



# Rescuing Railways: Recent Achievements and Experience

## What Are The Trends?

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The World Bank



## The Bank and Pakistan Railways (PR)

- ◆ 10 Loans, \$262 million to Pakistan Railways
- ◆ 2 Transport Sector loans (\$384 m) with rail components
- ◆ PR is important: employment (105,000+ people); financial deficits; environmental advantages; natural rail market
- ◆ PR, with good people, is near collapse because of conflicting policies and need for change
  - freight traffic has been falling
  - passenger traffic has been stagnant
  - low employee and asset productivity
  - high passenger share with very low fares
- ◆ PR is **dying** -- action is badly needed
- ◆ Successful change unlikely in the public sector, but private sector can succeed

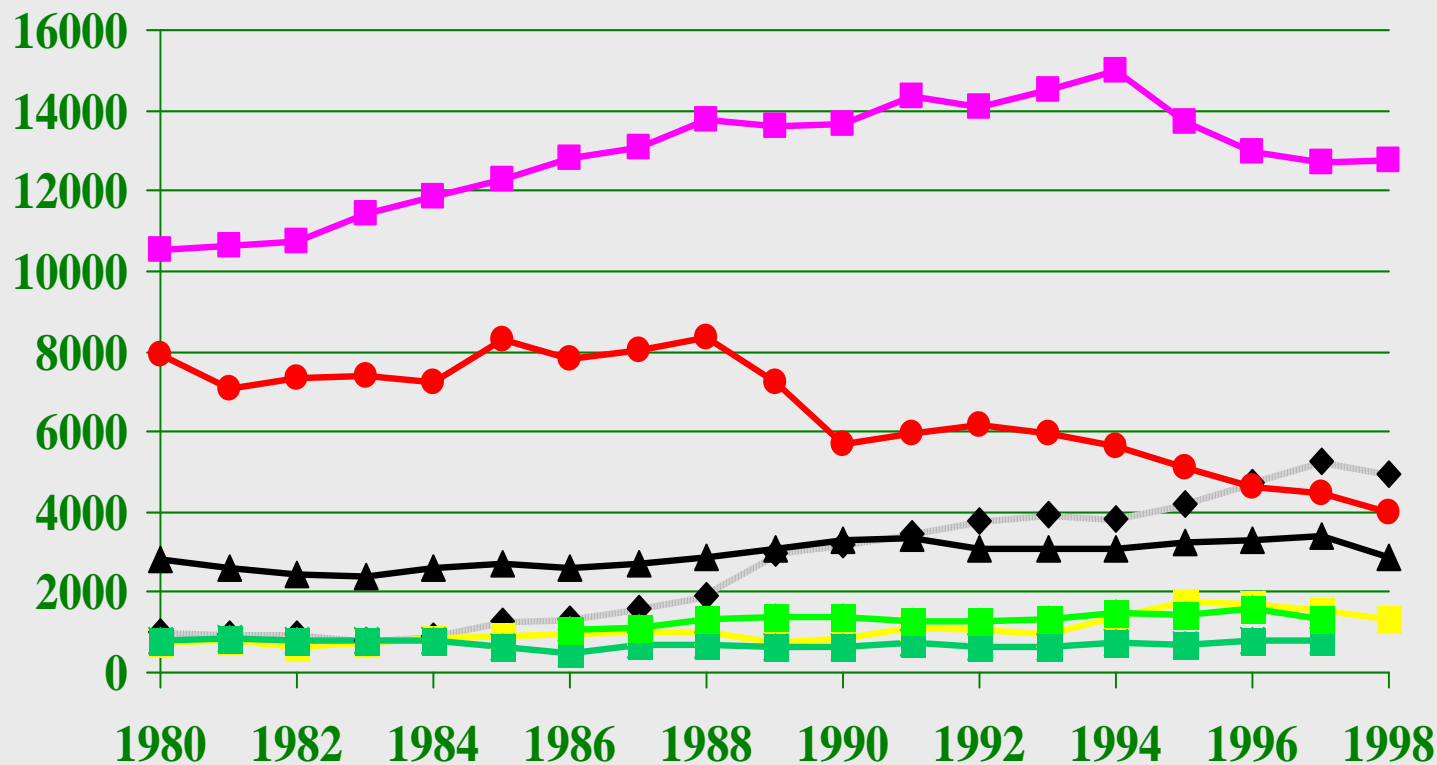




# Freight Traffic Has Been Shrinking

(000,000 Ton-km)

Indonesia Republic of Korea Thailand Vietnam Bangladesh Pakistan Malaysia

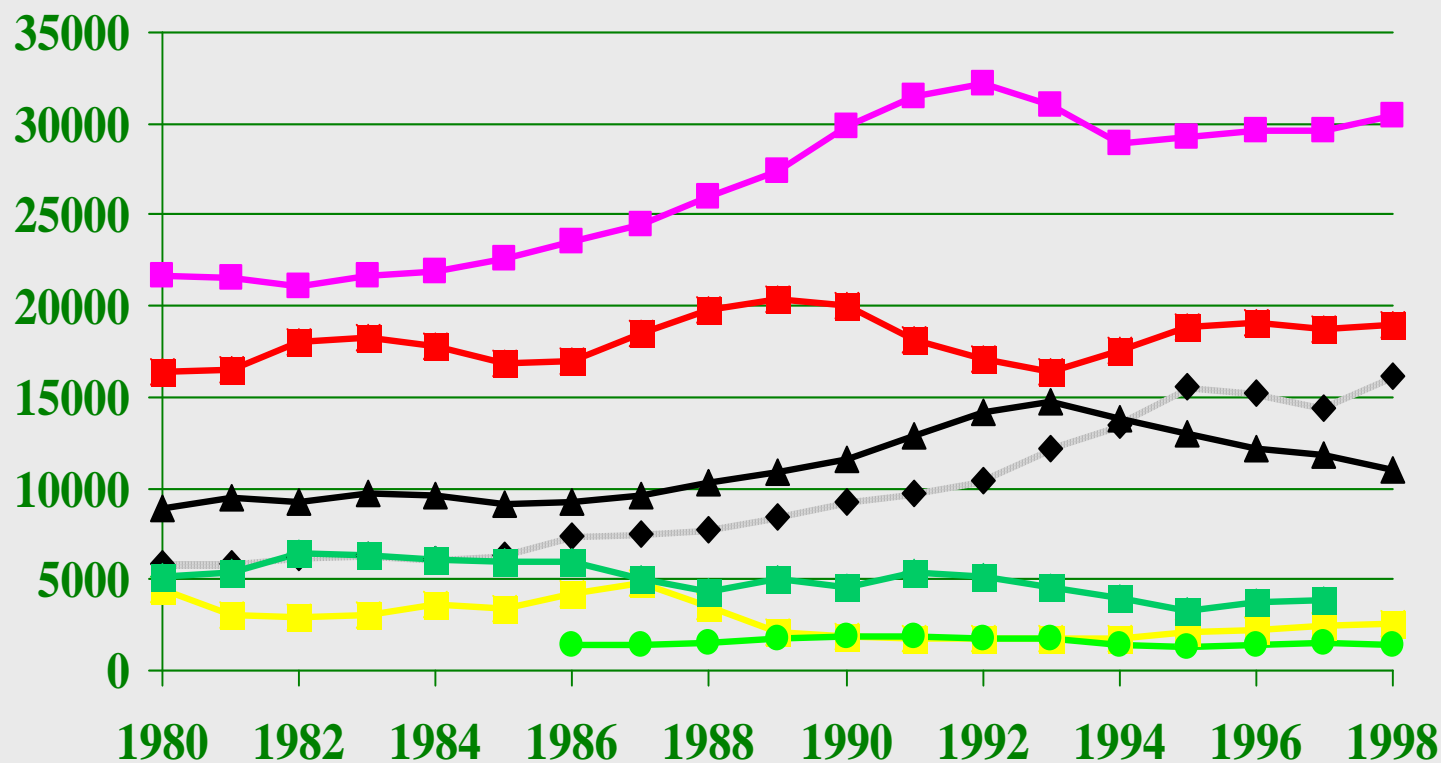




# Passenger Traffic has Stagnated

(000,000 P-Km)

Indonesia Republic of Korea Thailand Vietnam Pakistan Malaysia Bangladesh

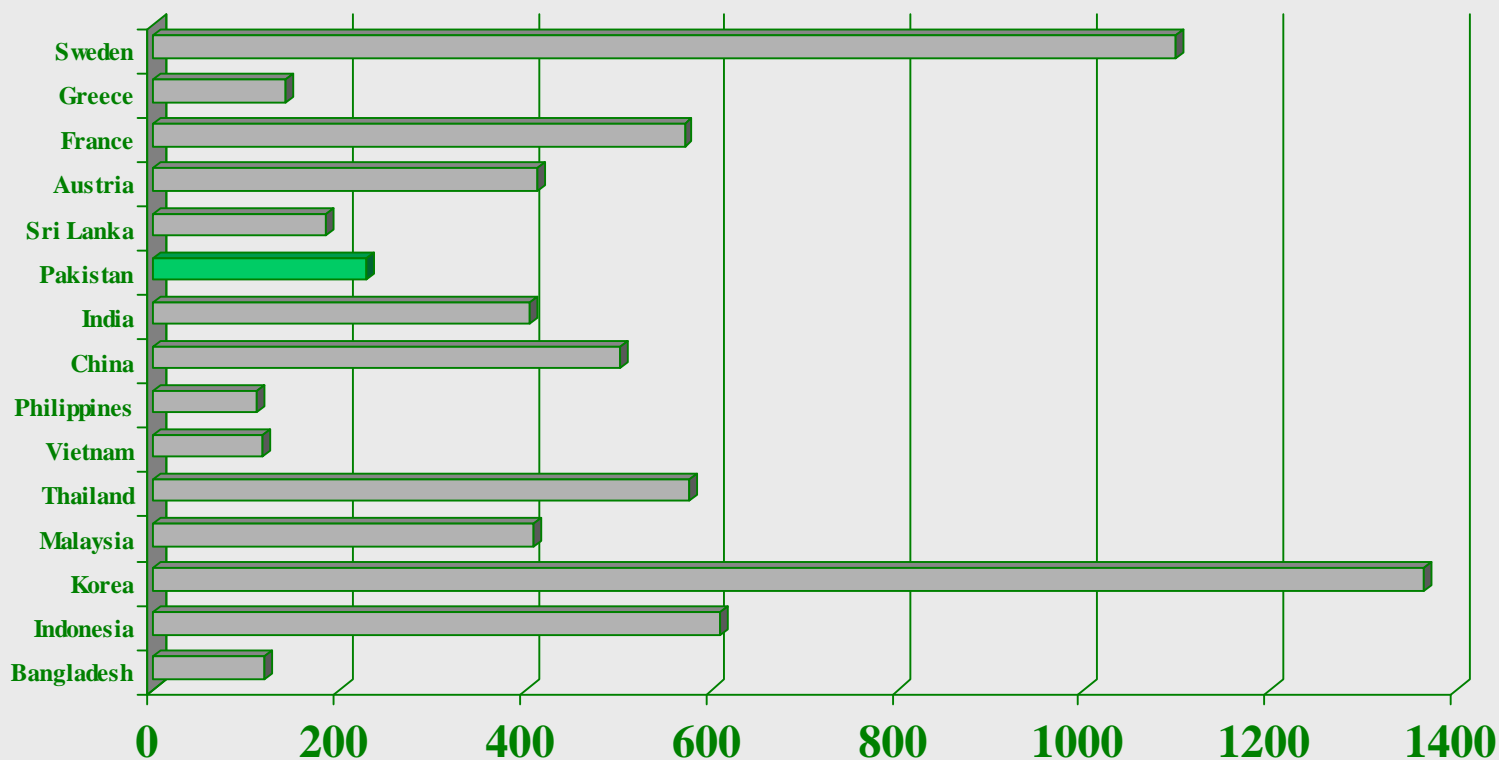






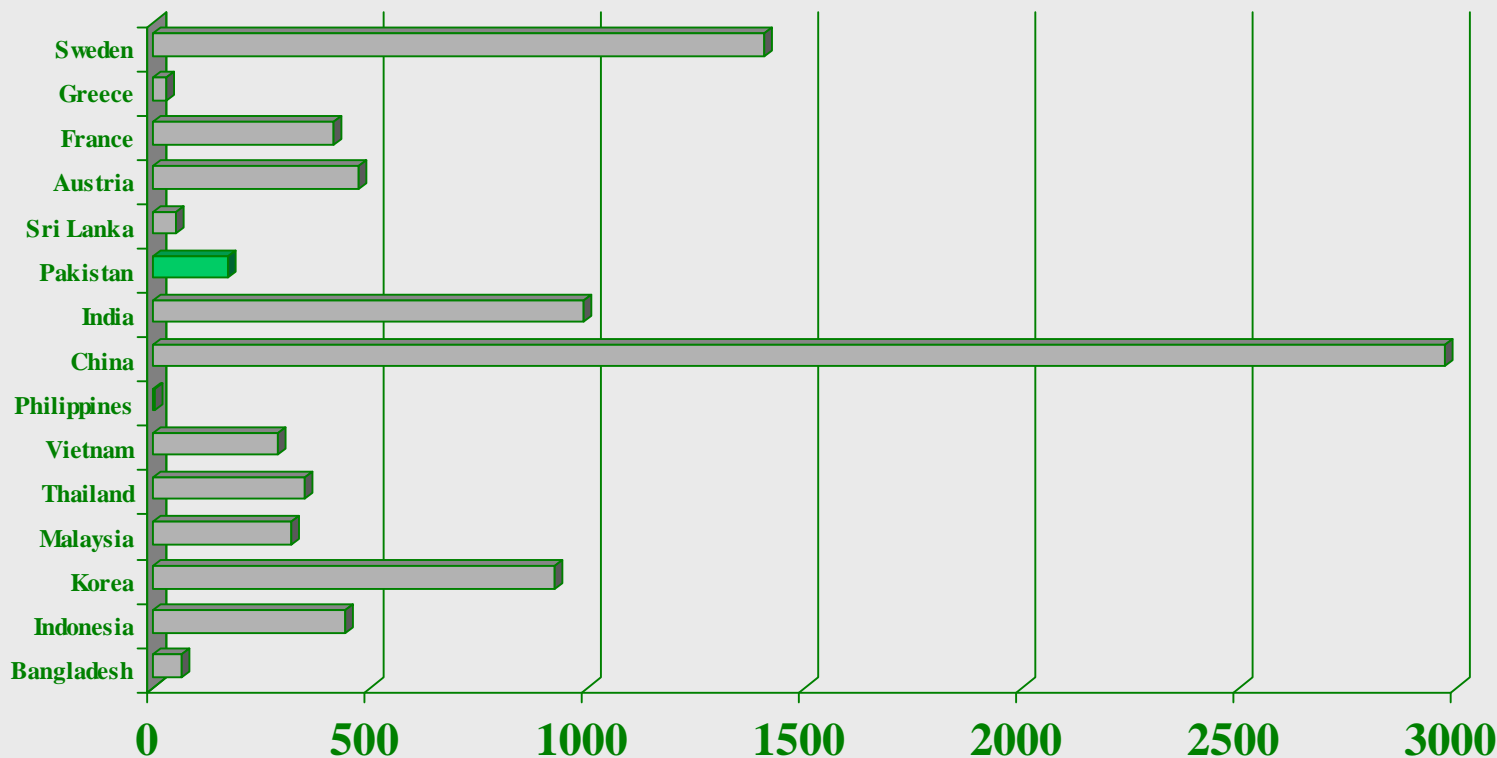
# Employee Productivity is Relatively Low

(000 Pkm+000 Tk/Employee)





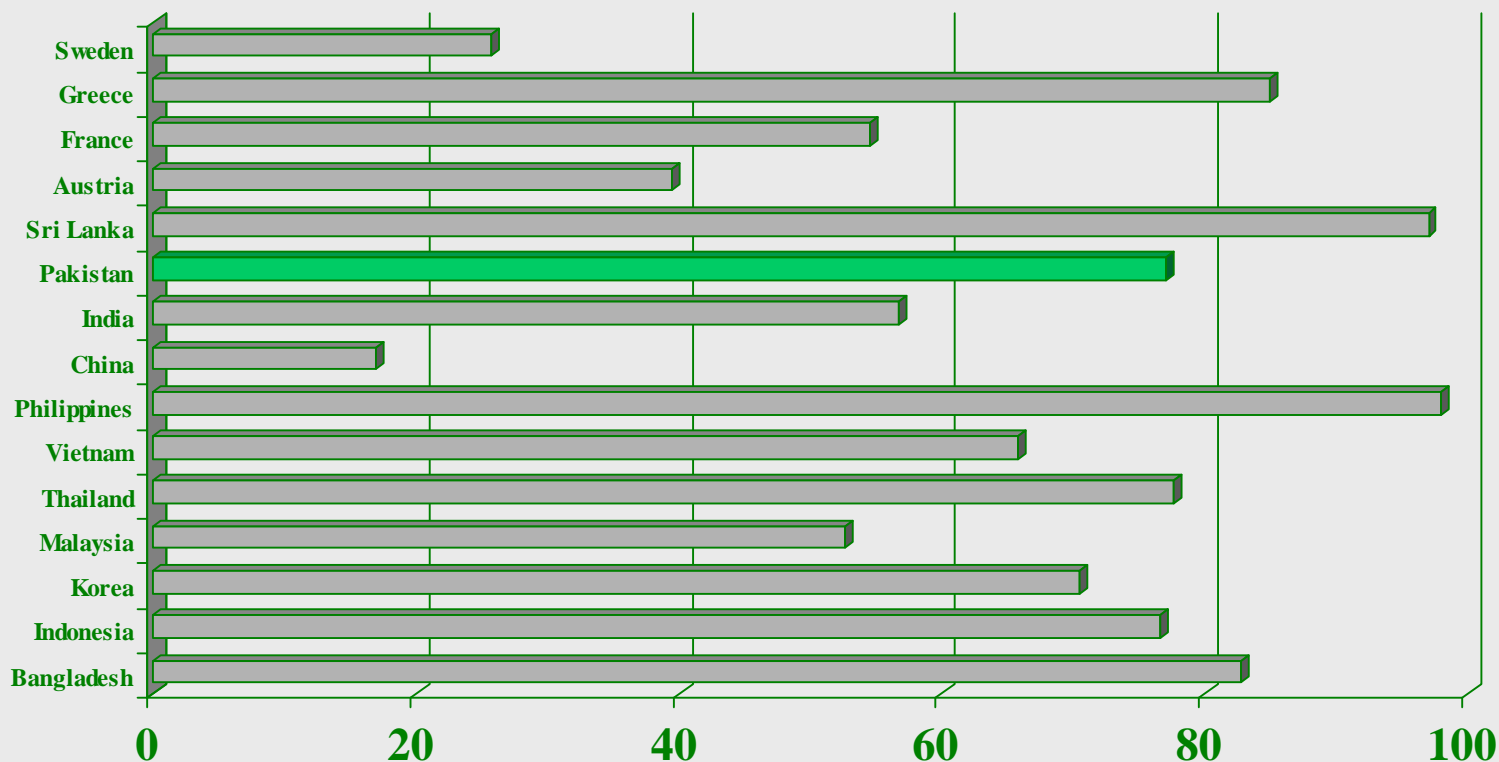
# Average Annual Output per Freight Wagon is Also Low (000 Tkm per Wagon)





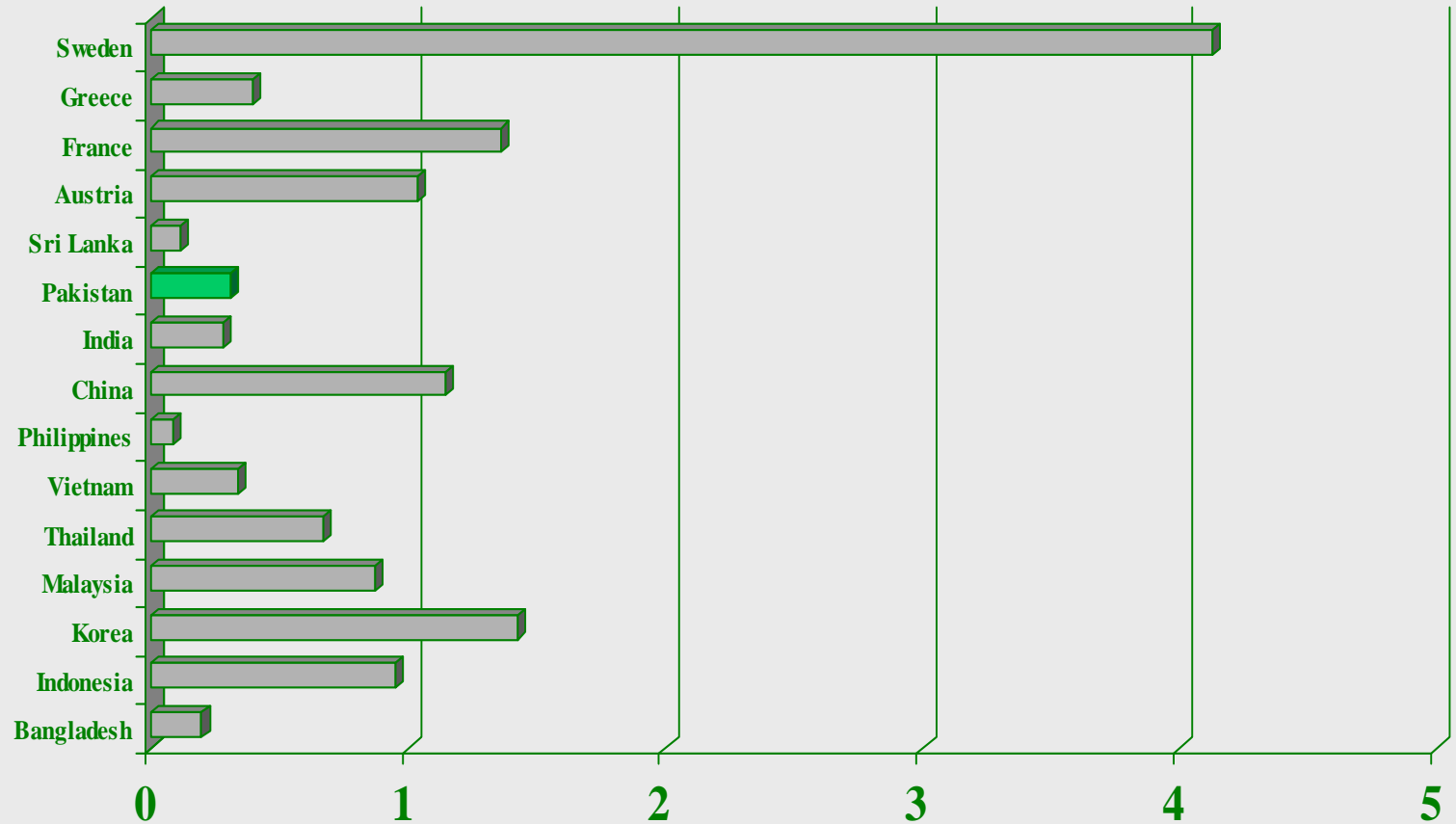
# Passenger Traffic as Percent of Total Traffic Is Very High

$(P\text{-km}/(P\text{-km}+T\text{-Km}))\%$





## The Ratio of Average Passenger Fare to Average Freight Tariff Is **Very Low**: Interacts With High Passenger Share

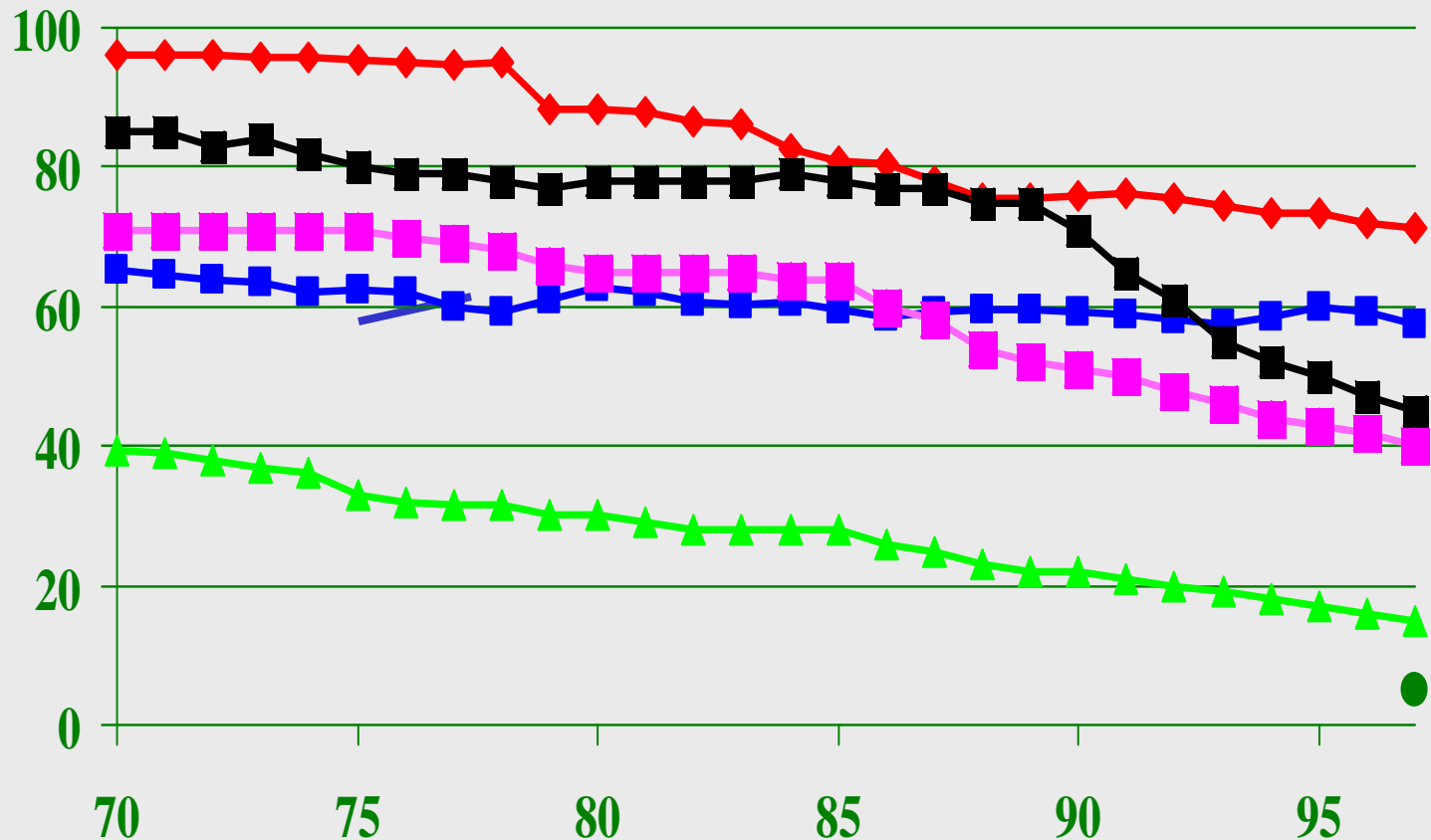






# PR is Approaching Irrelevance:

## Rail versus Truck Freight Market Share (% ton-km) In China, Poland, US, EU, India and Pakistan



Note: other modes excluded. This considers only the rail share of rail plus truck traffic.



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# Why Have Public Sector Railways Foundered: Is Pakistan Unusual?

- ◆ Public sector railways are in trouble everywhere
- ◆ Transitions prevail: EU, US, Latin America, Africa, Middle East, **India and China**
- ◆ Reasons are the same universally:
  - shortage and unreliability of public funding
  - mixing of commercial and social roles without compensation
  - political interference
  - surging competition





# Why Private Sector?

- ◆ Mobilize private investment, replace public funds
- ◆ Better use of national resources
- ◆ Increased efficiency
- ◆ Better market development
- ◆ Enhanced social equity
- ◆ Better meet defense and security needs
- ◆ Effective environmental protection
- ◆ Survive private competition







# World Bank Group **Experience** With Rail Concessioning or Privatization

- ◆ Freight concessions: Argentina (6), Chile (2), Brazil (7), Bolivia (2), Uruguay, Guatemala, Mexico (6+), Peru (3), Cote d'Ivoire/Burkina Faso, Cameroon, Malawi, Mozambique (2), Senegal/Mali, Ghana, Jordan, 5 others underway
- ◆ Partial Privatizations: Poland and Romania underway
- ◆ Suburban passengers: Buenos Aires (7); Rio de Janeiro; Mexico City underway
- ◆ Metros: Buenos Aires, Rio de Janeiro, Bangkok, Sao Paulo underway
- ◆ **UK**: 12 suburban and 13 inter city passenger franchises, 2 freight operators and 1 infrastructure company
- ◆ **Others**: New Zealand, Canada, US, Australia

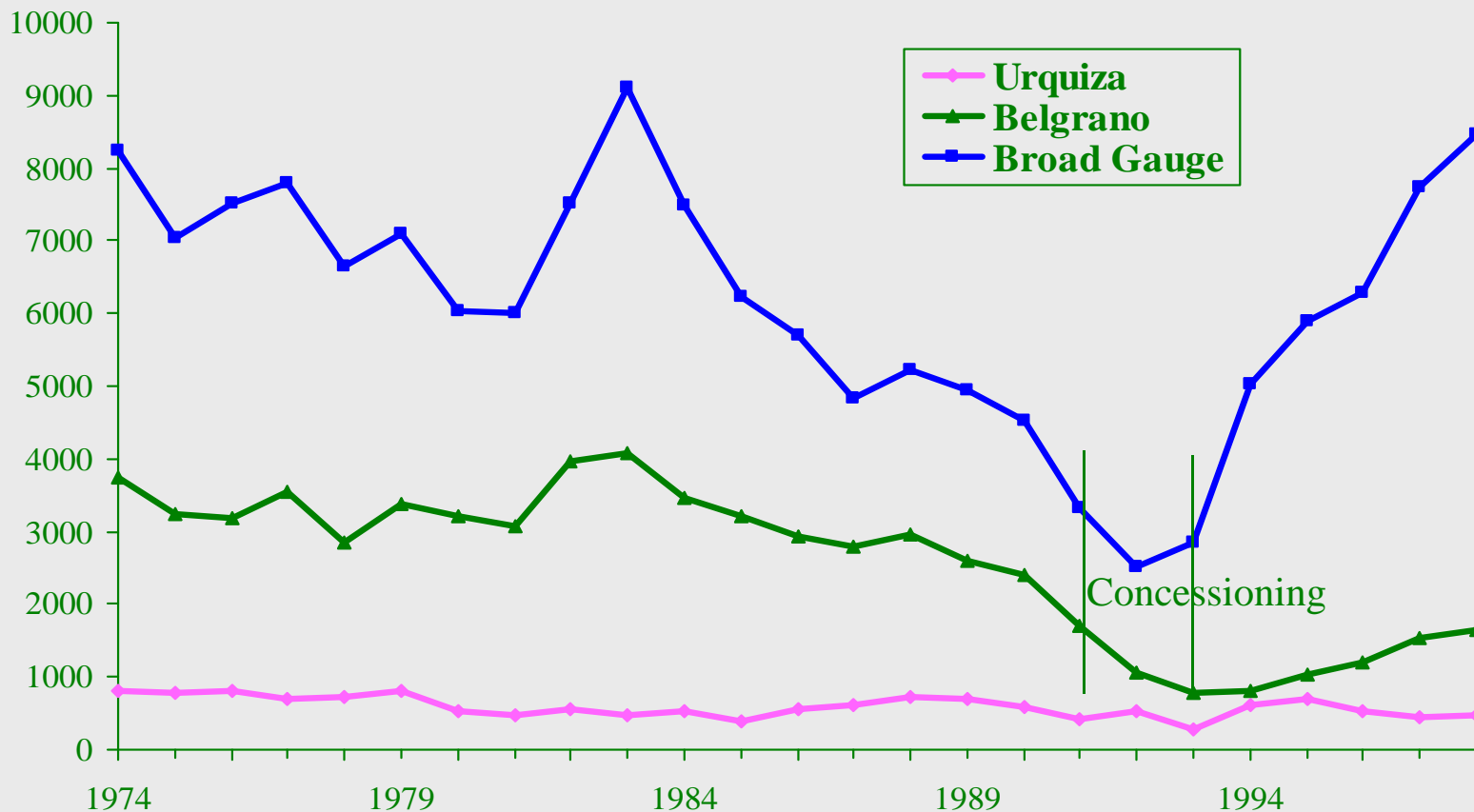






# Argentine Rail Freight

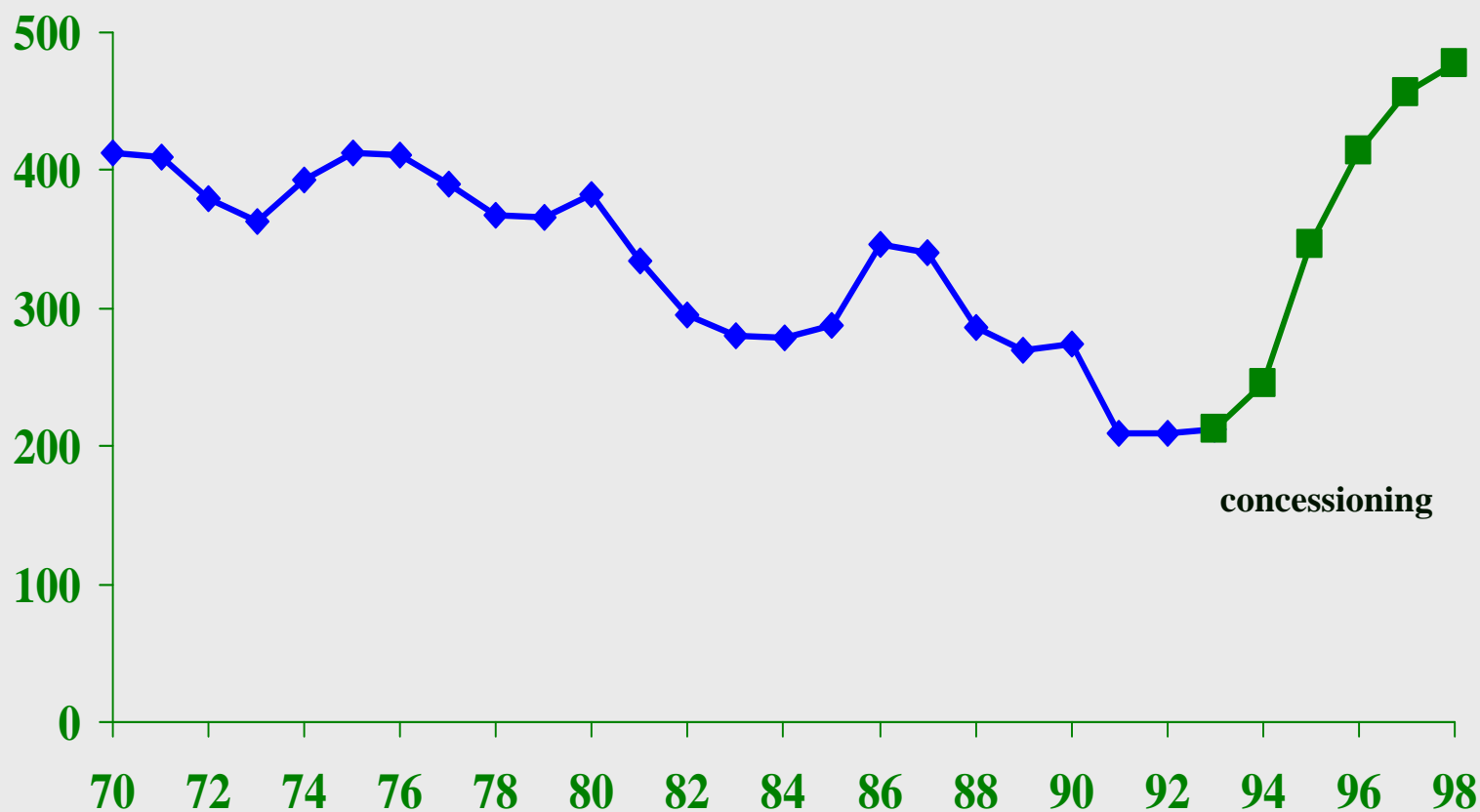
(000,000 Ton-Km)





# Suburban Rail Passengers in Buenos Aires

(millions of passengers)



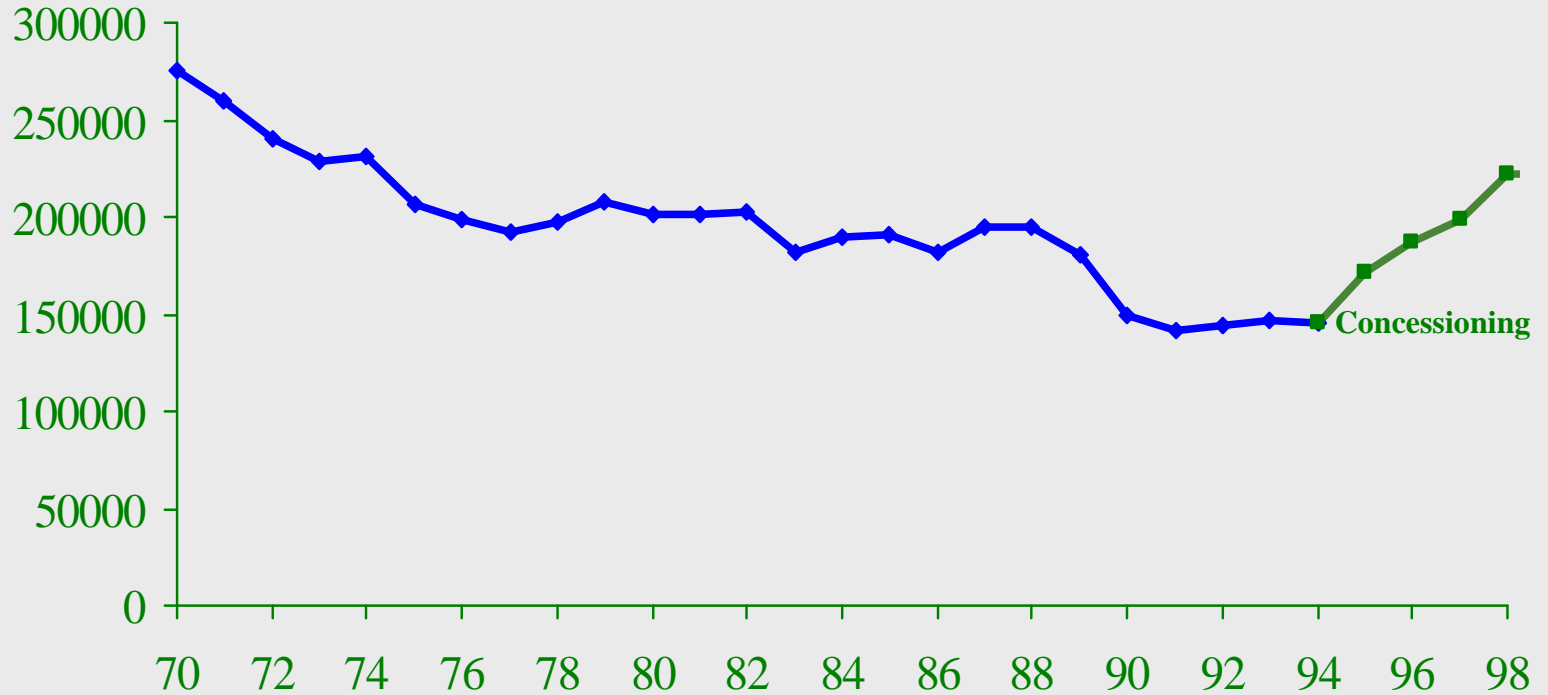
concessioning





# Buenos Aires Metro: 1970 to 1998

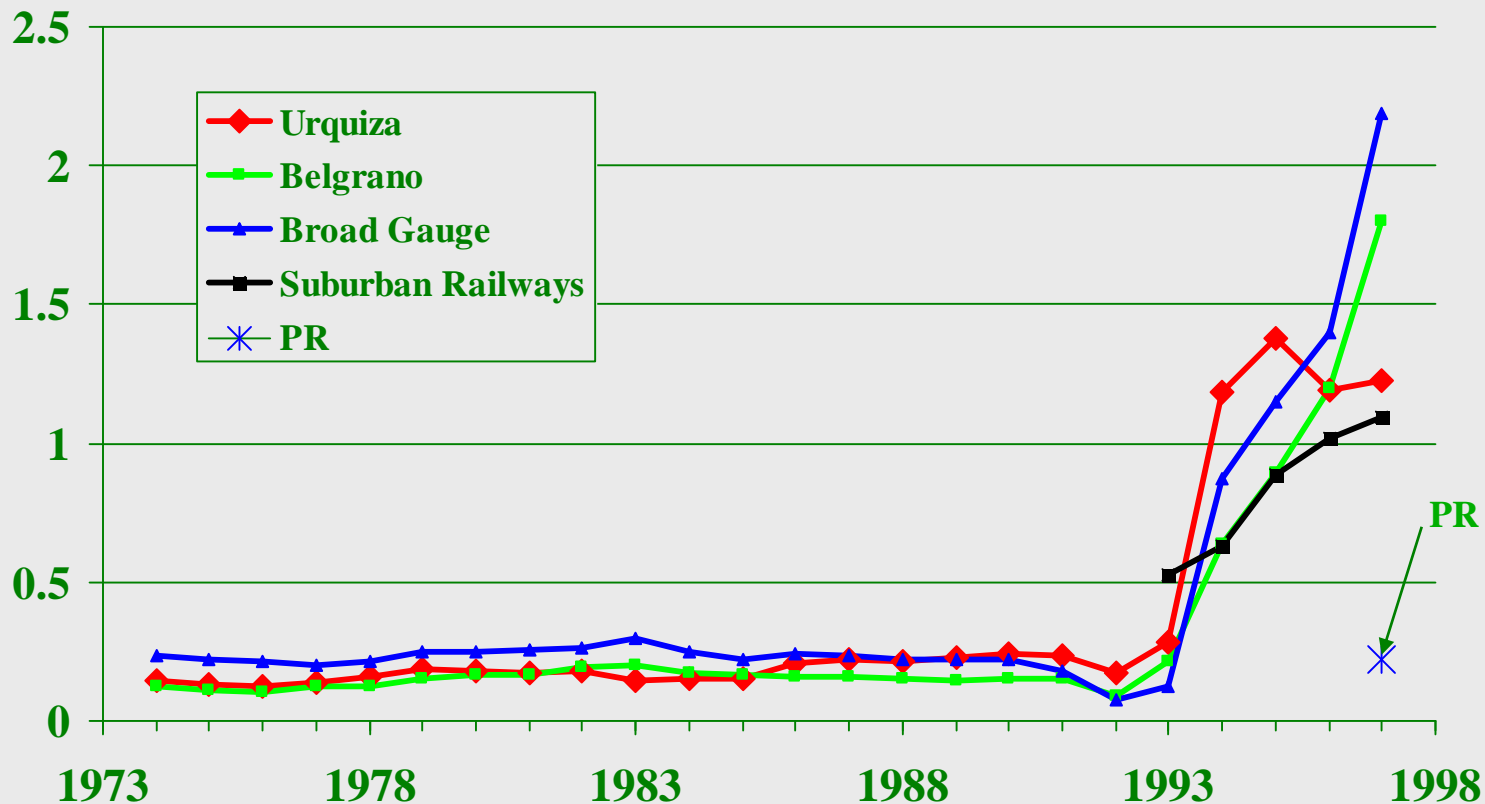
(000 Passengers)





# Labor Productivity in Argentina

(000,000 TU/Employee)

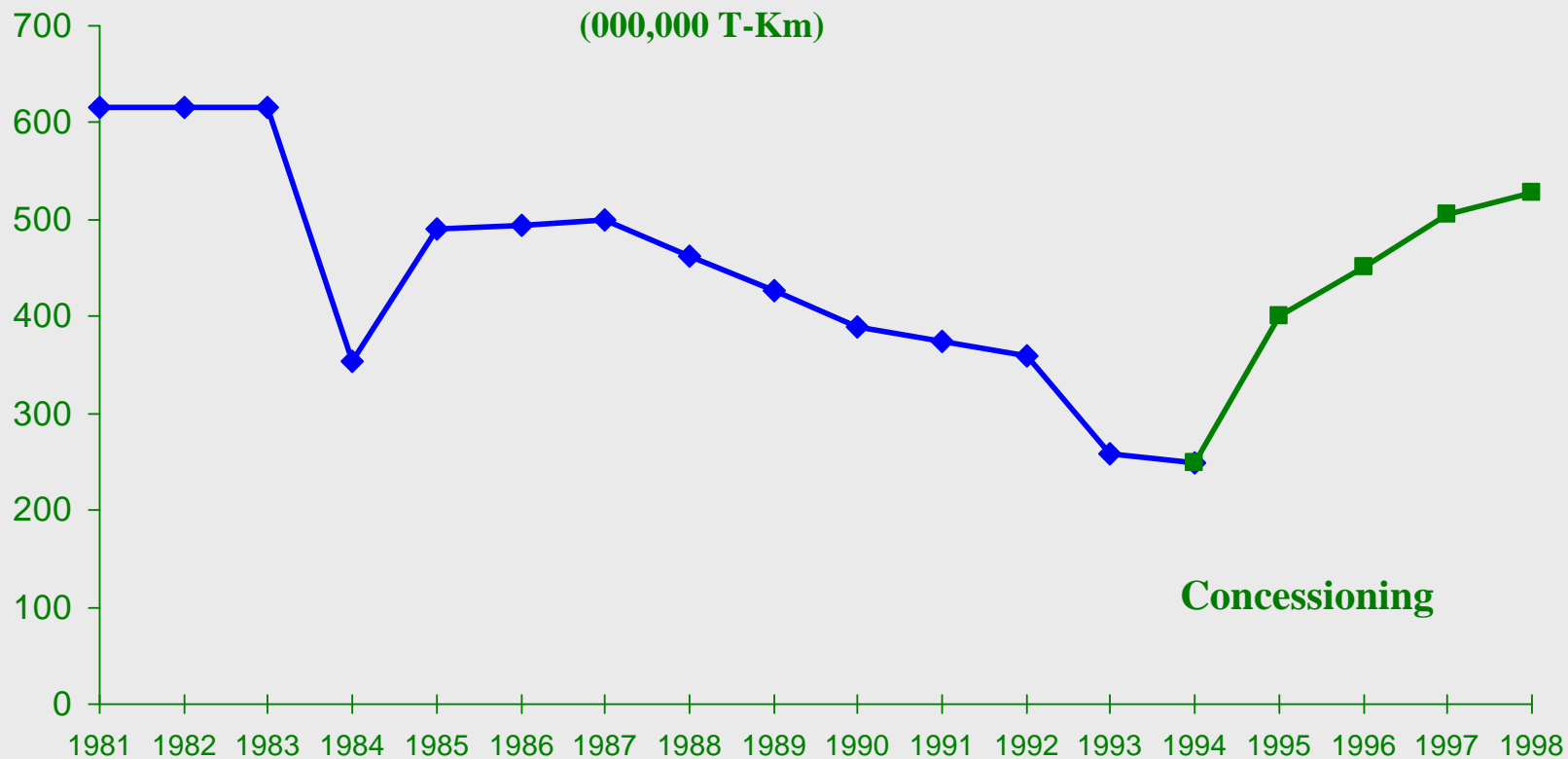






# Rail Freight Traffic Growth in Cote d'Ivoire/Burkina Faso

(000,000 T-Km)



Concessioning

No data is available for 1988 and 1989

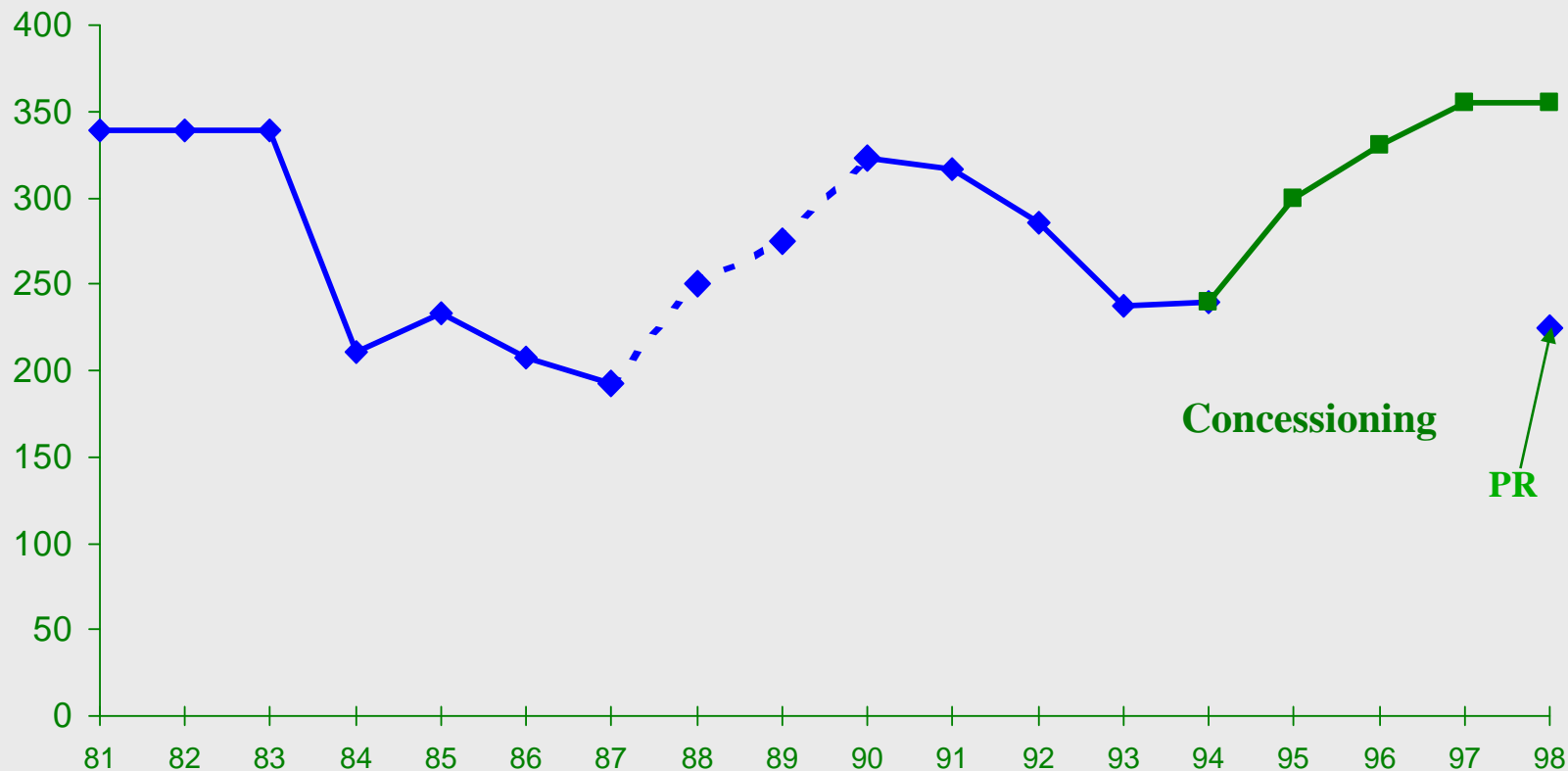
The concessionaire took over in October 1995 and a full year has been extrapolated from the first nine months.





# Rail Labor Productivity in Cote d'Ivoire/Burkina Faso

(000 TU/Employee)



No data available for 1988 and 1989

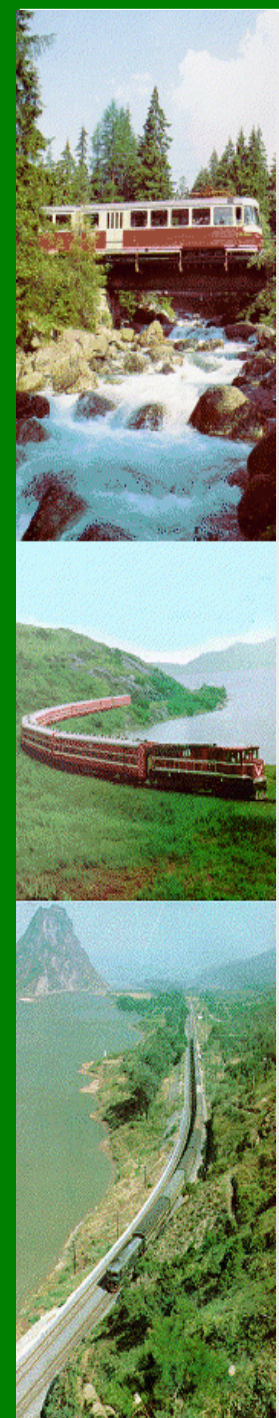
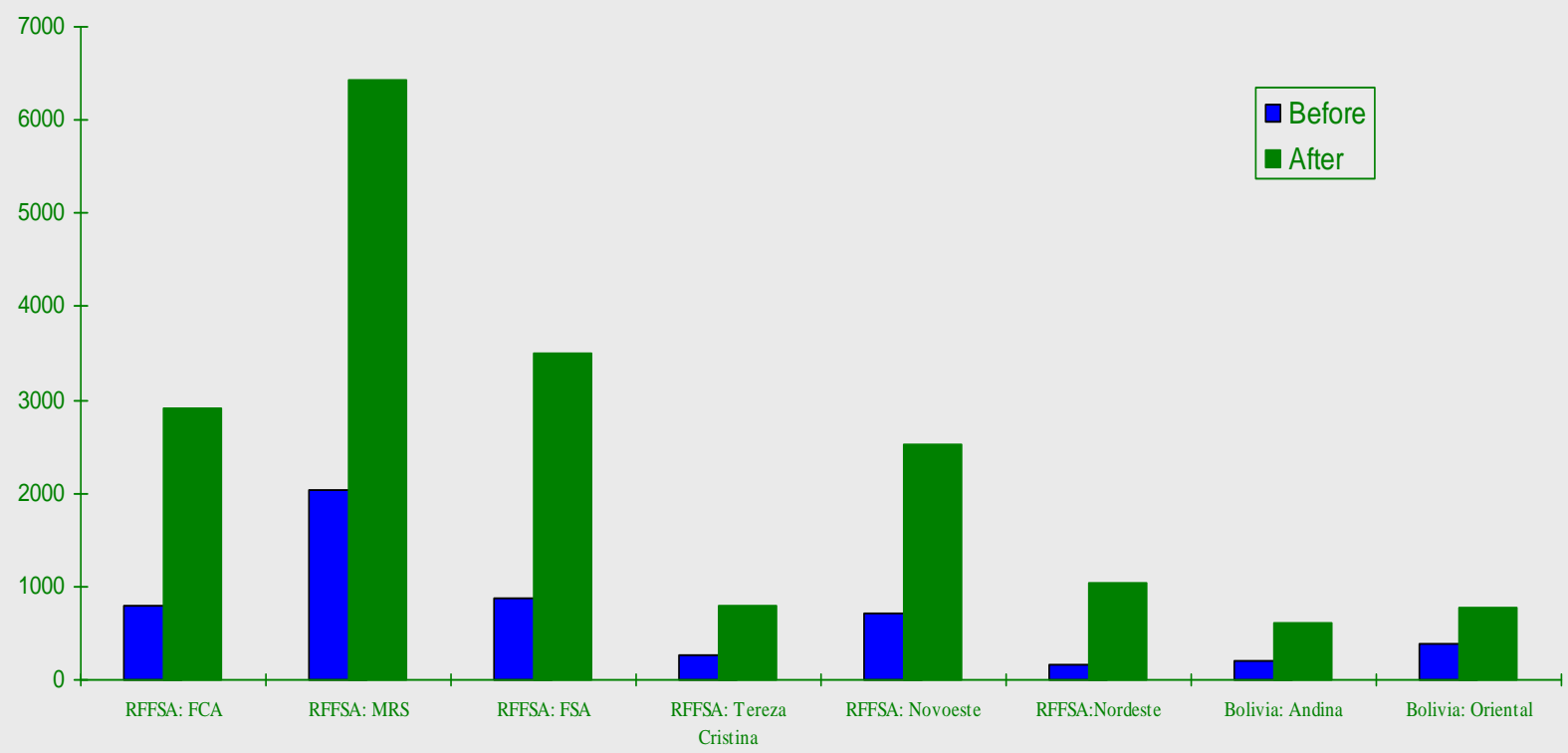
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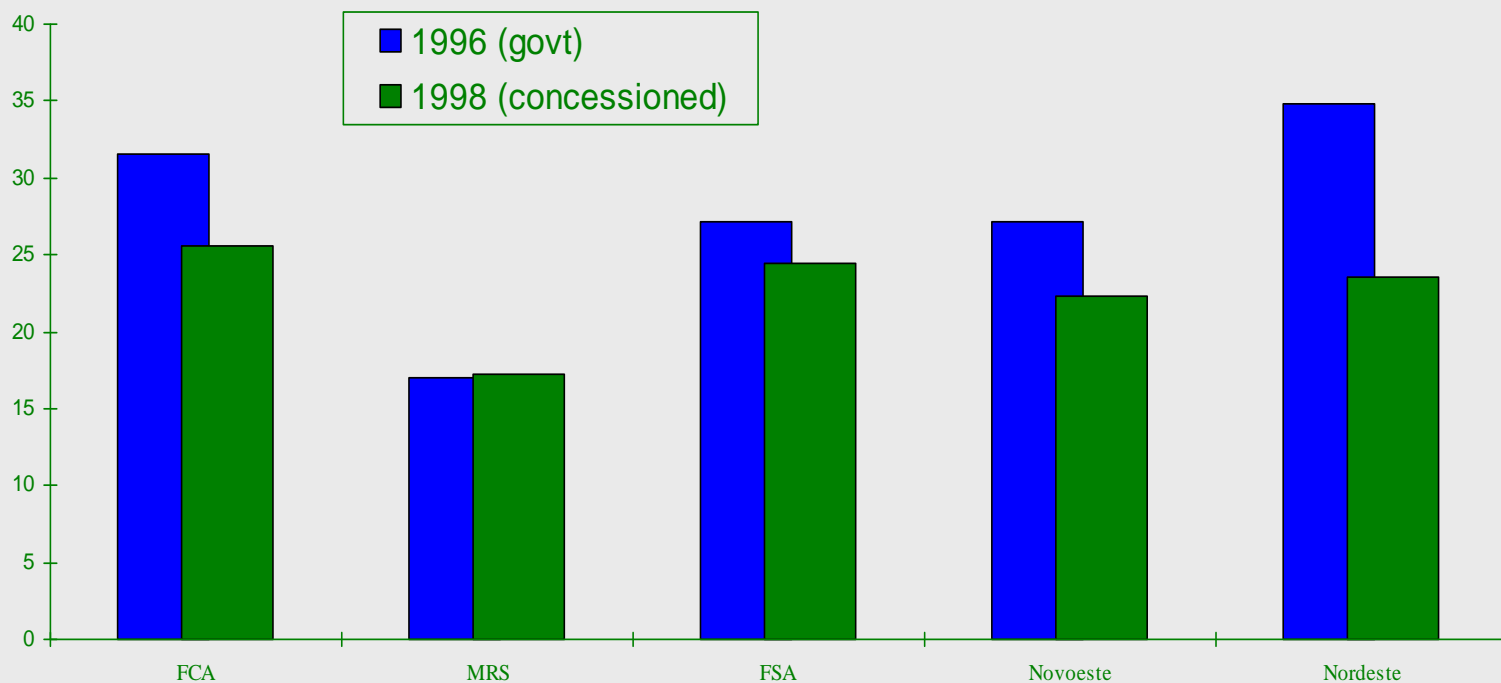


# Rail Labor productivity in Brazil and Bolivia and After Concessioning (000 TU/Employee)





# Rail Freight Tariffs in Brazil Before and After Concessioning (R\$/000 T-Km)

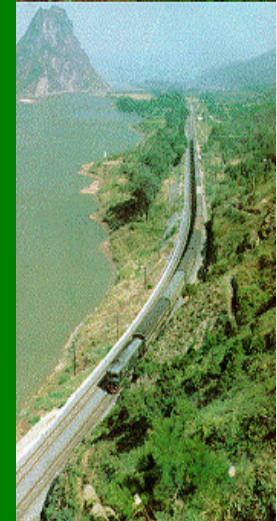
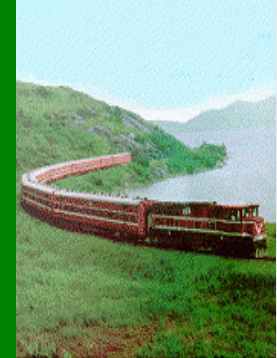
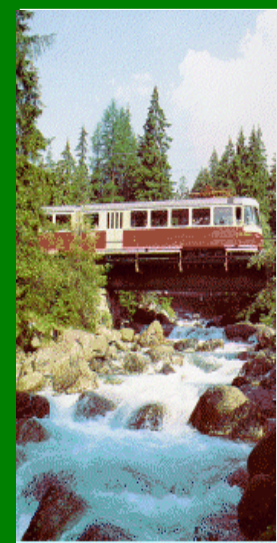






# Approaches Available

- ◆ Traditional public management
  - Public control
  - Outsourcing of some services
  - Management contracts
- ◆ Public/private partnerships
  - Franchising/concession (“Concessions”)
  - Functional separations, mixed operation
- ◆ Privatization
  - Divestitures to private operators
  - Private supply and operation
- ◆ **Mixtures**





# Lessons

- ◆ Determined action is vital
- ◆ Make sure you have the money
- ◆ Keep risk in the right place
- ◆ Let private sector “fix” the railway
- ◆ Social issues (labor, resettlement, environment) are important
- ◆ Identify and pay for social services (students, season tickets): avoid cross subsidies
- ◆ Don't forget regulation/oversight, but good contracts can also yield good oversight





# World Bank Roles

- ◆ Finance construction
- ◆ Repair/rehabilitate to assist transaction
- ◆ Environmental cleanup
- ◆ Human transitions:
  - Redundancy/retirement
  - Retraining
  - Relocation/resettlement
- ◆ Partial guarantees (risk or credit term)
- ◆ Technical assistance
  - Packaging and preparing studies
  - Marketing
  - Advice (economic, financial/legal)
- ◆ Transaction management and results delivery (CFS)
- ◆ Investment in operators (IFC)





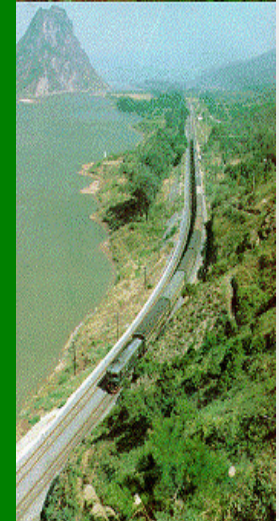
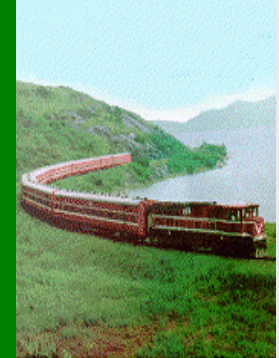
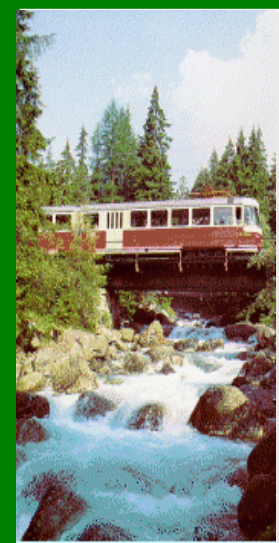


# Questions for Pakistan

- ◆ Separation and disposal of non-rail assets?
- ◆ Program for labor?
- ◆ Infrastructure integral with one operator (freight or passenger), or separate from both?
- ◆ Access fees, structure and level?
- ◆ Infrastructure and rolling stock rehabilitation program?
- ◆ Sale of assets or concessioning of freight company?
- ◆ Tariff policy and support for passenger company?
- ◆ Transaction management?







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# Concessioning in Railways

- ◆ Government defines and grants rights to a company
- ◆ Concession agreement details objectives and allocates risks
- ◆ Government retains or can receive ownership of infrastructure and equipment at end of term
- ◆ Concessionaire provides services and perhaps facilities, and carries appropriate commercial and financial risk
- ◆ Concession has a defined term (5 to 50 years): privatization has unlimited term





# Dimensions of Concessions

- ◆ Package size/division of responsibility
- ◆ Term
- ◆ Who owns or finances what
- ◆ Service Specification (quantity, quality, price)
- ◆ Tariff Authority
- ◆ Payments
- ◆ Award criteria
- ◆ Renegotiation conditions





# Critical Concessioning Issues

- ◆ Duration vs. investment
- ◆ Speed vs. transitional damage
- ◆ Surplus employees (retirement & redundancy)
- ◆ Who bears what risk (revenues)
- ◆ Regulation
  - Safety
  - Economic -- contract versus Commission
  - Anti-monopoly







# Awarding Options

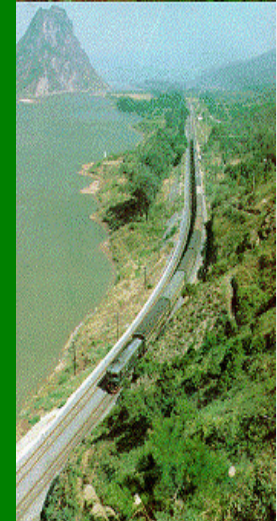
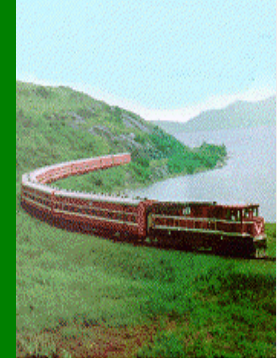
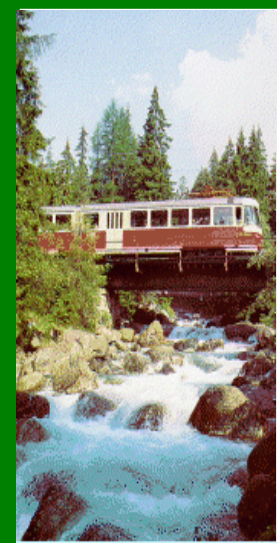
- ◆ Negotiations, auction, sealed bid
- ◆ Prequalification
- ◆ Flexibility vs comparability
- ◆ “Weighting formula” vs. best price
- ◆ Government decides award criteria: minimum tariff, maximum payment to Government, minimum operating support with fixed tariff, minimum capital contribution, and NPV-based combinations.





# Privatization of Railways: Back to the Future

- ◆ Integral Privatization (some multiple use)
  - New Zealand, Canada, Japan, US, TAZRAIL
- ◆ Infrastructure Separation (with sale or franchising of operations)
  - UK, Romania, Chile, EU railways, Estonia, Poland (?), Australia (many models)
- ◆ Mixtures are possible (and often best)





# Critical Privatization Issues

- ◆ How infrastructure is separated:
  - Who owns and controls (especially dispatching)
  - Neutral access and acceptable charges
- ◆ Concession (exclusive or non-exc.), sell going concern(s), sell assets?
- ◆ Term (if any) of operating franchises (number and type of offerings), and availability of rolling stock





# EU ORDER 91-440

|                              | Freight                                      | Intercity Passenger  | Regional Passengers   | Suburban Passengers |
|------------------------------|--|----------------------|-----------------------|---------------------|
| Infrastructure Ownership     | Kept at national level,<br>may be privatized |                      | Can be devolved       |                     |
| Infrastructure Improvement   |  |                      |                       |                     |
| Infrastructure maintenance   |  |                      |                       |                     |
| Control of Operations        |  |                      |                       |                     |
| (Dispatching and Scheduling) |  |                      |                       |                     |
| Train Movement               | Can be<br>Privatized                         | Can be<br>Privatized | Can be devolved       |                     |
| Equipment                    |  |                      |                       |                     |
| Marketing                    |  |                      |                       |                     |
| Financial Accountability     |  |                      | PSO Support Permitted |                     |







# Deutsche Bahn Approach

|   | Freight                          | Intercity Passenger                | Regional Passengers   | Suburban Passengers |
|---|----------------------------------|------------------------------------|---|---------------------|
| Infrastructure Ownership                              | DB Infrastructure                |                                    | Mostly DB Infrastructure, but some involvement by states and local government               |                     |
| Infrastructure Improvement                            |                                  |                                    |   |                     |
| Infrastructure maintenance                            |                                  |                                    |   |                     |
| Control of Operations<br>(Dispatching and Scheduling) |                                  |                                    |   |                     |
| Train Movement  | DB Freight<br>"to be privatized" | DB Passenger<br>"to be privatized" | Mostly Operated by DB Passenger under contract with locals, but some are operated by locals |                     |
| Equipment   |                                  |                                    |   |                     |
| Marketing   |                                  |                                    |   |                     |
| Financial Accountability                              |                                  |                                    | State and Local PSO   |                     |





# British Rail Privatization

Freight

Intercity Passenger

Regional Passengers

Suburban Passengers

Infrastructure Ownership

Infrastructure Improvement

Infrastructure maintenance

Control of Operations

(Dispatching and Scheduling)

Train Movement

Equipment

Marketing

Financial Accountability

All Owned and Operated by RAIL TRACK

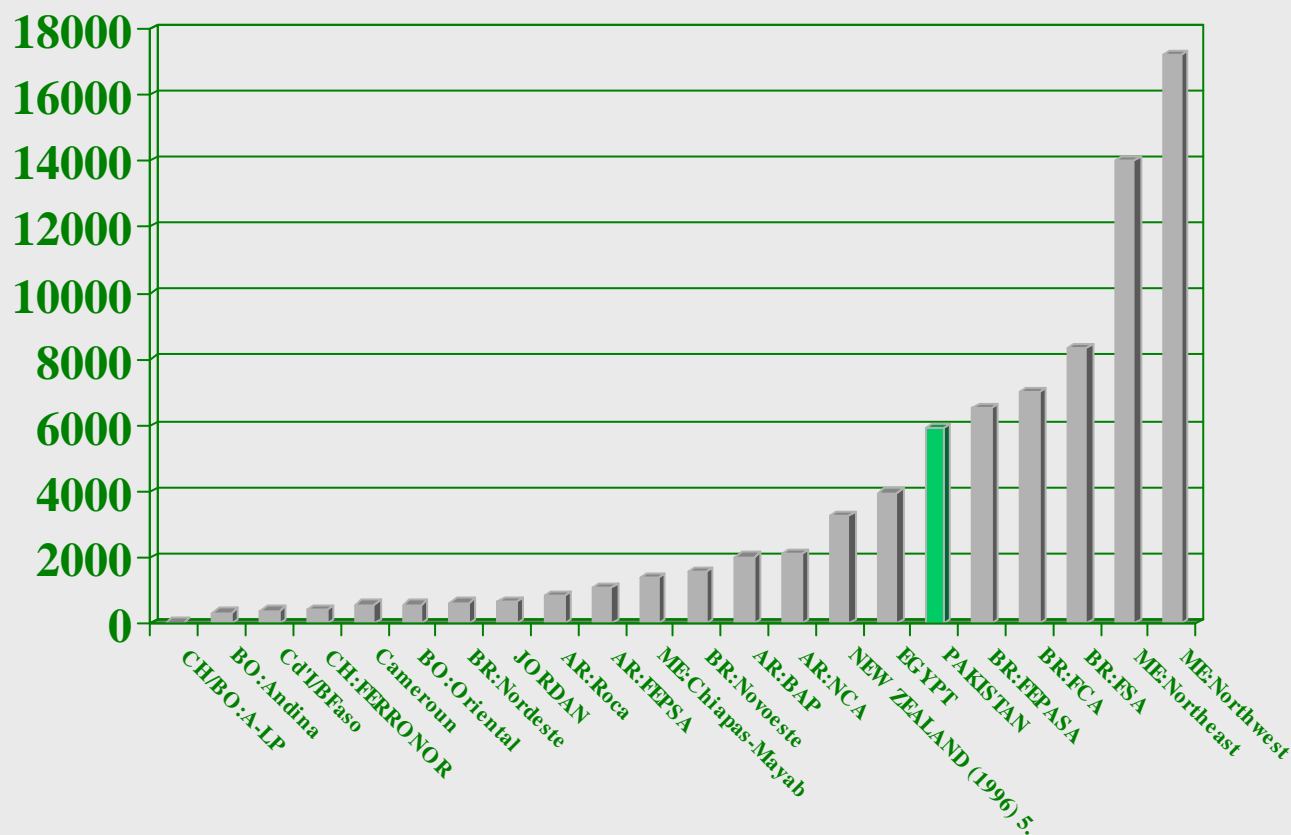
|                      |  |  |  |
|----------------------|--|--|--|
| EW&S Rail<br>Private |  | 25 Franchises  |  |
|                      |  | 3 Rolling Stock Leasing Companies ("ROSCOS" : Private) |  |
|                      |  | 25 Franchises (Private)                                |  |
|                      |  | Subsidies by local/national governments                |  |





# Ton-Km on Concessioned Freight Railways

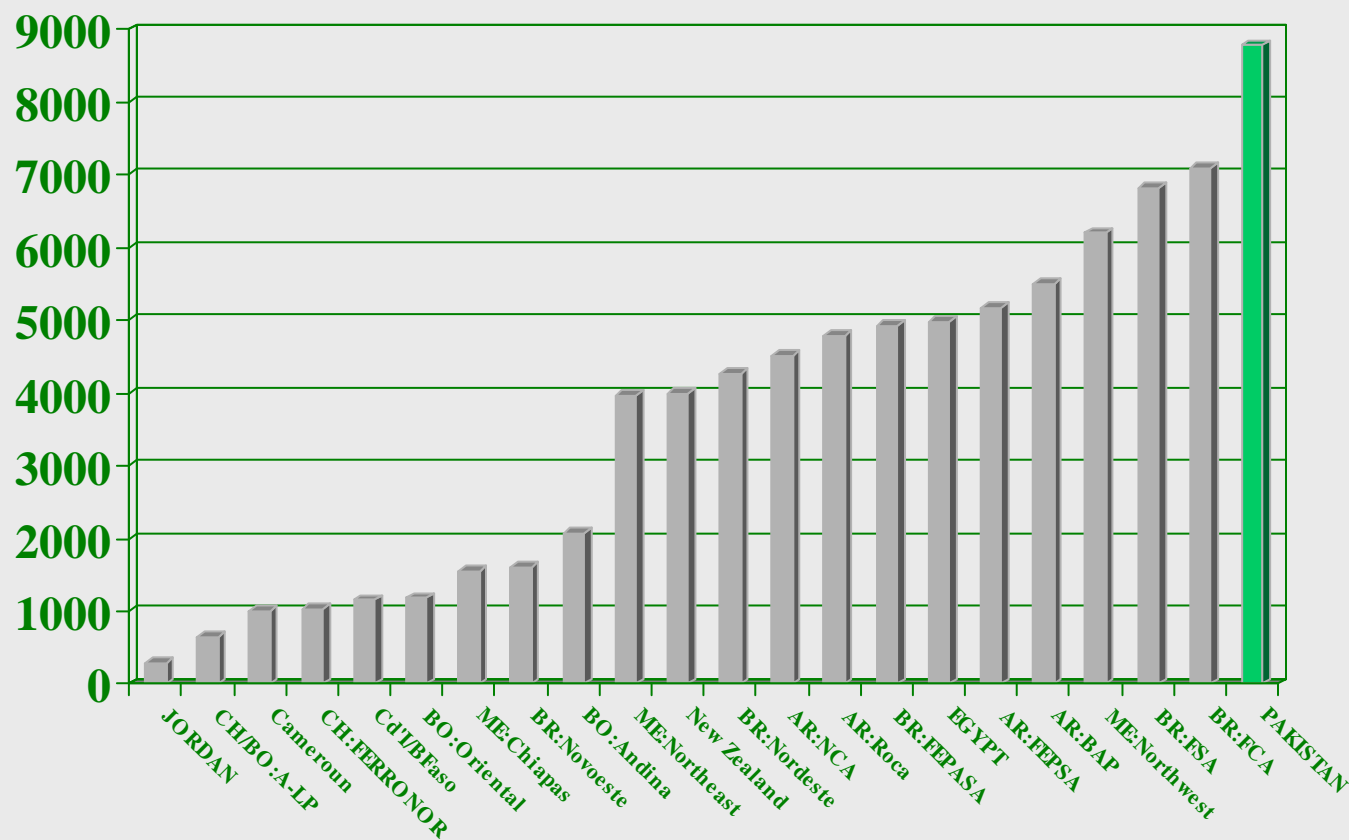
(000,000)





# Line Km on Concessioned Freight Railways

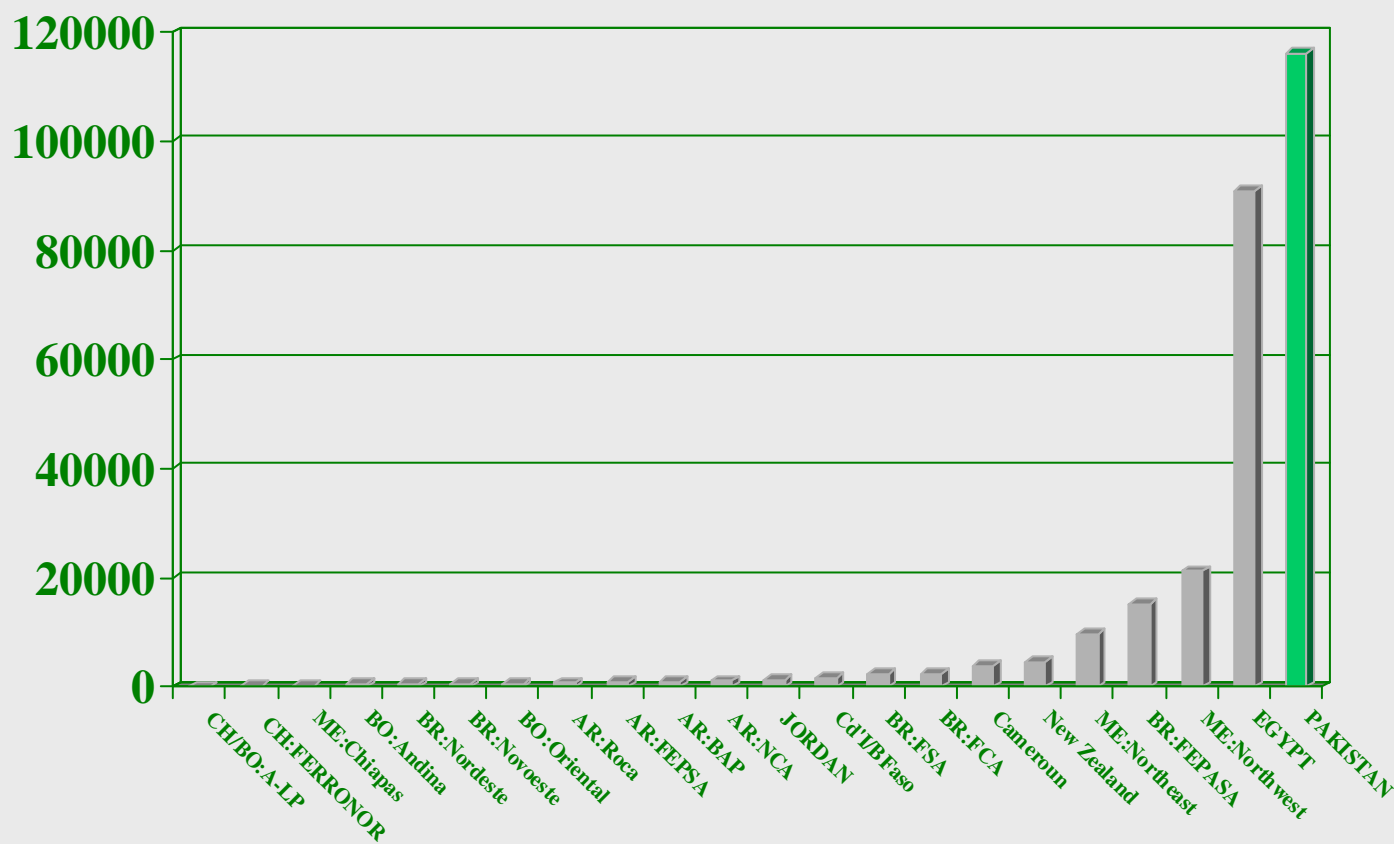
(000,000)







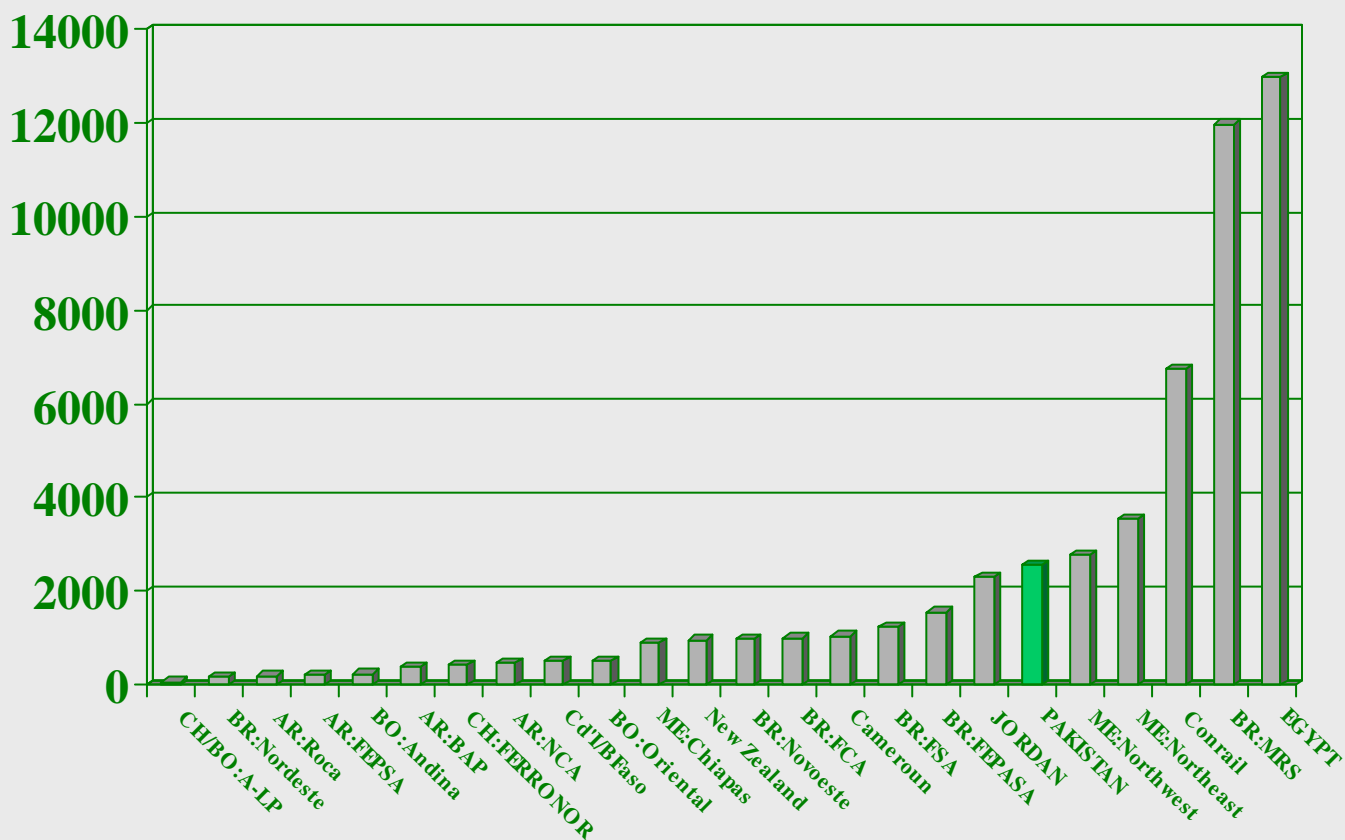
# Employees on Concessioned Freight Railways





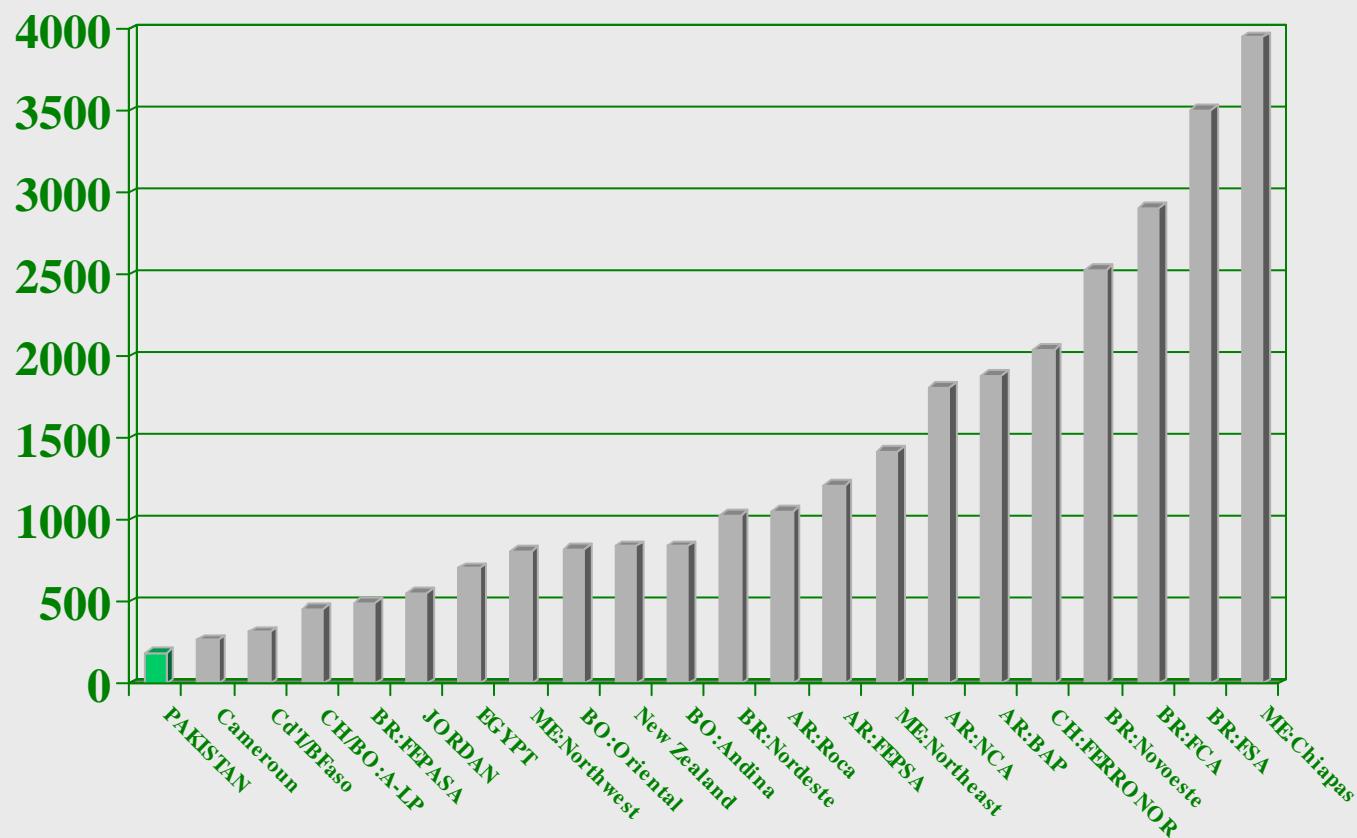
# Total Traffic Density

(000 Traffic Units/Km)



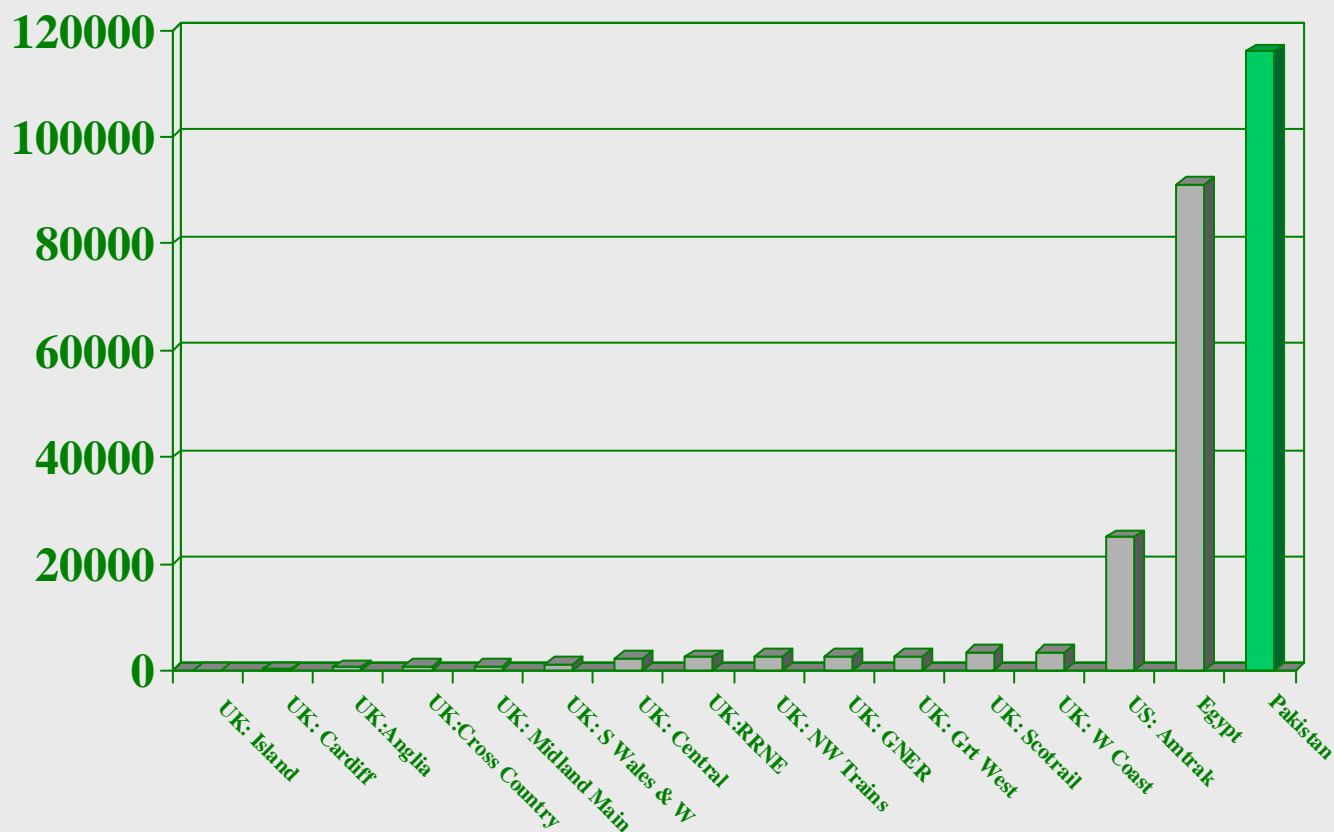


# Employee Productivity on Concessioned Freight Railways (000 TU/Employee)





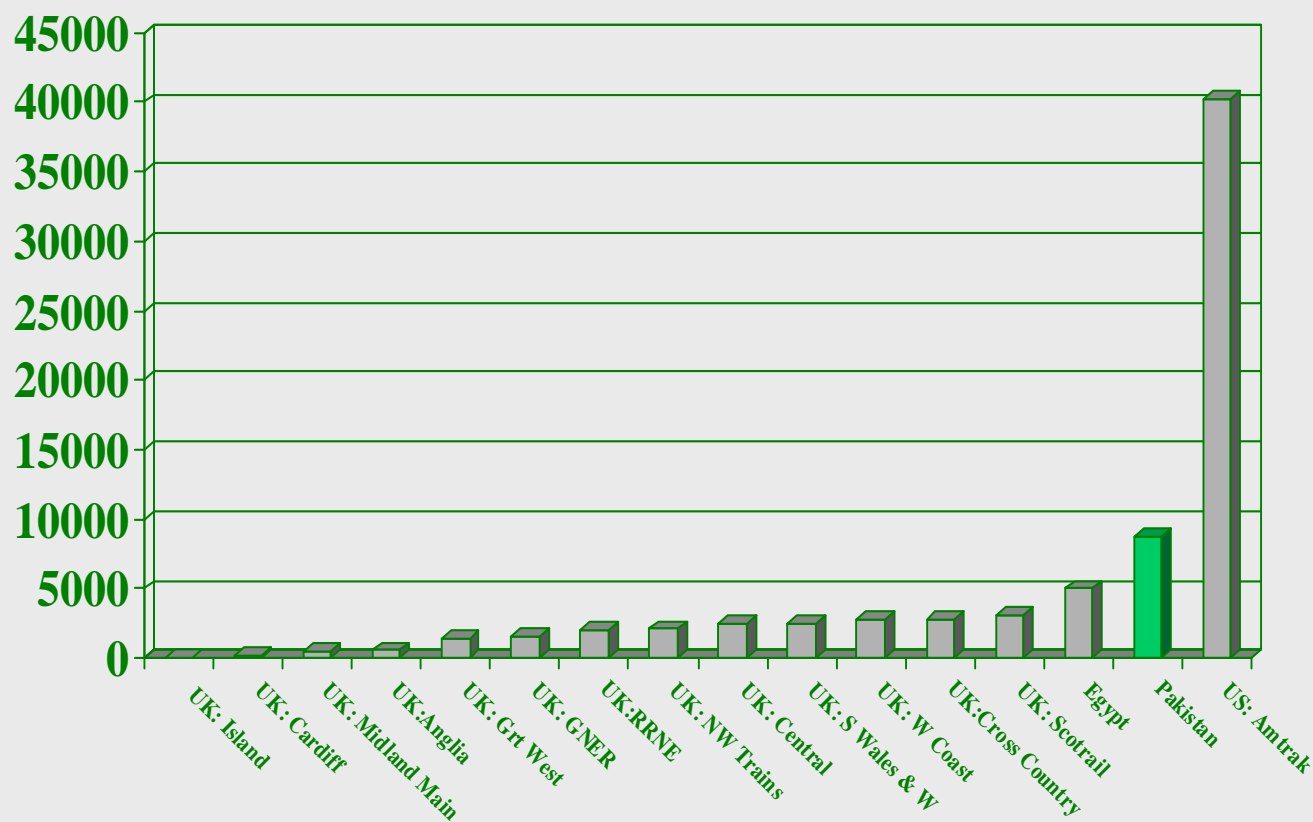
# Staff in Intercity Passenger Railways







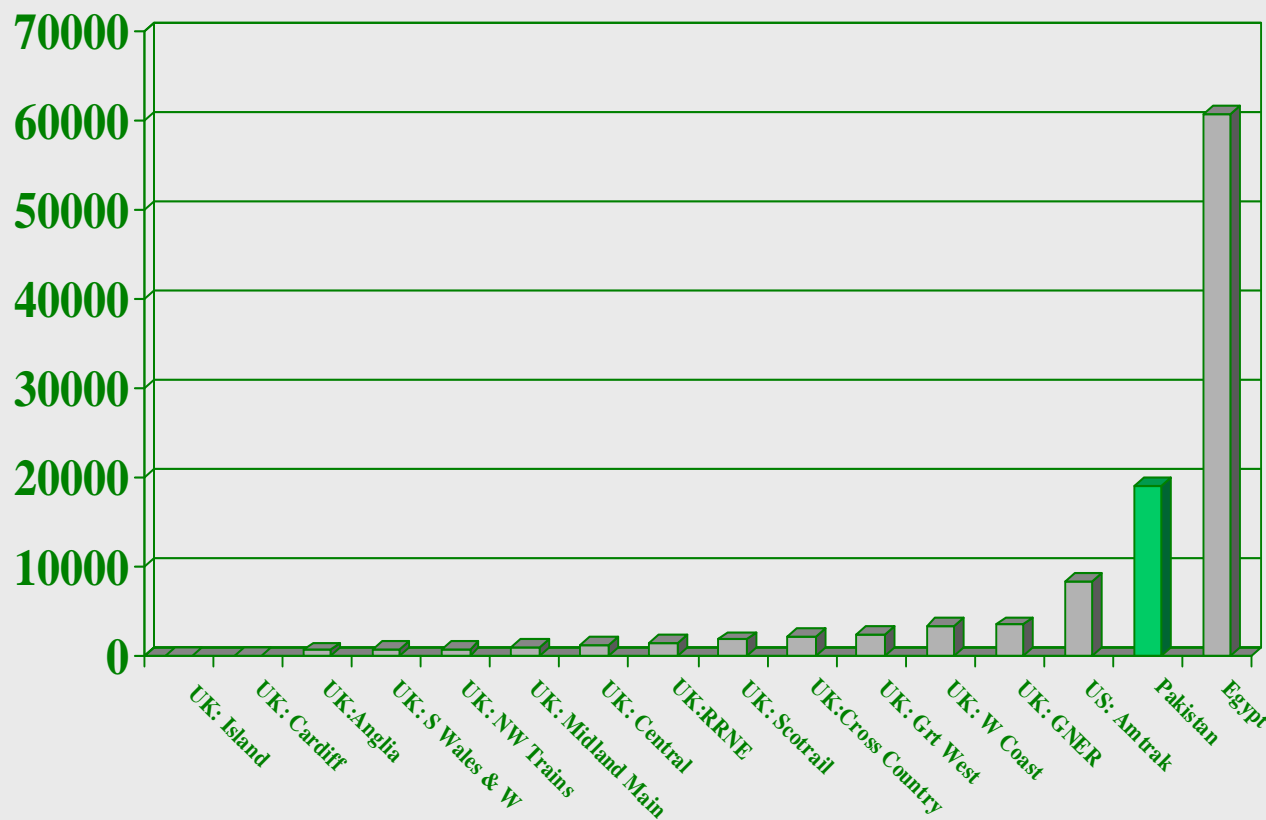
# Line-Km on Concessioned Passenger Railways





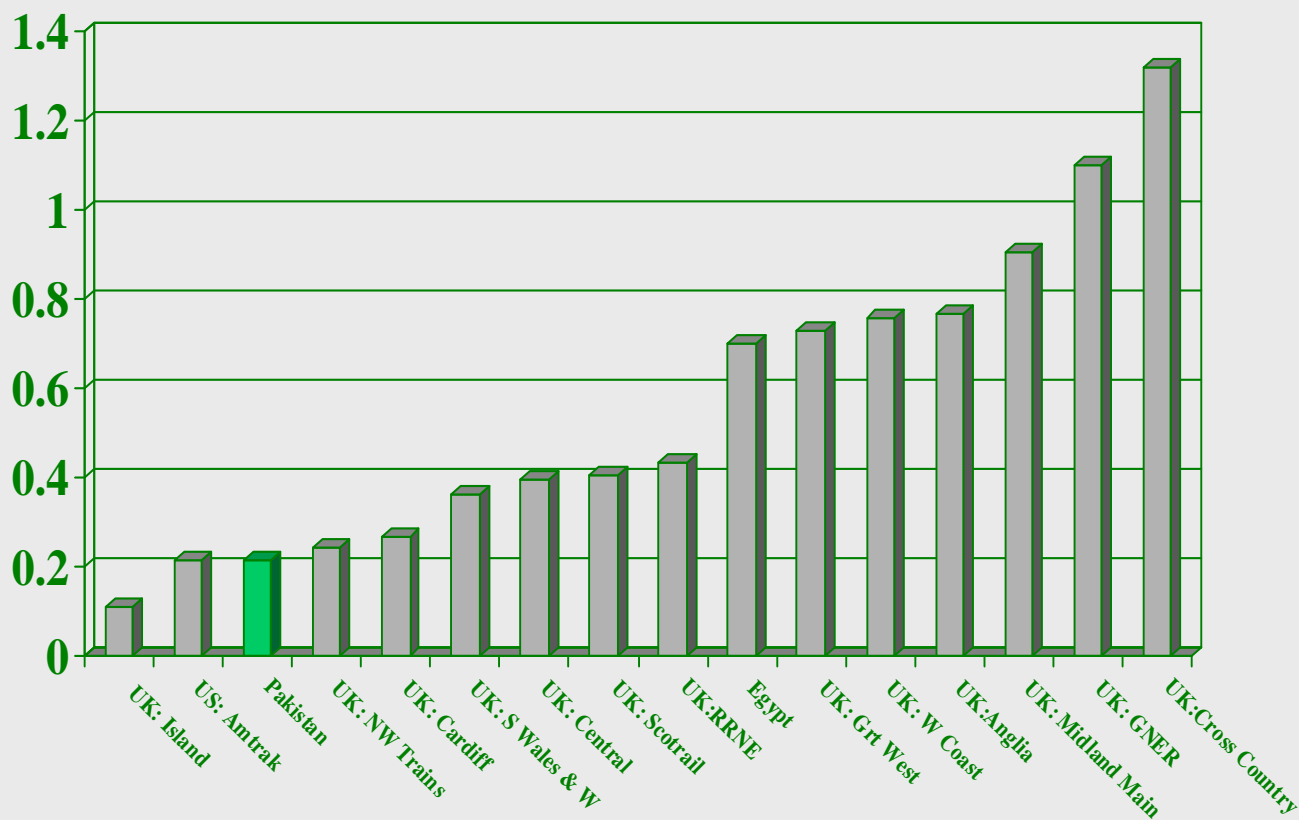
# Passenger-Km on Concessioned Passenger Railways

(000,000)





# Passenger-Km/Staff on Concessioned Passenger Railways (000,000)





# Passenger-Km/Km on Concessioned Passenger Railways (000,000)

