Economic Commission for Europe
Inland Transport Committee
Working Party on Transport Trends and Economics

Twenty-nine session
Geneva, 3–5 September 2018
Item 11 (d) of the provisional agenda
Review of the transport situation, transport trends and economics in ECE region:
Transport Trends and Challenges in the rail sector

Transport Trends and Challenges in the rail sector

Submitted by the International Union of Railways
Trends and challenges in Rail transport

Snejana MARKOVIC-CHENAIS
Economics Adviser
markovic@uic.org
UIC, a long history at the service of member railways and international railway cooperation

- **1921**: Intergovernmental (diplomatic) conference in Portorose, Italy
- **1922**: Constitutive Assembly of UIC (Paris): UIC Statutes adopted by 51 Railway administrations from 29 countries (Europe, Asia)
- **2018**: 200 Member railways from 95 countries
UIC today

- 200 members in 95 countries
- 10,000 billion tonnes kilometres
- 1 million kilometres of lines
- 3,000 billion passenger kilometres
- 7 million rail personnel
- Cooperation with over 100 institutions
- 700 UIC Leaflets – New International Railway Solutions (IRS)
- 85 congresses, conferences, workshops
UIC, its missions

Promoting the development of rail transport at world level

in order to meet challenges of mobility and sustainable development

KEY CHALLENGES IN TERMS OF

- INNOVATION
- STANDARDISATION
- TRANSMISSION
- DISSEMINATION
- STRATEGIC ADVICE
5 UIC Global cooperation issues
Serving the entire Railway Community

Environment & Sustainable Development
UN Climate Conferences COP

Safety & Security

Freight / Intercontinental corridors

Railway Signaling & Control Command

Standardisation, Harmonisation
UIC Leaflets,
International Railway Solutions
IRS
Statistics at UIC

visit our website at http://uic.org

UIC collects statistics from its members
- Data are company based
- Data are given and validated by UIC members

UIC data base available at http://uic-stats.uic.org/
Synopsis: global picture of railways

Provisional annual data - All continents

- Length of lines
- Rolling Stock
- Average staff strength
- Train performance in train-km
- Rail Traffic in pass., pass-km, tonnes, tonne-km
- High speed traffic

Available mid year for n-1

download it at [http://uic.org/statistics](http://uic.org/statistics)
Length of lines share in 2017

- Europe (including Turkey): 32%
- Russia: 11%
- Africa: 7%
- America: 21%
- Asia and Oceania (Russia and Turkey excluded): 29%
Passenger-kilometres share in 2017

- Asia and Oceania (Russia and Turkey excluded): 78%
- Europe (including Turkey): 16%
- Russia: 4%
- Africa: 1%
- America: 1%
Passenger.kilometres (millions) Top 10

IR (2016)
CR (2017)
EJR (2016)
RZD (2017)
SNCF (2017)
DB AG (2017)
ATOC (2014)
CJRC (2016)
WJRC (2016)
FS (2017)
Tonne-kilometres share in 2017

- Russia: 29%
- America: 27%
- Asia and Oceania (Russia and Turkey excluded): 37%
- Europe (including Turkey): 1%
Tonne.kilometres (millions) Top 10

- RZD (2017)
- AAR (2016)
- CR (2017)
- IR (2016)
- KTZ (2017)
- UZ (2016)
- TRANSEN (2008)
- DB AG (2017)
- QR (2011)
- BC (2017)
High Speed Traffic 2017 (billion pkm)

- **CR 2016; 464,1**
- **JR 2016; 98,59**
- **SNCF ; 55,3**
- **KORAIL 2016; 16,3**
- **DB AG; 28,5**
- **Italy 2017: Trenitalia (FS) + NTV; 15**
- **RENFE; 15,5**
- **THSRC 2016; 10,5**
- **Other Europe *; 9,49**

Other Europe * : CD, CP , EUROSTAR 2016, NS, PKP 2015, SZ, TCDD, THALYS 2016, VR
Trends in rail
Length of lines – 2004 – 2016 time series
Data source: UIC, OECD, World Bank, Eurostat, World Factbook

Africa – Total length of lines in 2016: ~78 000 km

America – Total length of lines in 2016: ~386 000 km

Asia & Oceania (Russia and Turkey excluded) – Total length of lines in 2016: ~327 700 km

Europe (Turkey included) – Total length of lines in 2016: ~271 800 km

Russia – Total length of lines in 2016: ~85 400 km

World – Total length of lines in 2016: ~1 149 000 km
Passenger Traffic Performances – 2004 – 2016 time series
Data source: UIC, OECD, World Bank, Eurostat, World Factbook

Africa – Total p.km in 2016: ~67 billions

America – Total p.km in 2016: ~40 billions

Asia & Oceania (Russia and Turkey excluded) – Total p.km in 2016: ~2900 billions

Europe (Turkey included) – Total p.km in 2016: ~514 billions

Russia – Total p.km in 2016: ~125 billions

World – Total p.km in 2016: ~3700 billions
Freight Traffic Performances – 2004 – 2016 time series

Data source: UIC, OECD, World Bank, Eurostat, World Factbook

- **Africa** – Total t.km in 2016: ~173 billions
- **America** – Total t.km in 2016: ~3050 billions
- **Asia & Oceania (Russia and Turkey excluded)** – Total t.km in 2016: ~3678 billions
- **Europe (Turkey included)** – Total t.km in 2016: ~672 billions
- **Russia** – Total t.km in 2016: ~2344 billions
- **World** – Total t.km in 2016: ~9919 billions
Railway Transport: Freight performance per GDP ppp

Data sources 2016: UIC, OECD, World Bank

Legend:
- t.km per million € GDP ppp
  - >= 500 000
  - [250 000 to 500 000)
  - [100 000 to 250 000)
  - [75 000 to 1000 000)
  - [50 000 to 75 000)
  - [25 000 to 50 000)
  - [10 000 to 25 000)
  - [5 000 to 10 000)
  - [0 to 5 000)
  - NA
Rail’s share in the world

> Inland freight transport: pipeline, inland waterway, rail and road.

> Inland passenger transport: rail and road.

> Inland transport infrastructure: pipeline, inland waterway, rail and road.

> Note: because of missing values, the mean proportion allocated to rail has been computed over the last 10 years and the linear positive/negative trend (red/blue arrows) has been assessed over the last 15 years.
Rail’s share in inland freight transport*

Data source: OECD, Tkm

* Inland freight transport: pipeline, inland waterway, rail and road
Rail’s share in inland freight transport*

* Inland freight transport: pipeline, inland waterway, rail and road

Data source: OECD, Tkm
Rail’s share in inland freight transport*

* Inland freight transport: pipeline, inland waterway, rail and road
Data source: OECD, Tkm
Rail’s share in inland passenger transport*

* Inland passenger transport: road and rail

Data source: OECD, Tkm
Rail’s share in inland passenger transport*

* Inland passenger transport: road and rail

Data source: OECD, Tkm
Rail’s share in inland passenger transport*

* Inland passenger transport: road and rail

Data source: OECD, Tkm
Rail’s share in inland transport infrastructure investment *

* Inland transport infrastructure: pipeline, inland waterway, rail and road

Data source: OECD, Tkm
Rail’s share in inland transport infrastructure investment *

Inland transport infrastructure: pipeline, inland waterway, rail and road

Data source: OECD, Tkm
Rail’s share in inland transport infrastructure investment

* Inland transport infrastructure: pipeline, inland waterway, rail and road

Data source: OECD, Tkm
Rail’s share in inland transport – global remarks

> Rail share at global scale is of about 26% of the total infrastructure investment dedicated to inland transport.

> Finally, if we consider all countries with available data (in all regions), the modal share allocated to rail passenger traffic represents about 11% and a slight negative trend is recorded over the period.

> To have a general view, if we consider all countries with data (in Europe, Northern America and in Asia and Oceania), the decrease of rail share in freight transport is about 10 percentage points (from ~ 39% to 29%). This is due to the stronger increase of freight transport by road than by rail especially in China and in India.

Data source: OECD, Tkm
Thank you for your kind attention

Snejana Markovic-Chénais

markovic@uic.org
Annexes
Global Vision for railway development

A strategic vision for the rail development in every region of the world

http://africa.uic.org/squelettes/AFRICA_Strategic_Vision.pdf
http://latin-america.uic.org/squelettes/LATIN-AMERICA_Strategic_Vision.pdf
http://europe.uic.org/IMG/pdf/europe_challenge2050.pdf
http://europe.uic.org/IMG/pdf/rail_technical_strategy_europe.pdf
ACCESSING UIC RESOURCES: STANDARDS