Worldwide railway restructuring: Application in Macedonia

World Bank Speaker

Skopje, Macedonia

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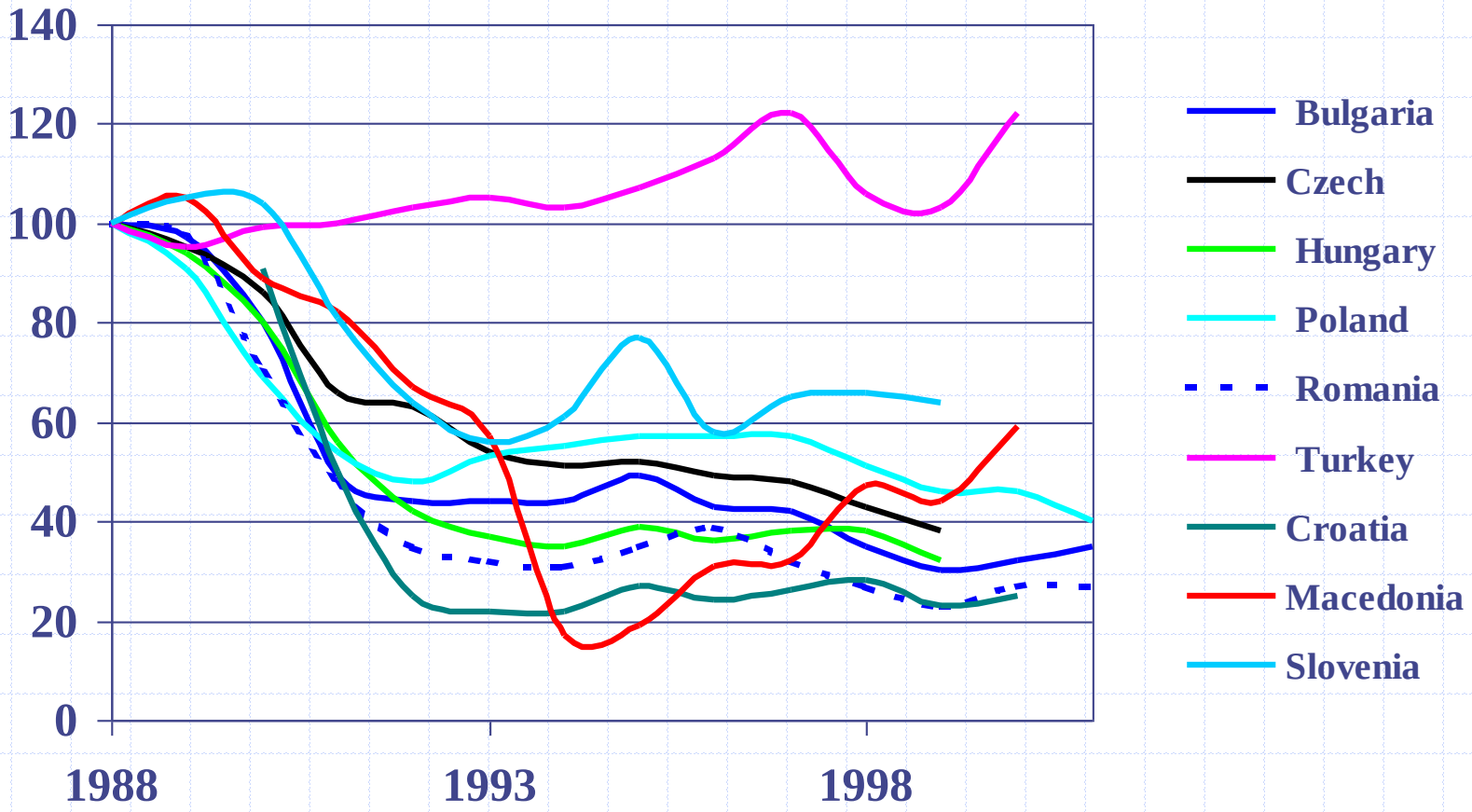
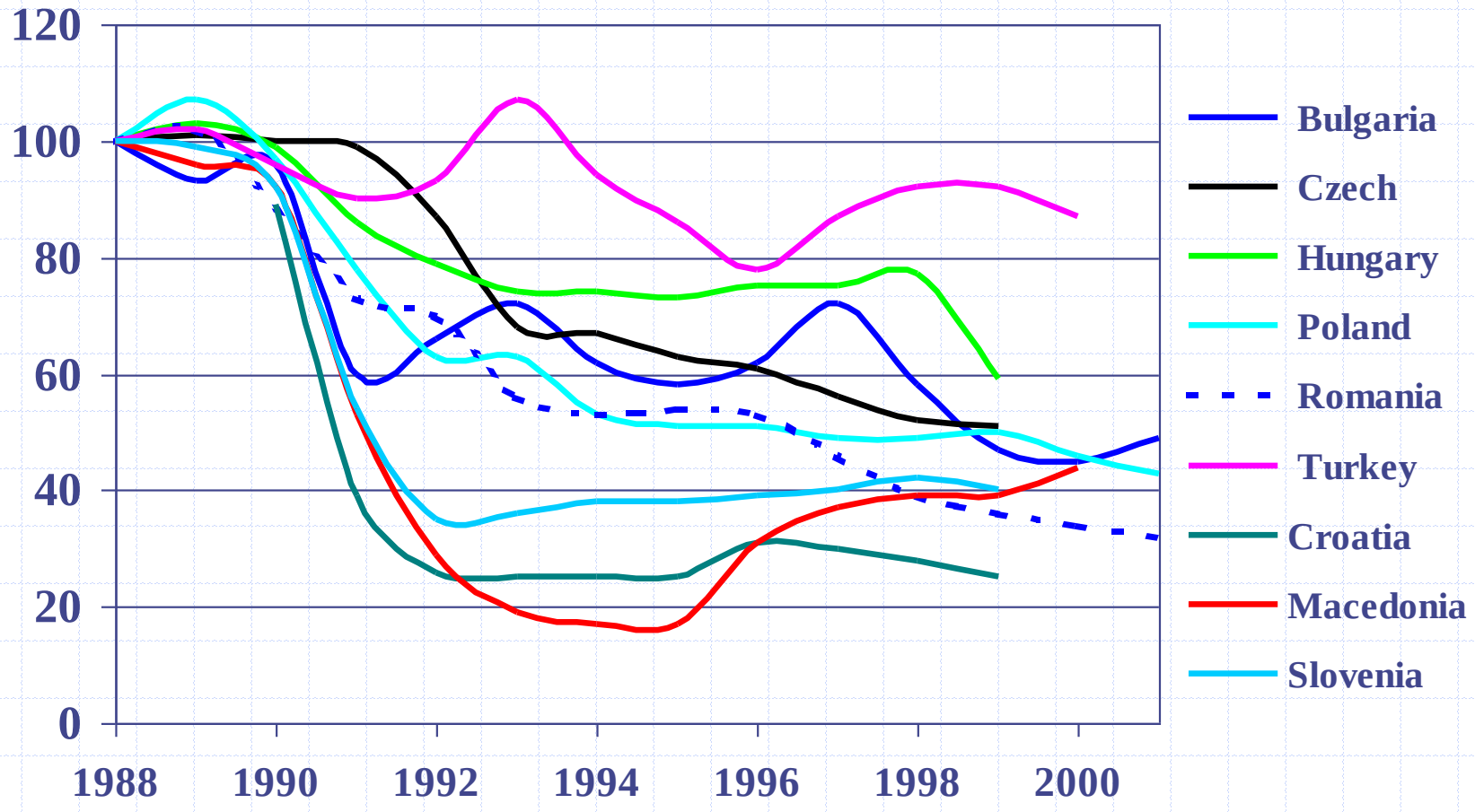
Under current conditions, Macedonia railways (MZ) has a very limited economic justification

- Traffic has fallen greatly since transition, though recent trends are at least mildly encouraging (except for loss of oil traffic -- >30% reduction)
- The current density of traffic is very low
- Labor productivity fell along with traffic, and is extremely low by outside standards
- Cross subsidies from freight to passenger are unsustainable, especially with the loss of the profitable crude oil traffic

Ton-Km trends by CEE railways and Turkey

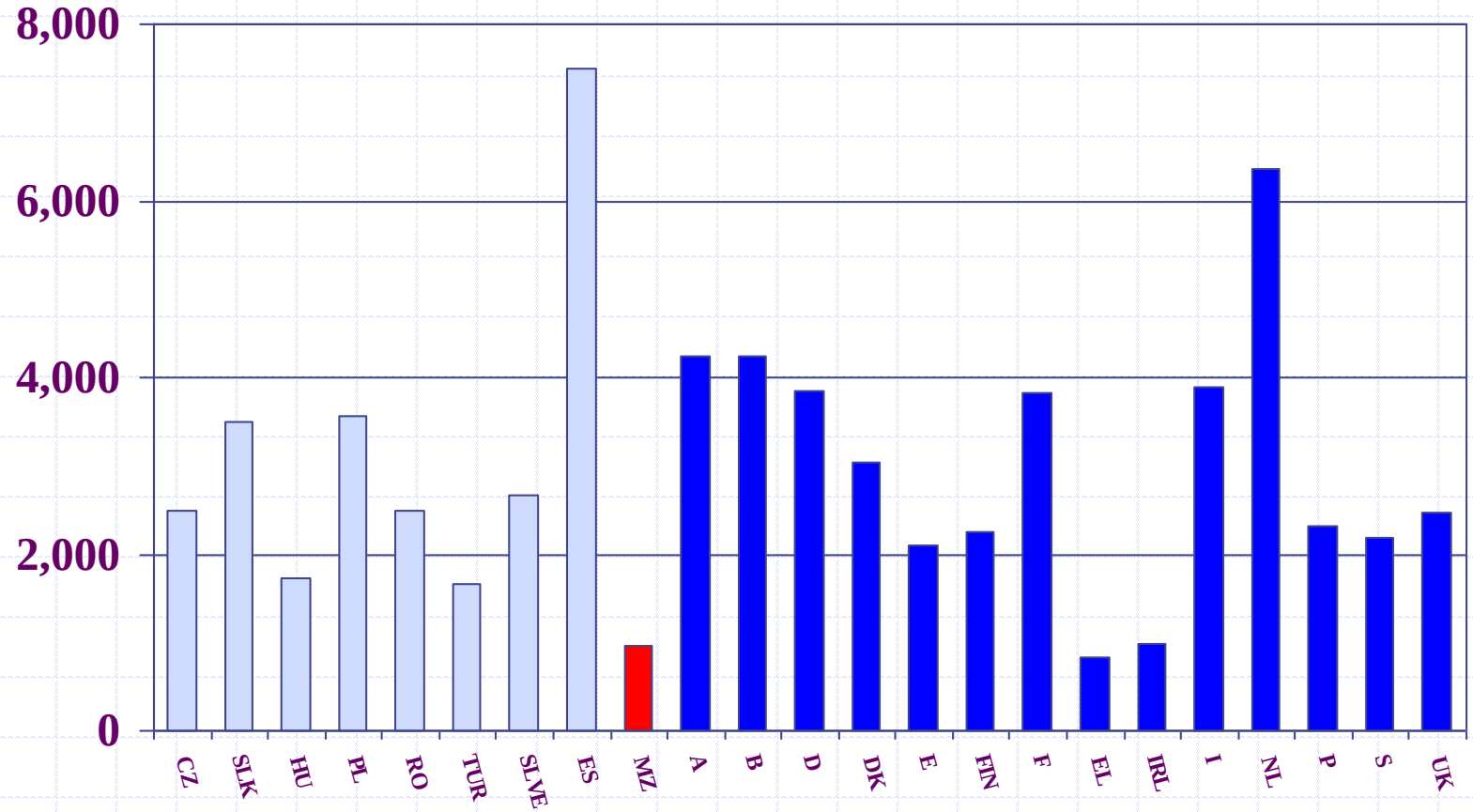


Passenger-Km trends by CEE railways and Turkey

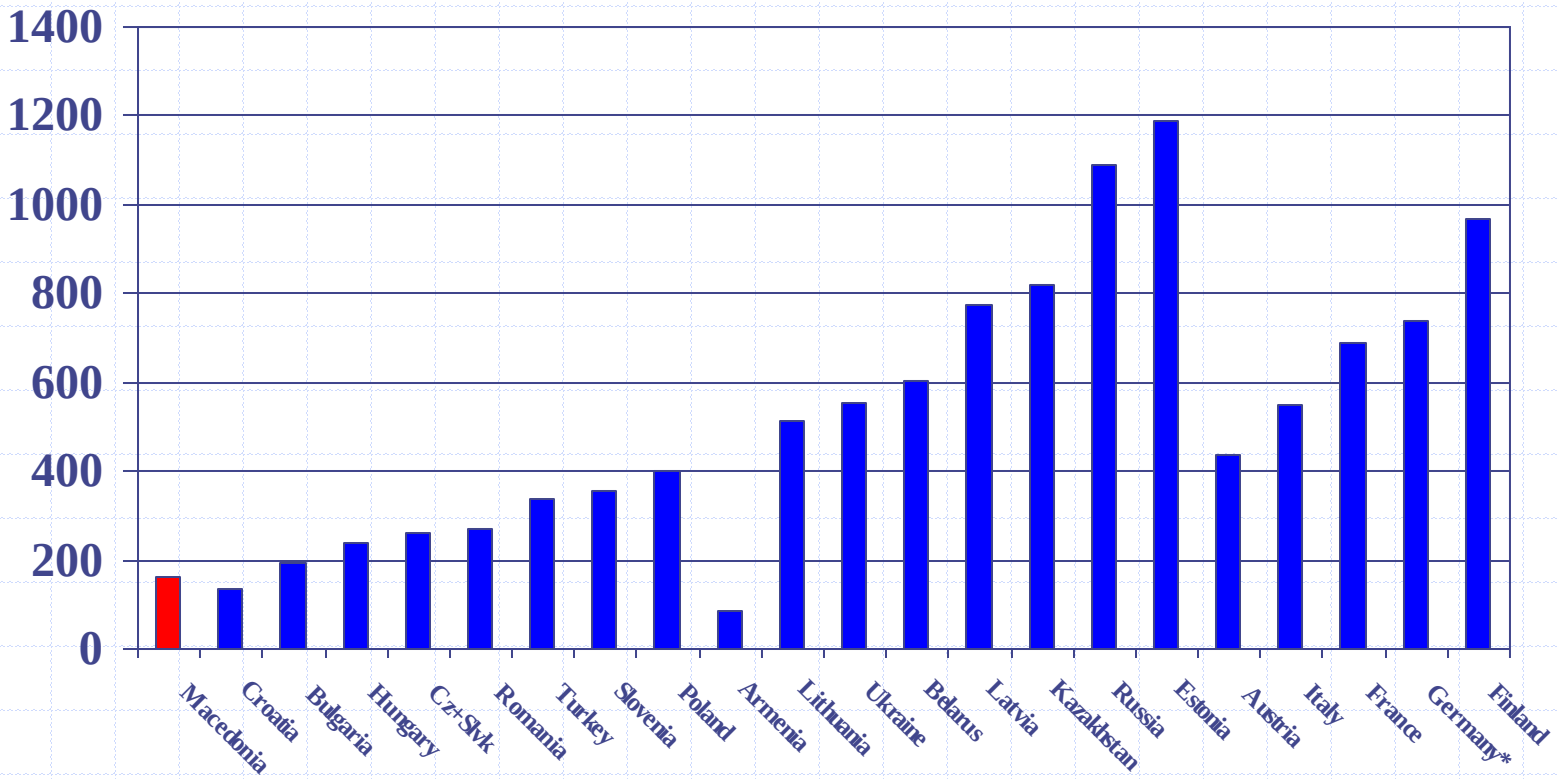


MZ's traffic density is low

(T-km+P-Km)/Km

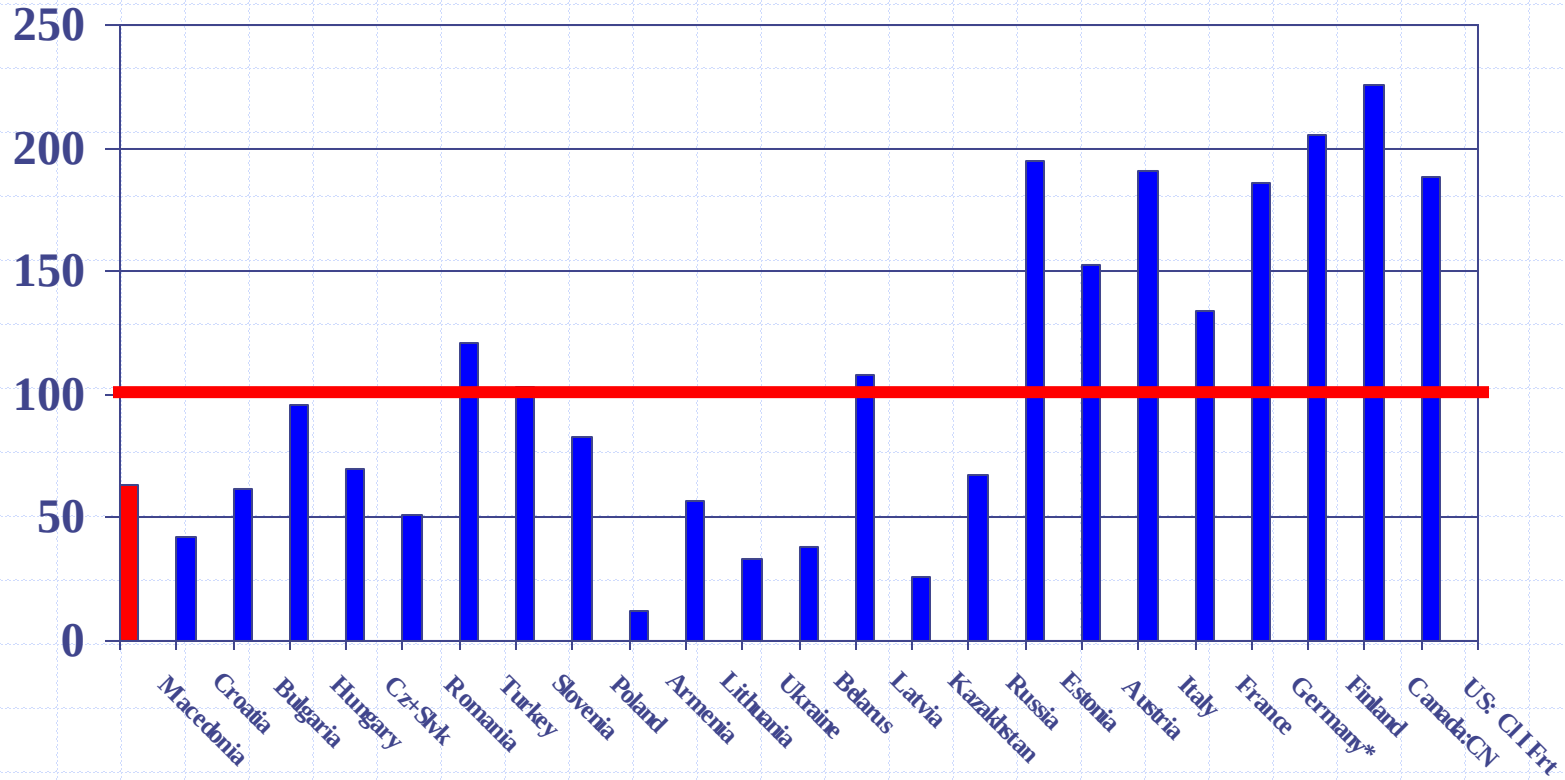


MZ labor productivity is low



And Labor productivity in MZ has fallen farther than most other railways

(Ratio of labor productivity in 1999 to 1988)



Below red line, productivity is actually worse in 1999 than in 1988

MZ Compared with the Freight Concessions

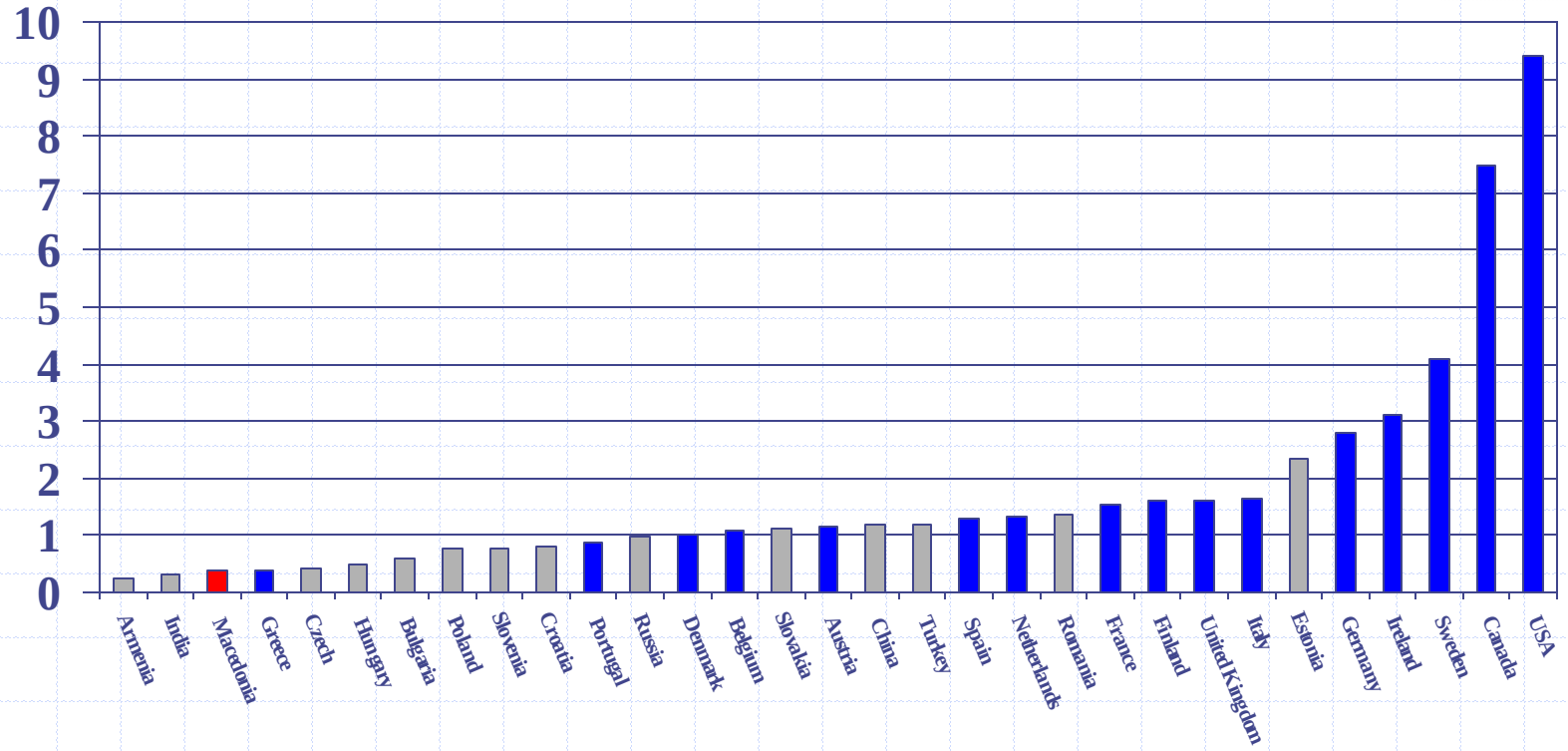
	Year	Km of line	Ton-Km (000,000)	Pass-Km (000,000)	Employees	TU/ Employee (000)	TU/Km (000)
Argentina							
Ferroespresso Pampeano	2000	5,094	877		810	1.08	172
Nuevo Central Argentino	2000	4,512	2,490		1,311	1.90	552
Ferrosur Roca	2000	3,342	1,263		772	1.64	378
Buenos Aires al Pacifico	2000	5,252	2,268		914	2.48	432
Ferrocarril Mesopotamico -- FMGU	2000	2,739	495		339	1.46	181
Bolivia							
Empresa Ferroviaria Oriental	2000	1,244	626	192	461	1.77	658
Empresa Ferroviaria Andina	2000	1,499	557	72	324	1.94	420
Brazil							
Ferrovia Centro-Atlântica S.A.	2000	7,263	7,268		2,596	2.80	1,001
Ferrovia Novoeste S.A.	2000	1,621	1,588		639	2.49	980
Companhia Ferroviária do Nordeste	2000	4,381	709		694	1.02	162
MRS Logística S.A.	2000	1,675	26,837		2,988	8.98	16,022
América Latina Logística	2000	6,355	10,285		2,018	5.10	1,618
Ferrovia Tereza Cristina S.A.	2000	174	259		142	1.82	1,489
Ferrovias Bandeirantes S.A.	2000	4,236	5,984		3,174	1.89	1,413
Chile							
FEPASA	2000	2,379	1,189		521	2.28	500
Ferronor	2000	2,229	743		360	2.06	333
Ferrocarril Arica-La Paz	2000	206	59		95	0.62	286
Mexico							
TFM	1999	5,176	17,256		3,694	4.67	3,334
Ferromex	1999	10,724	20,638	80	8,666	2.39	1,932
Sureste	1999	1,479	4,734		2,097	2.26	3,201
FCCM	2000	1,869	1,017		352	2.89	544
Cote d'Ivoire/Burkina Faso -- SITARAIL	2000	639	523	126	1,673	0.39	1,016
New Zealand -- Tranzrail	2000	3,904	4,078	*470*	4,064	1.12	1,165
Macedonia	2000	699	509	170	4,200	0.16	971

MZ Compared with the Passenger Concessions/Franchises

	Year	Km of line	Ton-Km (000,000)	Pass-Km (000,000)	Employees	TU/ Employee (000)	TU/Km (000)
Argentina							
Ferrovias	2000	54		617	615	1.00	11,363
Transmet -- San Martin	2000	56		1,152	656	1.76	20,571
Transmet -- Belgrano Sur	2000	66		312	657	0.47	4,727
Transmet -- Roca	2000	261		2,472	2,227	1.11	9,471
TBA -- Mitre	2000	186		1,456	1,648	0.88	7,828
TBA -- Sarmiento	2000	184		2,619	1,398	1.87	14,234
Metrovias -- Urquiza	2000	32		434	*440*	0.99	13,563
Metrovias -- Subte (Metro)	2000	47		1,124	*2,056*	0.55	23,915
Brazil							
Supervia	2000	200		2,247	2,236	1.00	11,235
Rio Metro	2000	35		*487*	1,534	0.32	13,914
Macedonia	2000	699	509	170	4,200	0.16	971
U.K.							
UK system	2000	26,605	19,500	39,010	52,000	1.13	2,199
UK WCML (employment est.)	2000	2,775	1,600	3,362	4,880	1.02	1,789

The cross-subsidy issue: MZ's passenger tariffs are too low

(Ratio of average passenger fare to average freight tariff)*



*(Passenger revenue/passenger-km)/(freight revenue/ton-km)

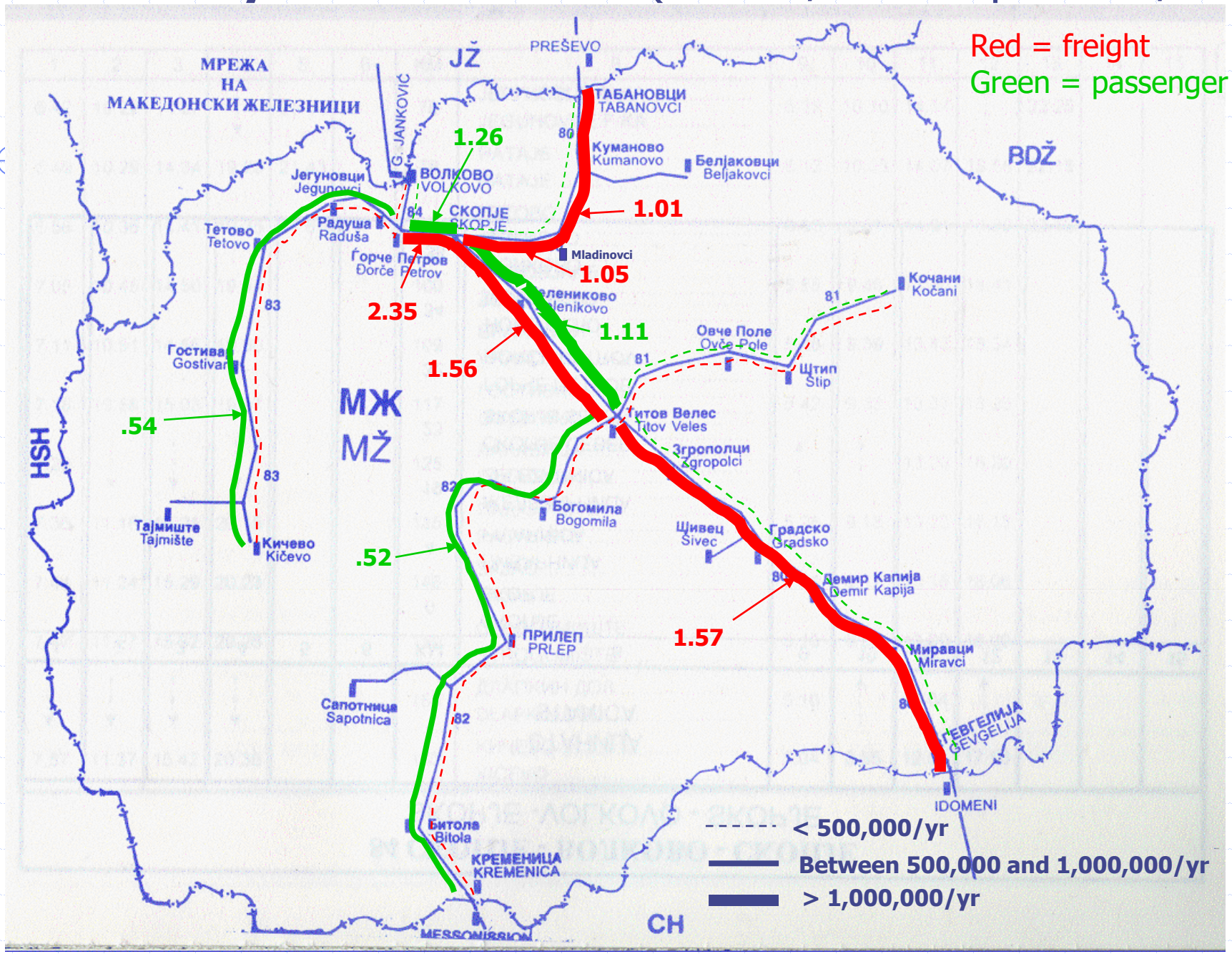
BUT, parts of the MZ network may have a strategic or social role

- Mainline Tabanovci to Gevgelia is an international corridor
- Kicevo section: potential connection to Albania and could be culturally sensitive
- Beljakovci section: potential connection to Bulgaria
- Other sections may play significant social role – this is for Macedonia to say
- But few links have enough traffic for the operations on the line to be able to pay for the full cost of track maintenance and upgrading
- Question: how to de-link the costs of the strategic and socially needed infrastructure from the potential economic performance of the operators?

De-linking infrastructure costs from the operators

- Required by EU rules in any case – *requires establishing agreed accounting systems to record and verify costs*
- Set up infrastructure agency (*Swedish Banverket* is interesting)
  - State and railway agree on the necessary condition of each part of the infrastructure, and State pays for the basic, "fixed costs" of keeping the strategic system in place. *Consulting assistance may be required to conclude this agreement.*
  - Operators pay a part of the cost to cover the variable costs of maintenance and to balance social costs (in Sweden, operators pay about 20%). This is Government policy decision.
  - Maintenance and dispatching contracted to the dominant operator (freight) or retained in the infrastructure agency. Policy decision.
  - Because MZ has no capacity problems and because only variable costs will be collected, access fees can be simple, use-based (*studies needed*)
- Freight operator can be privatized or concessioned if desired
- Passenger operations could be negative concessions, could be contracted to freight operator on cost-reimbursable basis, or could be publicly operated.

Traffic Density on MZ Network (ton-km/km and pass-km/km)



Comments on density map

- Very little of the system has traffic density levels approaching viability
  - For freight, the lines Gevgelia, Veles, Skopje (to Dorce Petrov), Mladinovci and Tabanovci might be viable at the right tariffs (note that the loss of the oil traffic has been accepted). All other links carry insignificant traffic.
  - Although some of the Latin American concessions operate with freight densities comparable to MZ, they also have labor productivities 10 times (or more) higher…
  - For passengers, the links from Dorce Petrov, Skopje and Veles carry light, but measurable traffic – but tariffs are so low as to make the services unviable without subsidy. The Kicevo and Bitola links carry very light levels, and, with low tariffs, are clearly non-viable. All other links carry vanishingly small loadings.
- It is possible that a freight operator would be willing to maintain the viable freight tracks at no cost to Government (and in a low condition), but all the other links will have to be maintained at cost to Government. If lines are to be maintained to passenger service quality, Government support will be required on ALL lines.

Ample experience with concessioning and privatization: it works

- Concessions and privatized railways are far larger and more complex than MZ – and they have been quite successful
- Most important concessioning issues in Macedonia:
  - Concessioning versus privatization (Argentina versus UK)?
  - How to secure access to Thessaloniki (Greek consortium member needed to secure trackage rights in Greece)?
  - Level of access charges on infrastructure
  - Will freight concessionaire do maintenance and control dispatching (preferably yes), and how will freight concessionaire relate to passenger services?
  - Separate concessions for passengers, or State operation?
  - Resolution of instabilities in the region

Assisting the labor transition

- Early retirement
- Severance benefit, based on final wages and length of service
- Relocation (including housing)
- Retraining before/after, general or specific vocational?
- Good communications
- Help to start new businesses?
- Worker (former and continuing) participation in new enterprises?

Transition issues

- Is private sector involved? If so, who pays labor, and who makes what decisions?
- When to do labor transition: before, during or after restructuring or privatization?
- Assistance to all employees, or only to affected employees
- Predicting the balance of measures actually chosen by employees

Results to date

- Three examples: Argentina, Brazil and Mexico
- Other recent experiences: Poland and Estonia, Cote d'Ivoire/Burkina Faso, Bolivia, Peru, Croatia
- How many employees affected
- Impact on productivity and costs

Example labor programs

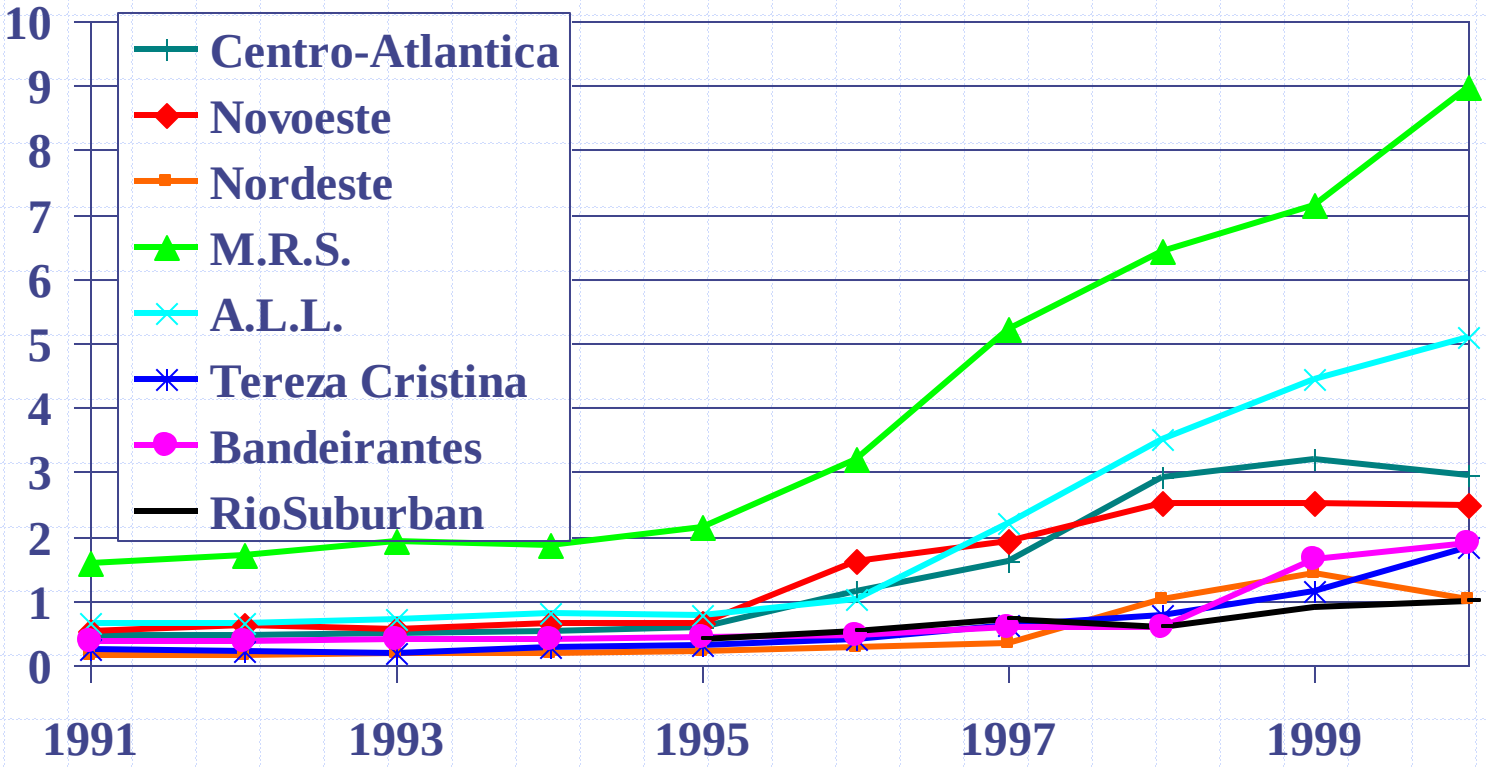
	Employment Before/After	Early Retirement	Severance Benefits	Relocation Assistance	Retraining	Worker Participation in New Company
Argentina	82,000/12,900	50/55	1 month salary per year of service	No	No	Yes (3%)
Brazil	54,000/14,300	25/20 years service	1 to 2 months salary per year of service	Yes	Yes -- rail-specific and little used	No
Mexico	46,800/16,000	None- but sale value funded pensions	Single payment for value of Government employment rights	No	No	No
Poland	205,000/165,000	50/55	PZl 20,000/30,000, defined by unemployment rate in area of employment	No	Yes -- little used	No
Estonia	4,481/2,464	Up to 2 years with 50 % wages	Standard in law: 2-4 months bonus, plus notice payments plus 6 months unemployment	No	Yes -- centrally provided	No

Labor Force Changes in Concessioned Railways

	Labor Force in Year Before Concessioning	Labor Force in Most Recent Year	Percent Reduction
Freight Concessions			
Argentina	67,000	5,300	92.1
Brazil	49,896	12,251	75.4
Bolivia	3,900	785	79.9
Mexico	46,823	16,000	65.8
Cote d'Ivoire/Burkina Faso	1,811	1,673	7.6
Passenger Concessions			
Buenos Aires Suburban	15,000	7,600	49.3
Buenos Aires Subté	4,750	2,100	55.8
Rio Suburban	4,170	2,236	46.4
Rio Metro	3,272	1,534	53.1

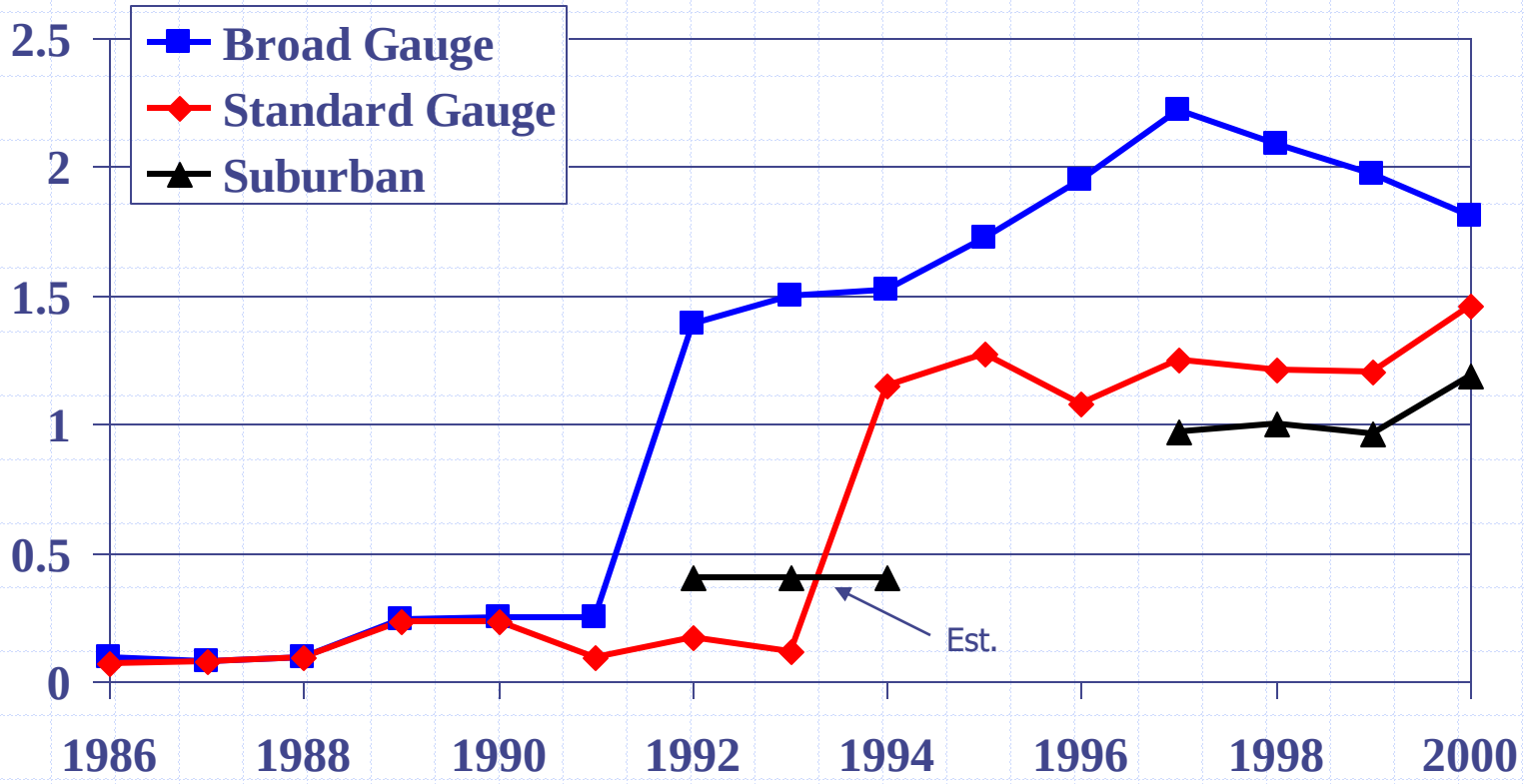
Brazil rail labor productivity

(000,000 TU/Employee)

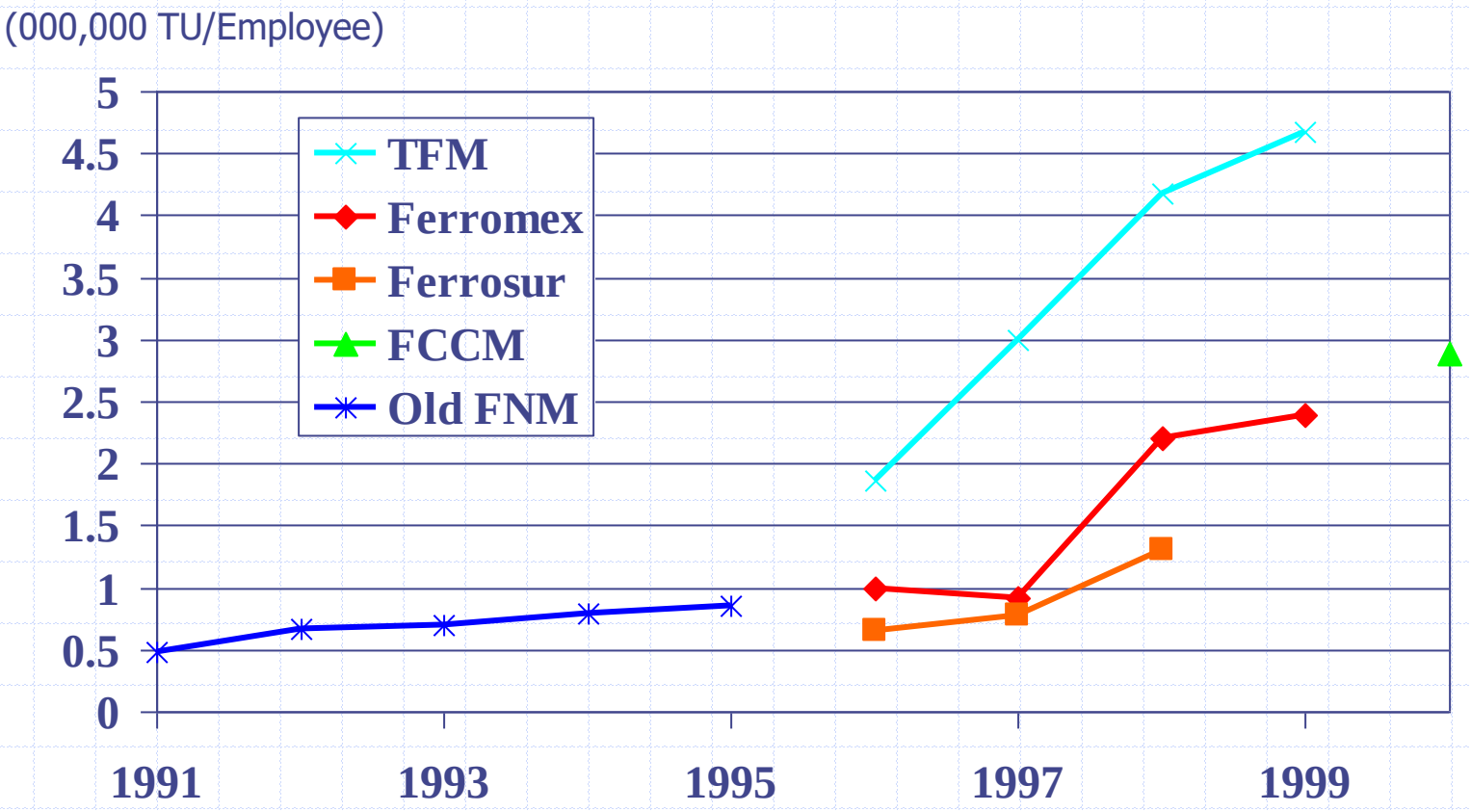


Argentina rail labor productivity

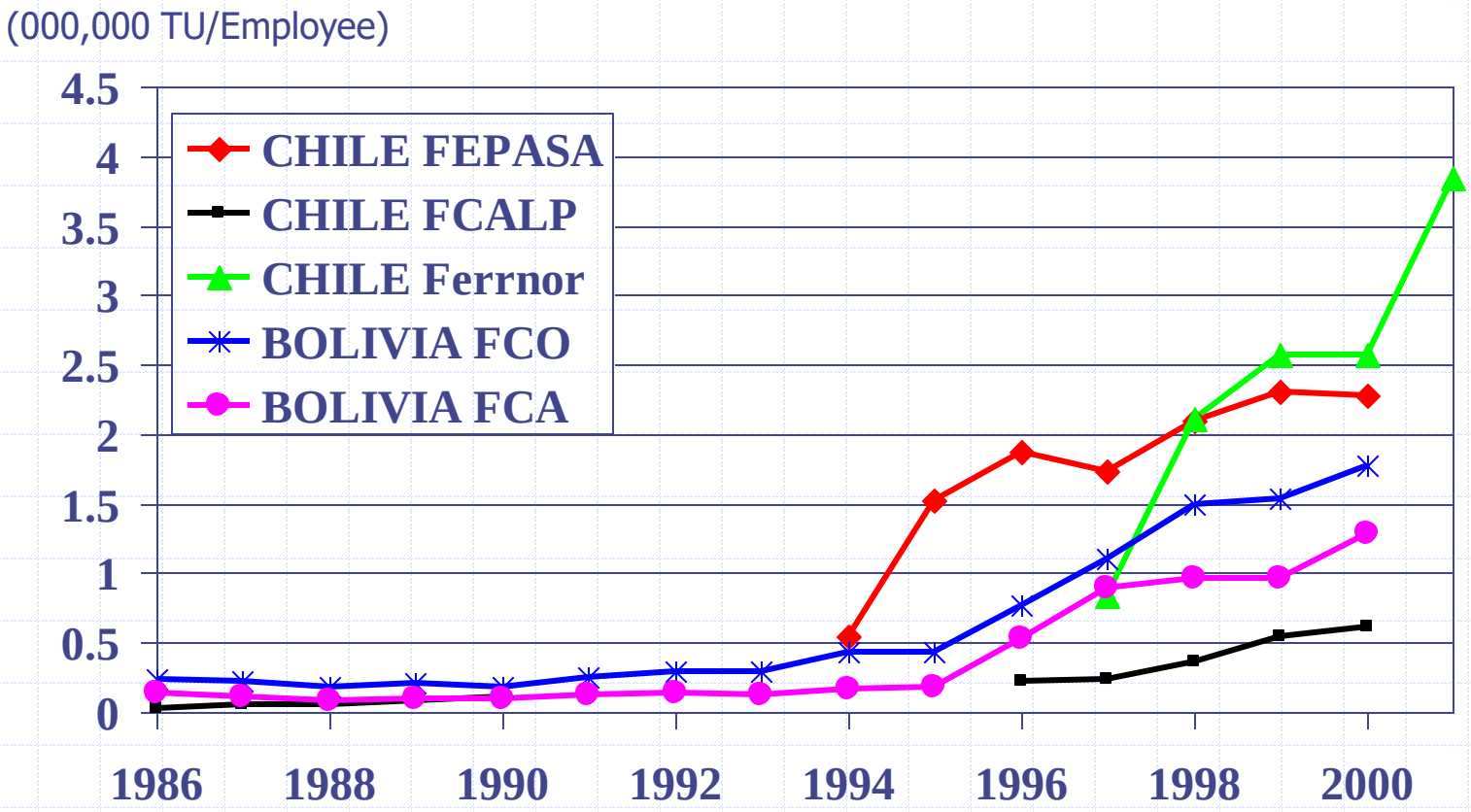
(000,000 TU/Employee)



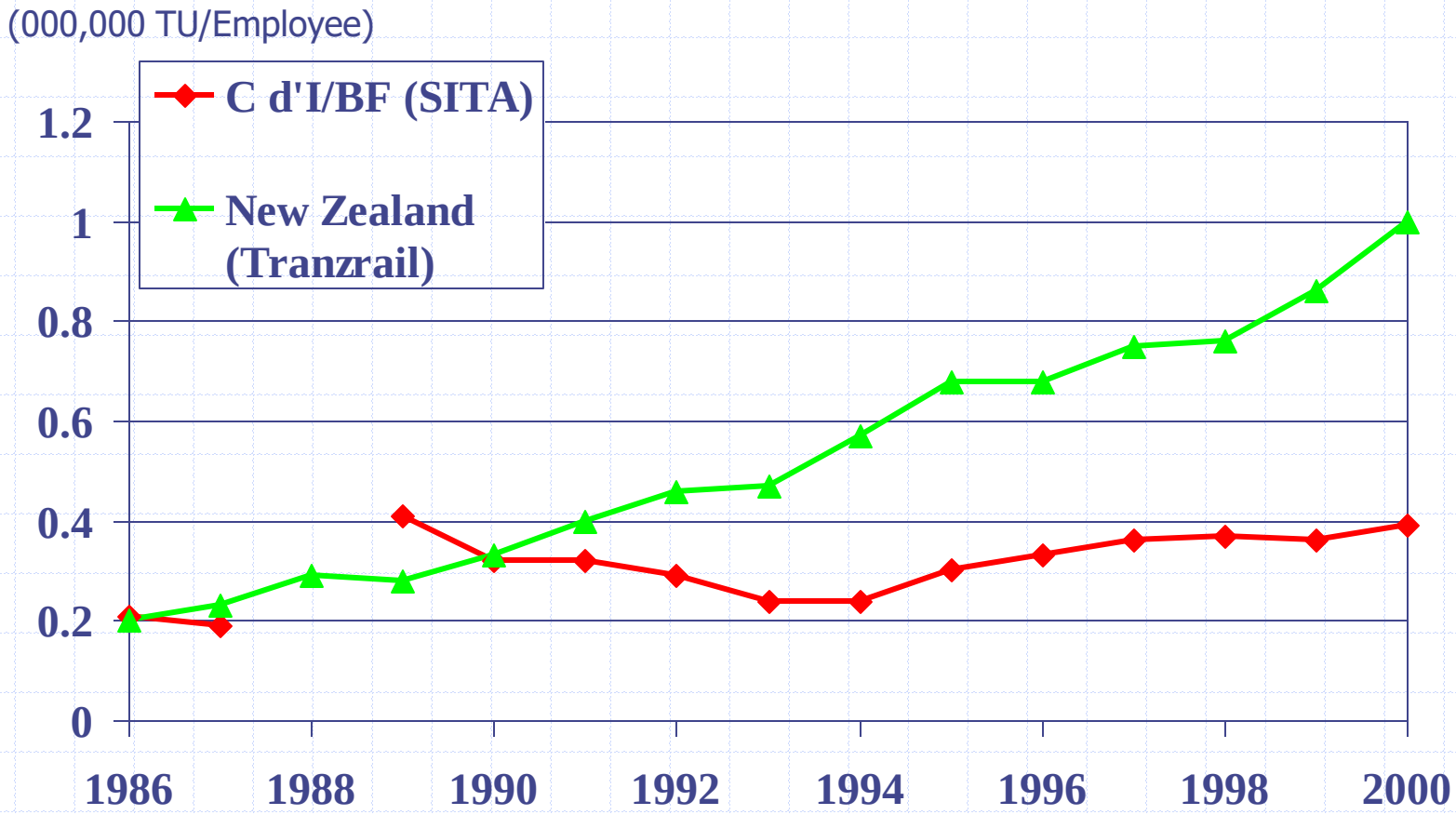
Freight rail labor productivity in Mexico



Freight rail labor productivity in Chile and Bolivia



Rail labor productivity in Cote d'Ivoire/Burkina Faso and New Zealand



Next steps

- Policy decisions on establishment and desired condition of the links of infrastructure
  - **Supported by studies on desired condition and cost of maintenance of infrastructure and by implementation of accurate accounts**
- Development of program to ease labor adjustment (use existing loan?)
- Policy decisions on approach to private involvement
- Preparing concessions for privatization (if desired)