




Railway Reform in South East Europe and Turkey  
On the Right Track?

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## Overview

- Scope and Structure of the Study
- Main Findings of the Study
- Conclusions

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## Scope of the Study

- Wake-up call for the relevant authorities (MoT, MoF, Rail Companies) of the urgent need for stepping up the railway reform process in the Region
- Guide for candidate and potential candidate countries to move quickly in order to receive a positive opinion from EU regarding rail transport regulations
- Message to governments to use more efficiently scarce public resources for financing necessary upgrades of infrastructure and passenger rail services

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## Elements of the Study

**Elements of analysis**

- Progress in institutional reform
- Operating and financial performance
- State of international integration

**Sources of data**

- Operational Performance: UIC Statistics 2010 and Kosovo Reports
- Financial Performance: 2005-2008 or 2009 data reported by railways/MoT


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## Railways Included

- Albania
- Bulgaria
- Bosnia & Herzegovina
- Croatia
- FYR Macedonia
- Kosovo
- Montenegro
- Romania
- Serbia
- Turkey

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## INSTITUTIONAL REFORM

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## Position of Railways Relative to EU

MEMBERS	CANDIDATES	POTENTIAL CANDIDATES
<ul style="list-style-type: none"> <li>Bulgaria</li> <li>Romania</li> </ul>	<ul style="list-style-type: none"> <li>Croatia</li> <li>FYR Macedonia</li> <li>Turkey</li> <li>Montenegro</li> </ul>	<ul style="list-style-type: none"> <li>Albania</li> <li>Bosnia &amp; Herzegovina</li> <li>Kosovo</li> <li>Serbia</li> </ul>

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## Bulgaria and Romania - Strong points -


- New commercial oriented railway companies in place
- Infrastructure charging systems
- Regulatory agencies
- Successful liberalization of the market
- More local and international private operators licensed

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## Bulgaria and Romania - Weak points -


- Poor operational and financial performance of newly created state-owned railway undertakings:
  - Unclear contractual relationships with the state for the PSC
  - Cross-subsidies of passenger traffic by freight clients (non-commercial track access charge)
  - Weak Infrastructure Managers (under-financed infrastructure, poor absorption capacity of funds)
  - Instability and lack of accountability of managers
  - Inability to respond to changing market conditions
- Lack of independence of the Regulatory Body in Romania (structure in the MoT)
- Track access charges higher than the direct costs in Bulgaria

Improving the performance of state owned railways and implementing the EU Acquis are two separate objectives to be pursued in parallel

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## Candidate and Potential Candidate Railways Institutional Framework Updates since 2005

Country	Rail Law	Organizational Changes	Separation of Infrastructure	New Entrants
Albania	No	No	No	No
B & H	Law in 2008	No	No	No
Croatia	Rail Act - 2006	Holding	To be achieved	No
FYROM	New Law-2010	2 Companies	Yes	No
Kosovo	Rail Law -2008	Joint Stock Co.	To be achieved	No
Montenegro	Rail Law -2009	3 Companies	Yes	No
Serbia	No	No	No	No
Turkey	No	No	No	No
Bosnia & Herzegovina	Amendment to Law in 2008	No	No	No

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## Key Financial Arrangements included in the EU Rail Acquis

Country	Multi-annual contract between State and IM	Track Access Charging (TAC)	Multi-annual Public Service Contracts for Passenger Services	Mechanisms to Reduce Indebtedness of Rail Incumbents
Albania	No	No	No	No
Bosnia & Herzegovina	No	Partly implemented	Yes in RS, not fully aligned with EU Directives	No
Croatia	Yes since 2008	Yes, but not aligned with EU directives	Yes, but not fully aligned with EU directives	Debt taken over by State as of 1 Jan. 2006
FYR Macedonia	Yes	Yes, from 2010, but exceeds direct costs	Yearly contracts, level and structure under revision	Yes, government decision in 2009
Kosovo	No	Lump sum, not in line with EU	Yes, but not aligned with EU provisions	No
Montenegro	No	Not for PSO passenger services	No	Debt taken over by State as of 31 Dec 2008
Serbia	No	No	No	No
Turkey	No	No	No	No

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## Continuing Necessary Institutional Reform

- Ensure managerial independence of the infrastructure manager
- Ensure contractual relationships between the infrastructure manager and the rail operators
- Set the infrastructure charging framework based on the direct costs of operating transport services
- Review passenger fare regulations
- Permit rail operators to set ticket prices for services not covered by the PSC
- Improve corporate governance in state rail companies
- Implement financial accounts according to IFRS – published and audited

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## Strengthening Regulation of the Rail Sector

- Put an end to self-regulated rail monopolies
- Establish pro-active and strong rail regulators
- Strengthening licensing bodies as foreseen in the EU Rail Directives
- Require authorization of the rolling stock and approval of safety management systems by the safety authorities
- Ensure transparent and non-discriminatory access to rail related services (services in terminals or sea ports, passenger stations, fueling, supply of traction power, etc.)
- To ensure that state rail incumbents will be able to compete with the new operators



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## Appropriate Environment for Supporting Rail Reform

- Signature of the Addendum to the MoU for enhancing the South East European Rail Transport Area
- Harmonization of programs and dissemination of information promoted by the SEETO Railway Working Group
- Western Balkan Transport Community Treaty – potential important mechanism for moving rail reform agenda



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## OPERATING PERFORMANCE



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## TRAFFIC TRENDS



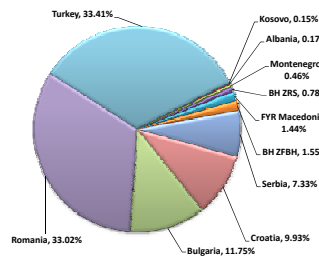
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## Rail Market Characteristics

- Three types of railways: large, medium, and small
- Aggregate traffic developments are driven by Turkey and Romania and are not characteristic for the whole region
- Regional statistics to be evaluated with care
- For accuracy purposes the Study separates Western Balkans from Turkey, Romania, and Bulgaria

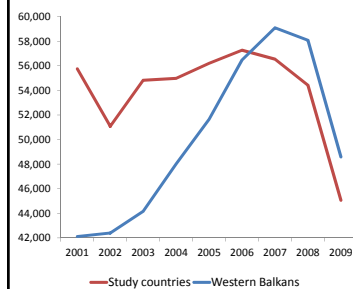


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## Traffic Evolution



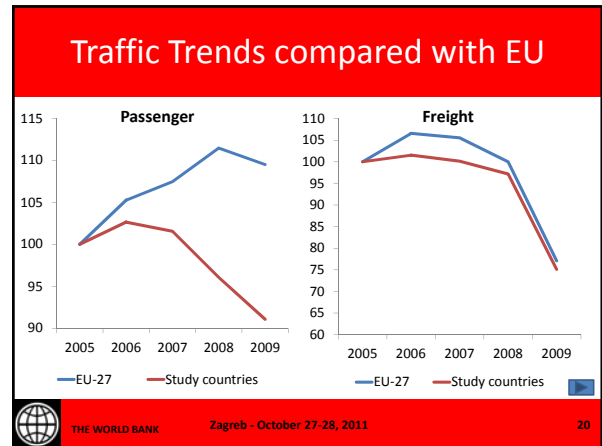
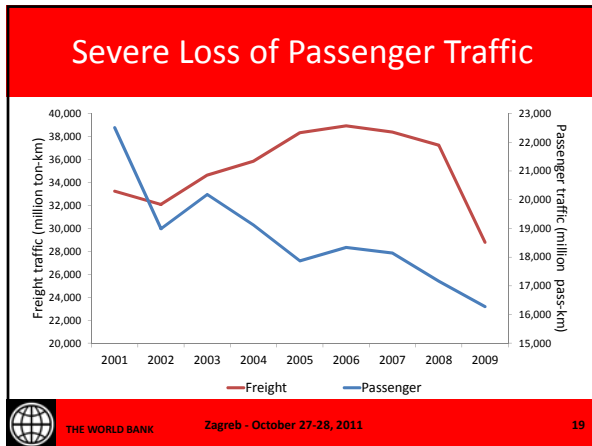
- Total traffic declined sharply after 2007
- Better evolution of traffic in Western Balkans than in the whole region
- 75% of traffic in the region is freight



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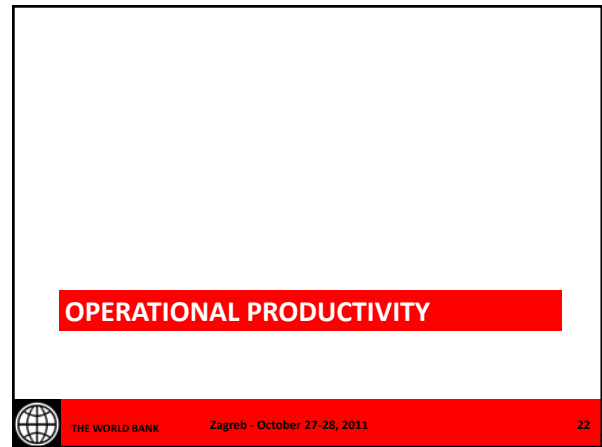


### Structure of Freight Traffic [2008]

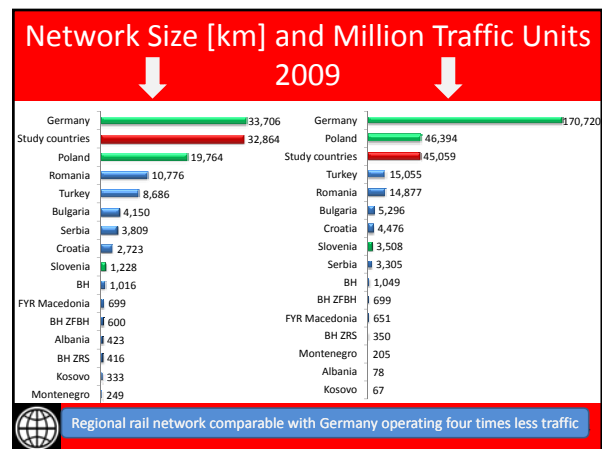
Railway	Ton km (Mil.)	Average haul (km)	Composition (%)			
			Domestic	Export	Import	Transit
Albania	53	134	56	0	44	0
BH ŽFBH	876	95	17	23	58	3
BH ŽRS	361	81	26	28	7	40
Bulgaria (BDZ)	4,031	213	68	10	9	13
Croatia	3,312	227	22	n/a	n/a	n/a
Kosovo	51	56	19	15	66	0
FYR Macedonia	743	170	2	9	38	51
Montenegro	186	106	25	12	20	43
Romania (CFR Marfa)	8,992	183	67	12	20	2
Serbia	4,028	296	10	14	15	61
Turkey	10,104	471	87	8	4	1

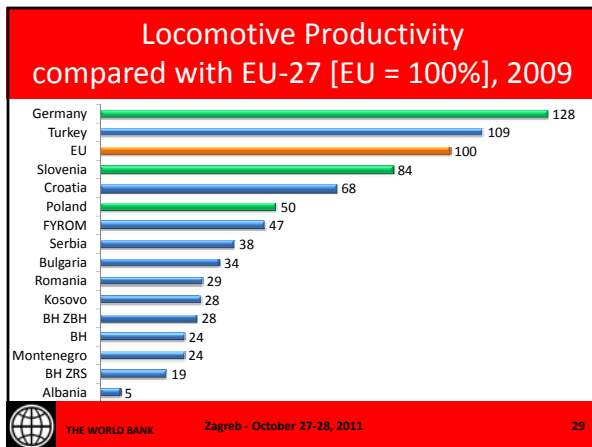
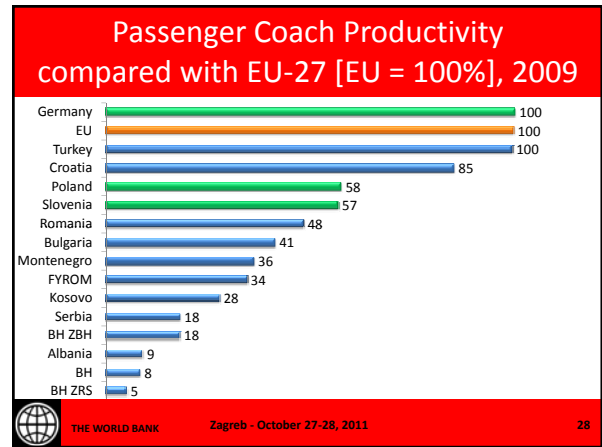
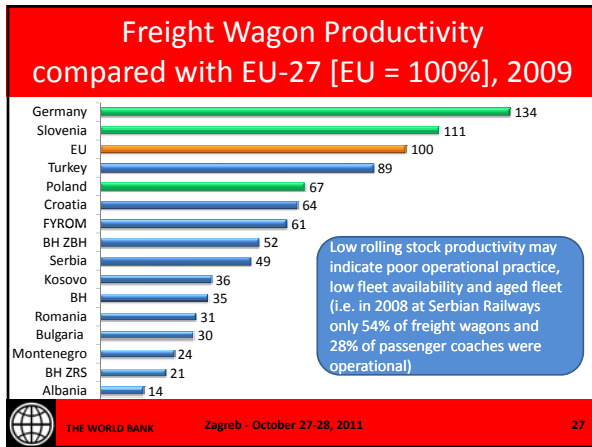
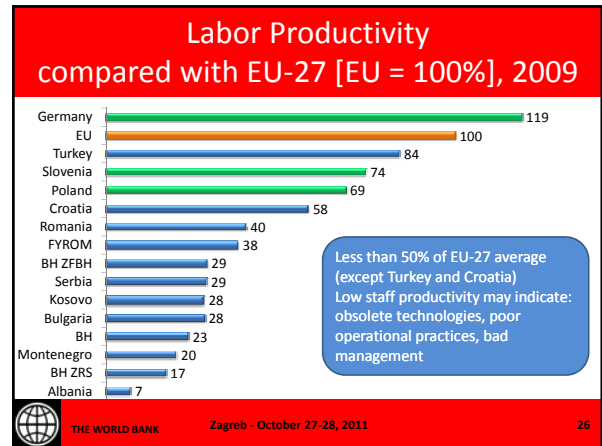
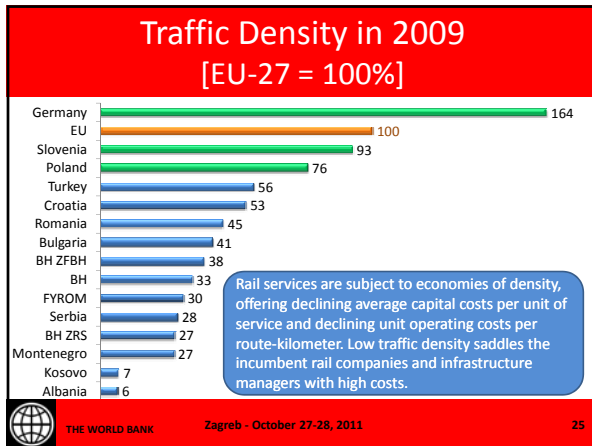
- Most of the railways are preponderantly oriented on import/export and transit traffic
- Fragmentation of traffic due to small size networks does not support efficient operation

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- ### Indicators for Operational Performance
- Indicators used to measure the operational performance:
    - Traffic Density
    - Rolling Stock Productivity
    - Labor Productivity
  - EU-27 values of each of selected indicators considered as basis for comparison (100%)
  - Three EU Member States chosen for comparison:
    - Germany – high performing EU railway
    - Poland – important new member of EU
    - Slovenia – new member of EU from the same region and part of the same corridors
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### Improving Operational Performance (1) Railways Infrastructure

- Refocus rail network development plans
  - Focus on cost-benefit analysis not on past traffic volumes
  - Distinction between upgrading, rehabilitation, maintenance
- Consider the need for network rationalization and focus maintenance on high-density lines (core network)
- Implement multi-annual contracts for infrastructure development
- Provide equitable support to road and rail transport sectors
- Set infrastructure charges at not-excessive level (avoid cross-subsidizing passenger services by freight)

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## Improving Operational Performance (2) Operation of Transport Services

- Divest or scrap non-economic assets
- Identify and address factors affecting low productivity (surplus assets, surplus staff, poor operation practices)
- Implement multi-annual PSC using performance targets
- Utilize performance indicators by lines of business for increasing accountability of staff and managers
- Organize railway companies around customer needs instead of classical territorial structures or railways branches

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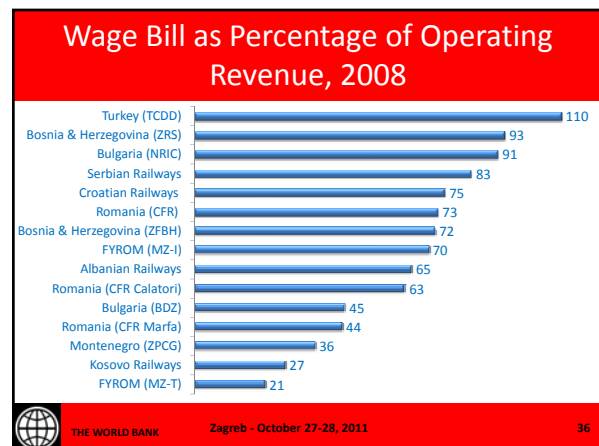
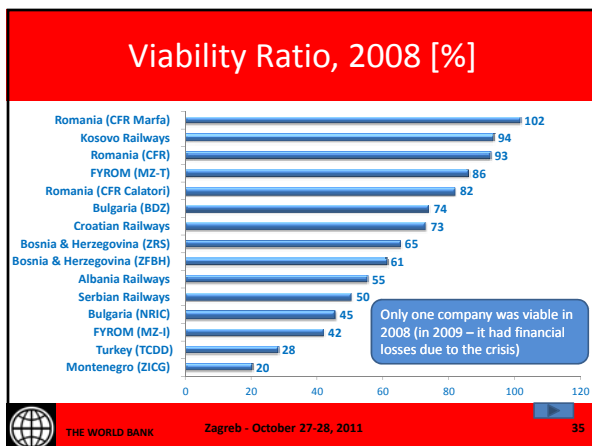
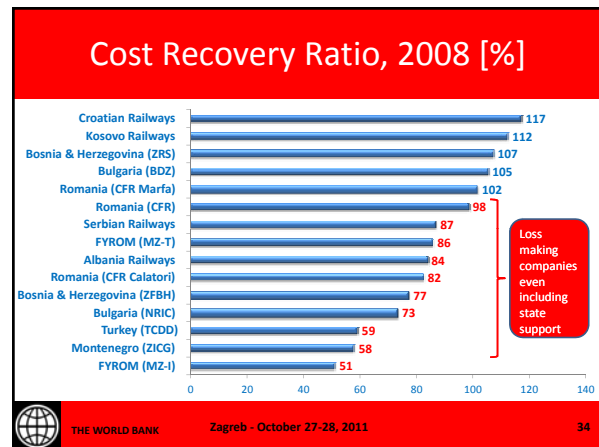
## FINANCIAL PERFORMANCE

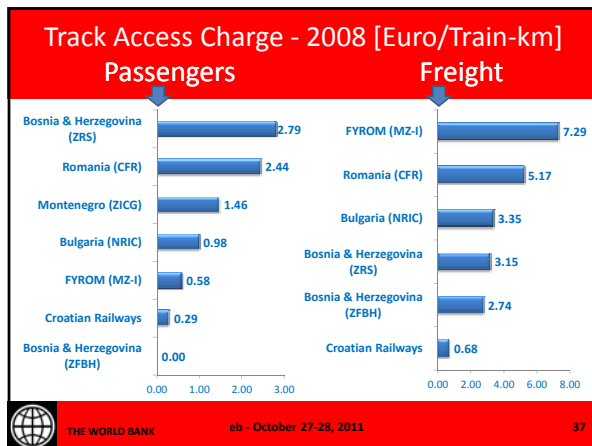
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## Indicators for Financial Performance

- Cost Recovery Ratio**, defined as the ratio of the total revenue, including all forms of state support, divided by total operating costs
- Viability Ratio**, defined as the ratio of commercial revenue (excluding state support) divided by total operating costs [expressed in %]
- Average Track Access Charge** per train-km per type of traffic
- Wage Bill** indicators:
  - Percentage of total operating costs
  - Percentage of operating revenue excluding state support

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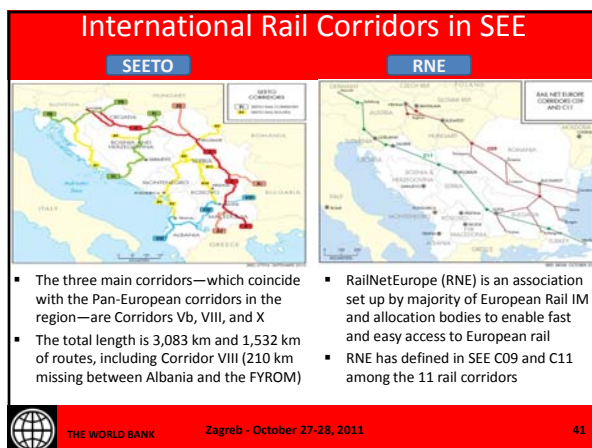


- ### Improving Financial Performance
- Poor financial performance – consequence of:
    - Poor operational performance
    - Underinvestment in infrastructure and rolling stock
    - Lack of commercially oriented management = Unsatisfactory management
  - Each railway has its specific mix of the above factors
  - Commercially oriented management
    - Strict control of costs
    - Tariff policy based on market rules
    - Quality transport services according to market expectations
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- ### Identify and Eliminate Factors Adversely Affecting Financial Performance
- State as owner of railways:
    - Supervision but not interference in daily management of railways
    - Transparent merit based selection of managers
    - Stability and accountability of managers
    - Set monthly, quarterly, and annual targets for measuring the achievements
  - Railway Managers
    - Outsource non-core activities not financially sound
    - Divest or scrap non-economic (surplus) assets
    - Replace obsolete assets
    - Ensure existing staff is in line with traffic needs
    - Eliminate poor operation practices:
      - Allocation of locomotives and crews
      - Obsolete methods of maintenance of infrastructure and rolling stock
      - No commercially viable tariffs for transport services
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## INTERNATIONAL INTEGRATION

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- ### Major Barriers to International Traffic on Rail
- Long stopping time planned in border stations
  - Large delays during processing time in border stations
    - inefficient organization of state rail undertakings
    - non-availability of locomotives
    - incorrectly assembled trains
    - border police and customs controls
  - Absence of full interoperability in rail sector
    - Traction systems (electric, Diesel)
    - Signaling systems
    - Safety rules
  - *Critical element = effective cooperation among incumbent rail undertakings and rail infrastructure managers*
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### Corridors – Comparing Operational Performance

Corridor IV (Budapest-Curtici-Ruse-Svilengrad)		Corridor X (Budapest-Subotica-Nis-Dimitrovgrad-Sofia-Svilengrad)	
Length (km)	1,180	Length (km)	1,076
Average transit duration: passenger trains (hours)	25.7	Average transit duration: passenger trains (hours)	25.05
Curtici (HU-RO)	0.3	Subotica (HU-SR)	0.6
Ruse (RO-BG)	1.4	Dimitrovgrad (SR-BG)	1.3
Svilengrad (BG-TR)	0.8	Svilengrad (BG-TR)	0.8
Average speed pass. trains (km/h)	45.9	Average speed pass trains (km/h)	43.0
Average transit duration: freight trains (hours)	44.3	Average transit duration: freight trains (hours)	43.0
Curtici (HU-RO)	3.0	Subotica (HU-SR)	3.8
Ruse (RO-BG)	4.3	Dimitrovgrad (SR-BG)	4.5
Svilengrad (BG-TR)	5.0	Svilengrad (BG-TR)	5.0
Average speed freight trains km/h	26.6	Average speed freight trains km/h	25.0

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### Border Crossing Points (BCP) Stops

Border Station	BCP Stop (minutes)	
	Timetable	Average real time
<b>Subotica</b>		
Freight	180	225
Passenger	32.5	32.5
<b>Curtici</b>		
CFR Marfa	235	180
Private freight trains	40	40
Passenger	15	19
<b>Svilengrad</b>		
Freight	120	300
Passenger	35	45
<b>Dimitrovgrad</b>		
Freight	400	269
Passenger	60	75

- Much longer duration for freight than for passengers
- Private trains operation in border stations much shorter
- Lack of predictability (estimated time of arrival at destination)

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### Bosphorus Europe Express on Corridor X

**Description of the route**

- total length: 1570 km (total of 4120 km if some non-rail sections are taken into account, 200 km of single tracks, on some sections gradients up to 25‰)
- crossing 5 countries
- up to 12 border crossings, EU and non-EU borders
- different power supply systems
- 5 times changing the locomotives
- different maximum length (200 - 510 m) and weight (1200-1400 tonnes)

- Rail in competition with other modes. Traffic distribution and average duration from Turkey to Central Europe:
  - 80% by sea – 48-56 hours
  - 16% by road – 72 hours
  - 4% by rail – 57-64 hours
- Trip duration according to timetable and average duration from Turkey to Central Europe: = 60 hours and 43 minutes
- **Achieved target = 35 hours** (by reducing the stoppage time from 19 hours to 6 hours)

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### Initiatives to Improve Rail Corridor Performance

- Framework Border Crossing Agreement was presented in May 2009 to SEETO Rail Working Group
- The Agreement on Infrastructure Interconnection (AII), signed between IM's to be implemented (document approved by the SEETO Commission representing the transport ministries of the Western Balkan countries)

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### Joint Border Zone – The Vital Element for Changing the Current Situation

- **Single window principle** for freight customs. All customs services should be carried out by the customs authorities of both countries at one location in the Joint Border Zone
- **One Stop Shop** for the use of rail infrastructure meaning a body that designs an international train path
- **Passenger control on moving trains.** Border police and customs of both states carry out controls while the train is moving

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### Recommendations for Improving Integration

- Utilize selective investments in order to establish joint border stations or move clearance to defined inland terminals
  - Transfer certain border-crossing activities to major inland terminals
  - Adapt procedures for single wagonload or wagon groups to block trains (due to private operators)
- Coordinate marketing of services across rail corridors
  - Coordination of rail operators along corridors to improve services (address the fragmentation of traffic), while ensuring the independence of the partners on pricing
- Ensure coordination of TACs across freight corridors
  - Excessively high freight TACs across one segment can shift freight rail traffic onto trucks
- Introduction a pilot scheme to test EDI transmission between select border stations (ICT at border stations, RU, IM, shippers / forwarders)

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## Conclusion

- There is no alternative to the continuation of the process of railways reform in SEE (institutional, operational, financial, and international integration)
- EC has a vital role for stimulating the process (SEETO Railway Working Group)
- International donors must continue to support the development programs of railway transport in SEE



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## Rail Report Website

- Available at <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/ECAEXT/0,,contentMDK:22928780~pagePK:146736~piPK:146830~theSitePK:258599,00.html>
- Also to be available at: [www.worldbank.org/eca/railwayreformreport](http://www.worldbank.org/eca/railwayreformreport)
- Full report in English, Executive Summary of the report available in English, Albanian, Bosnian, Croatian, Macedonian, and Serbian.



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## Railway Reform Toolkit

- Railway Basics
  - Rail Markets (freight and passengers)
  - Rail Technology
- Economics and Finance
  - Pricing, Costing
  - Financial Sustainability
  - Benchmarking
  - Financial Model
- Reforming Industry Structure
  - Business organization
  - Competition
  - Options for structure
  - Non-core activities
- Role of the Government
  - Owner, Client, Policy Maker
  - Regulatory Framework
- Commercial Management
  - Corporate Governance
  - Organizational Structures
  - Human Resources
- Private Sector Participation
  - Concession Contract
  - Service Contract
- Case Studies



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## How to access the Toolkit ?

- Downloadable book <http://www.worldbank.org/railways>
- Website (coming soon) <http://www.ppiaf.org/railtoolkit>  
[Toolkit link](#)
- Flashdrive containing searchable website & book
- Contact: [railtoolkit@worldbank.org](mailto:railtoolkit@worldbank.org)



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It is not the strongest ... that survives,  
nor the most intelligent... It is the one  
that is the most adaptable to change.


Charles Darwin



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**Thank you for your kind attention!**

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