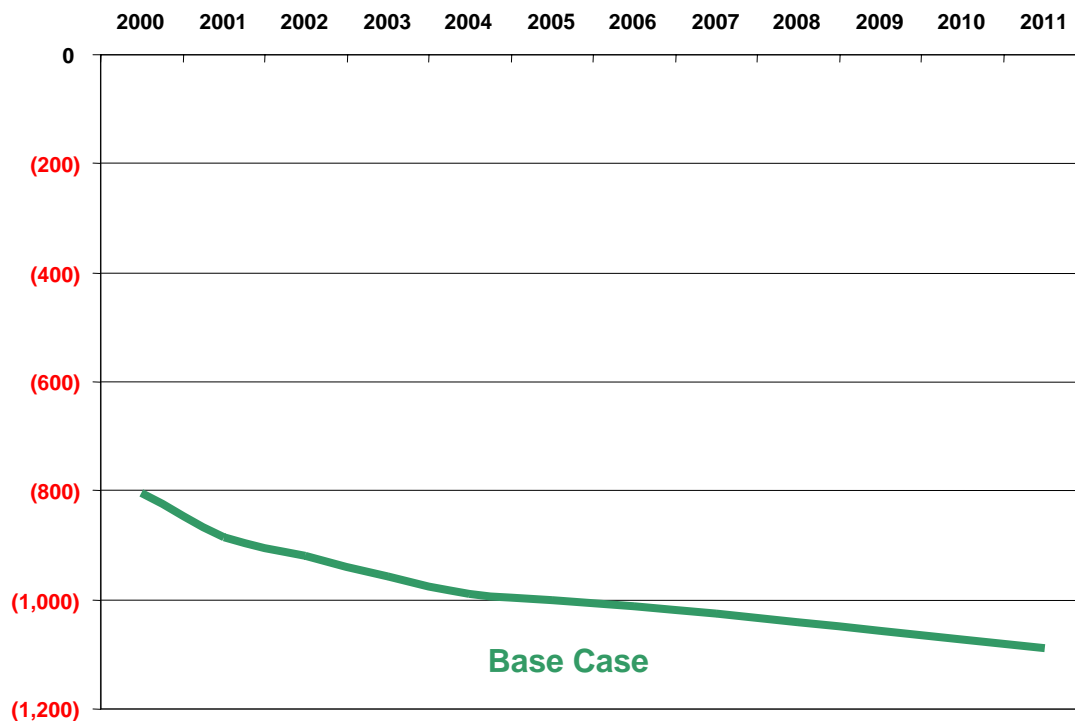
## Freight traffic mix has changed little over the last two decades.



- **Rail freight transport prices have declined but the decline cannot be explained by**
  - Changes in mix can drive changes in average freight transport prices
  - Changes in average length of haul can also change prices but average haul has not increased enough to account for the decline.
- **The result has been a decline in overall revenue, increasing losses, and increasing demand for government subsidy**

**Should these trends continue, the railway will become an increasing burden on the economy of Turkey.**

Net Operating Cost of Railway

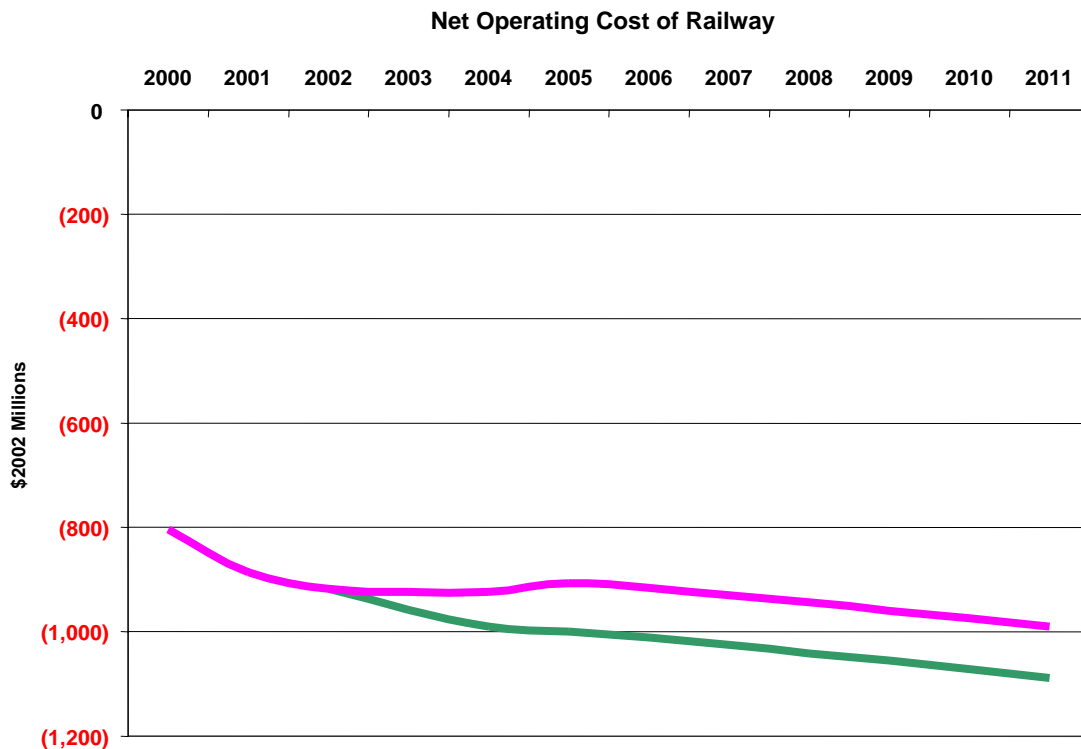


- **Railway operating losses will grow to more than US\$1 billion annually.**
  - Excluding cross subsidy from ports
  - Assuming nominal traffic growth
  - Excluding capital investment
  - Excluding investments necessary for EU membership
- **TDCC and Government concluded that reforms are needed to make these costs more manageable.**
  - Developed restructuring strategies to reduce costs and improve performance
  - Participated in independent studies by World Bank and EU
  - Developed recommended changes in railway management law to facilitate restructuring

## Restructuring Strategies

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**Government and TCDD have been moving to restructure and reform the rail sector. But, our analysis shows that while financial performance improves somewhat, the cost to Government remains quite high.**



- **TCDD to become commercially oriented.**
- **Organized differently.**
  - Forming freight, passenger, and infrastructure business units
  - Shifting manufacturing functions
- **Government expected to fund infrastructure and money losing services.**
- **Significant investment still needed for**
  - Increased speeds
  - Extended electrification
  - Increased line capacity
  - New high-speed routes to Istanbul
- **Implementation will require new railway law.**

### **We considered a series of restructuring options to find the most sensitive ways to reduce subsidy requirements.**

- **90% Traffic**

- Based on TCDD Strategy but keeps only network lines with 80% of freight and passenger traffic plus important connecting lines—about 60% of the network and 90% of all traffic.
- Rail employment (30,000 in 2002) declines to about 23,000 then grows to about 27,000 as traffic grows.

- **Reduced Network**

- Based on 90% network, retains only freight lines with 1 million tonnes or more—about 50% of the network, 60% of passenger traffic and 85% of all freight traffic.
- Only suburban and commuter services and key intercity passenger trains between Istanbul, Ankara, and Afyon are retained, all others abandoned.
- Employment declines to about 18,000 by 2005, then grows to 21,600 by 2011.

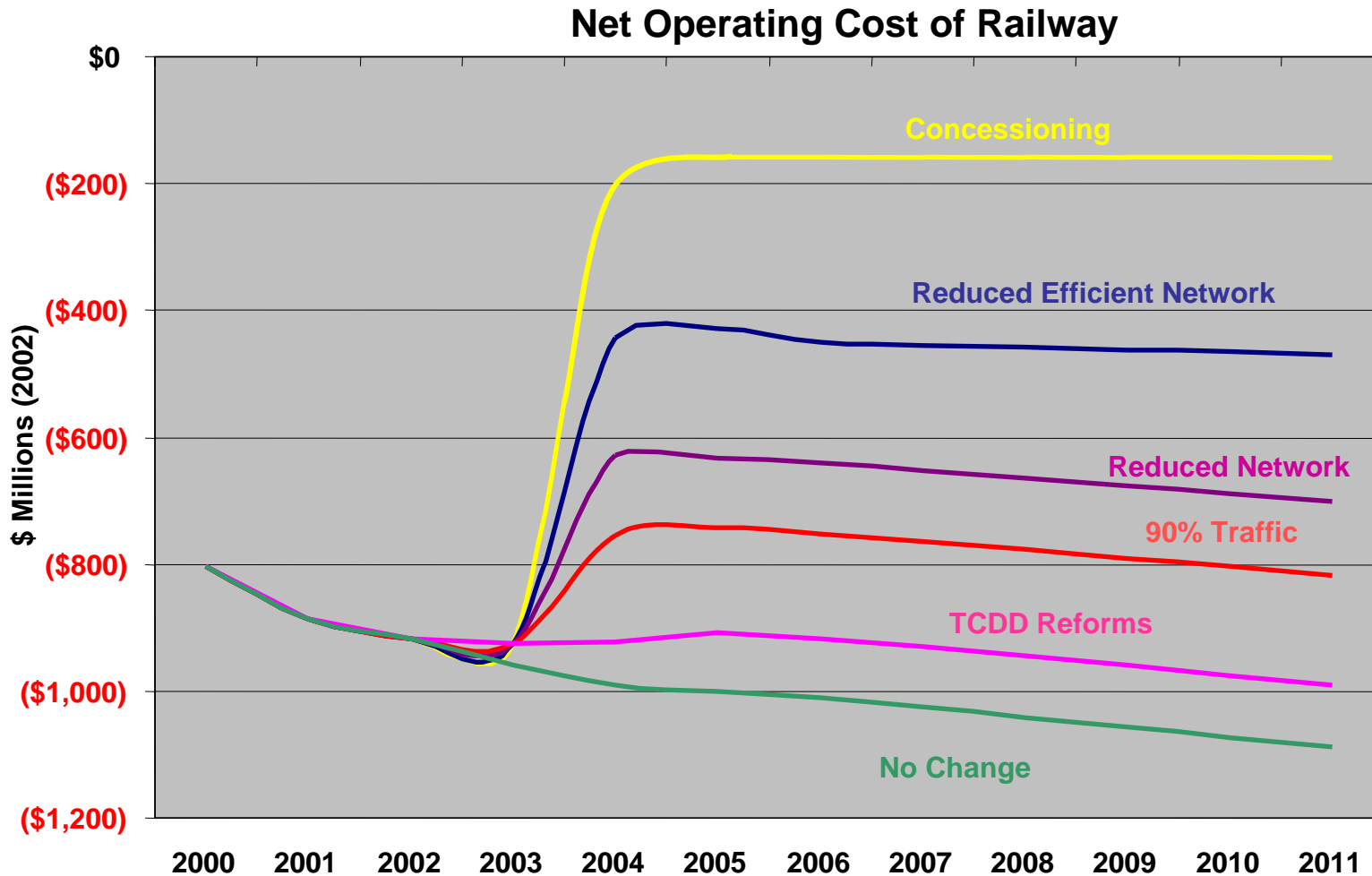
- **Efficient Railway**

- Based on Reduced Network, applies various techniques to reduce operating costs by 20%, improve fuel efficiency by 10%, raise some freight prices.
- Employment declines to about 15,000, then grows to 17,000 by 2011.

- **Service Concessions**

- Based on Efficient Railway, assumes that freight services are concessioned (including the infrastructure), passenger services are also concessioned separately.
- Employment declines to about 7,000 and remains relatively constant—this does not include employment of concessionaires.

All options require government subsidy, though subsidy needs can be reduced substantially.





## Implementation Issues

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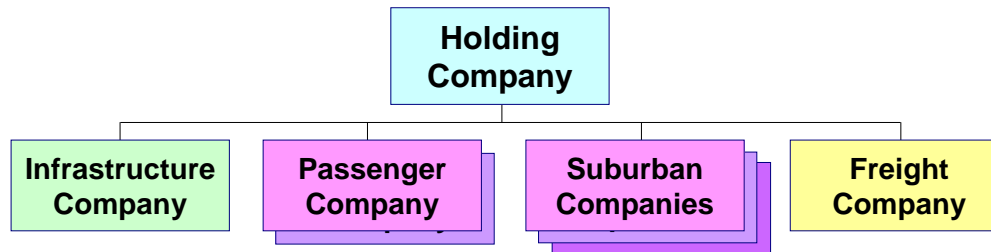
### **TCDD and Government should consider a broader range of restructuring strategies that will have greater fiscal impact. The steps to do so are:**

- **Conduct a more detailed strategy analysis using financial and operational models.**
  - The strategy should consider a wide range of restructuring options and alternative structures.
  - Government and TCDD should work to reach agreement on services, network size, investments and subsidy requirements.
  - Use financial, network operations, line capacity, and financing models to evaluate the trade-offs between network size, investment strategy, and services to be provided.
  - Develop an integrated network restructuring action plan and schedule for implementation.
- **Develop the legislative and regulatory framework needed.**
  - Legislative framework should establish the basis for enterprise structure determined in the strategy
  - A regulatory structure should define the relationship between government and railway enterprises.
  - The legal and regulatory structure established should conform to the requirements of EU membership
- **Develop a transition strategy to achieve joint TCDD and government objectives**
  - Address cultural change issues.
  - Specifically address cost, investment and labor protection issues associated with any reduction in the scope of rail services.
  - Develop a time-based schedule for dealing with organizational structures, company structures, efficiency improvements, investments, and labor issues.

### **Implementation of a major railway restructuring should address several important issues.**

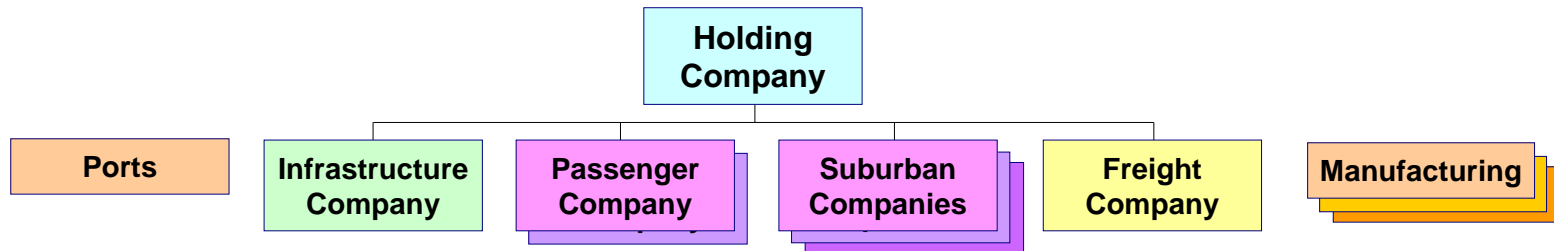
- **Industry Structure**
  - Separation of railway and non-railway functions
  - Establishment of commercially oriented companies based on line-of-business
  - Separation of regulatory functions and financial oversight
  - Determine policy for how private sector will be involved in the restructuring
- **Define the restructuring, investment, and organization strategy in detail**
  - Agree on goals and objectives
  - Financial projections, asset requirements by business unit
  - Develop necessary legal and regulatory frameworks
- **Analyze investment priorities**
  - Use analytic tools to evaluate investment requirements associate with key elements of the restructuring strategy
  - Develop prioritized list of investments and develop strategies for financing them
- **Determine service and labor implications and create mitigation plans**
- **Prepare for culture change issues associated with restructuring**

**Restructuring should work towards organization structures that separate important parts of the business within a holding company structure. For example:**



- **An Infrastructure company would include ownership and operation of fixed facilities**
  - Including railway lines, signals, communications, and electrical overhead supplies
  - Maintenance and engineering functions include repair, maintenance, renewal, investment planning and engineering
  - Operating functions include dispatching, inspections, and control system operations
- **A Passenger Company would provide intercity passenger services**
  - This function could include operation of rolling stock, stations, and intercity passenger services.
  - Provision might be made for multiple passenger operators (e.g., high-speed, Izmir services, etc.)
  - Equipment ownership could be with the passenger company or retained by the board, or a separate rolling stock leasing enterprise could be setup.
- **Several Suburban Companies would provide suburban passenger services**
  - Certainly Istanbul and Ankara, other cities also possible.
  - Equipment would be assigned to specific services, just as it is now.
- **The Freight company would include rolling stock and freight facilities, and could include operation of terminals and marshalling yards.**

## Such structures provide a great deal of flexibility



- **Rolling stock, e.g. locomotives, could be assigned to one operating company but transferred between operating companies on a commercial basis, subject to a negotiated agreement.**
- **Each operating company would have commercial contract with the infrastructure company for access to rail lines.**
  - Such contracts typically include performance specifications (for example, acceptable speeds and delays on the one hand, and maximum trains-per-hour, schedule performance standards on the other)
  - Bonus payments for performance in excess of contract standards are typical.
  - The freight company could be responsible for maintenance on light density lines handling only freight traffic.
- **Ports, manufacturing and other non-core rail entities would be separated from rail activities.**
  - The structure could permit multiple freight operators and different passenger operators in different regions of the country.
- **The structure can permit further separation in the future, if that proves beneficial**
  - For example, separation of the freight company
  - Or separation of suburban or even some long distance passenger services.

**All details of the restructuring, investment, and organization strategy should be addressed in an integrated plan.**

- **Agreement on high level goals and objectives is not easy and usually requires an iterative but comprehensive methodology**
  - Start with highest levels of constraints in regard to total government spending on rail, including investment.
  - Define the level of line rationalization that is acceptable.
  - Define how quickly the Government wants to achieve EU conditions.
  - Outline policy on separation of non-rail units.
- **Develop integrated financial models that includes major business units and goes far enough into the future that the implications of the strategy are visible.**
  - Use an integrated traffic forecasting method that is sensitive to prices and services.
  - Use sufficient detail to show the effects of efficiency improvements and investments.
  - Model should show employment implications of major restructuring actions, including structural changes.
  - Specifically consider the fate of separated units.
- **Iterate this process until agreement is reached.**
- **Then develop the necessary legal and regulatory framework.**

## Analyze operating changes and investment strategies in detail.

- **Use analytic tools like simulation models to evaluate operational feasibility of major operating changes.**
  - Detailed operational and financial modeling reveal counterintuitive characteristics of network businesses.
  - Also provide a good basis for the development of implementation plans when a strategy is finally agreed.
- **Develop accurate analyses of employment, investment, and operating costs.**
  - Like it or not, this is how restructuring options will be evaluated, along with service area and market data.
  - A detailed estimate of employment effects of restructuring will help define necessary policy responses and their cost.
- **Analyze investment priorities**
  - Use analytic tools to evaluate investment requirements associate with key elements of the restructuring strategy.
  - This is particularly important for major investments like electrification and high-speed services.
  - Look for investments that will improve efficiency, especially in the use of assets like rolling stock and marshalling yards and terminals.
  - Develop prioritized list of investments.
  - Consider alternative strategies for financing investments, make sure these are reflected in the financial models.

**Develop a full description of the evolving role of the government as the restructuring takes place.**

- **Develop detailed analyses of employment and service changes by region.**
  - Employment changes are one of the most significant issues that must be resolved.
  - But changes in services available by region are also politically important.
  - Any restructuring plan must be politically acceptable for successful implementation.
- **The restructuring is likely to require changes in how the industry is regulated and its relationship to government in many different areas.**
  - For the EU aquis, competition for rail services will be a key feature, requiring new government structures to regulate the competitive environment.
  - Safety, entry, access to infrastructure, subsidy payments, and employment are all issues that will require new government oversight.
- **Work with government representatives to develop any new legislative changes that may be necessary for the new structure to be successfully implemented.**



**All major restructuring efforts require a change in the culture of the existing organization.**

- **The existing culture, whatever it is, must be changed.**
  - New organizations will be commercially oriented and must be much more concerned with customer issues.
  - The environment will become increasingly competitive.
  - The government will have a different role, with more oversight but less direct control.
  - Demands on staff will change, some dramatically.
  - Staff numbers will change, some dramatically.
- **A new culture, based on competition and commercial performance will be more important.**
  - Staff will require special training for the transition.
  - Some staff will be in new organization units and structures, they will need to be trained and new expectations set.
- **It is better to develop a vision of the culture you want, rather than have one evolve on its own.**
  - Then design programs to help build this culture.
  - Implementation of a restructuring program will go much more smoothly when expectations and the ultimate vision of the restructuring are clear to all staff, officers and employees alike.
  - New ways to communicate the vision, progress, and implementation plan will be needed.

## Next Steps

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### To proceed ...

- **Appoint a restructuring champion with the mandate to create change and accountability for it**
- **Find a mechanism for clear and unambiguous dialogue with Government – a steering committee has worked in a number of places**
  - Set the initial goals and objectives
  - Set up a process for reviewing and acting on the results of the studies
- **Develop an integrated planning process**
  - Evaluate financial and operational implications of proposed changes
  - Continue efforts at internal reforms: organization change, outsourcing, development of strategies and plans for next phases
  - Initiate study of line costs and economic value
  - Estimate savings to railway and to Government from modernization, impacts of investments
  - Analyze new financing mechanisms
  - Consider management contracts for some functions (e.g., suburban services)
  - Develop culture change process
- **Begin development of changes in legal structures and the role of the government**
  - Assessment by Government of the need for regulation and oversight of the new railway activities.
  - Develop new regulatory structures and relationships between railway, ports, other entities
- **Passage of new legislation**