



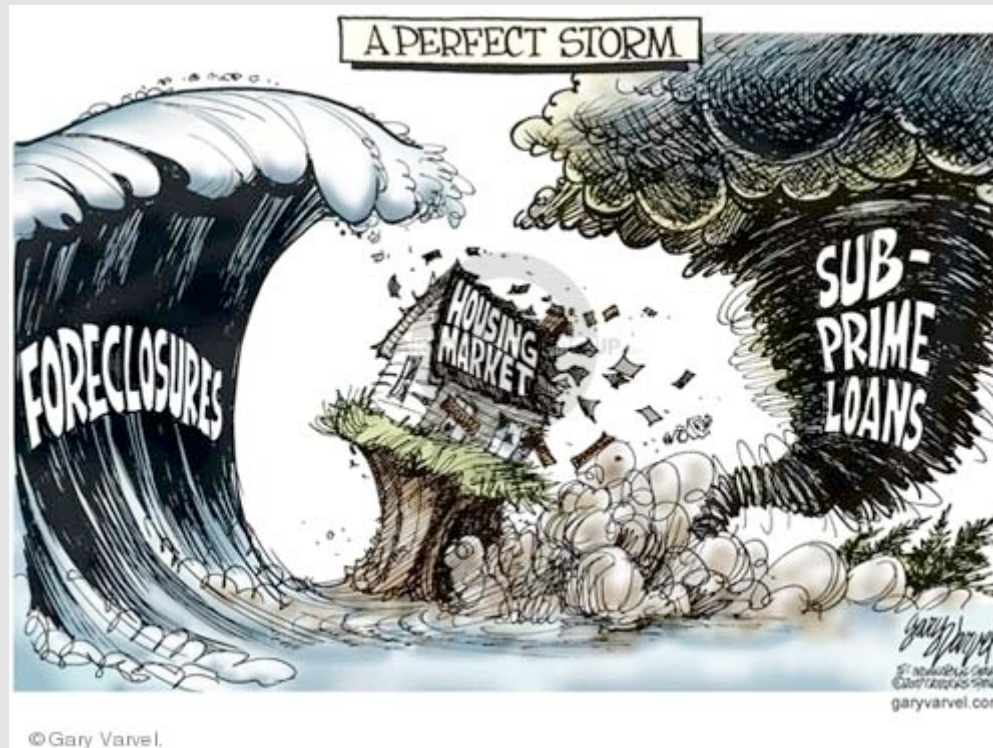
# **Economic Crisis and the Impacts on Transport**

**Werner Rothengatter**

**Universität Karlsruhe (TH)**



# A Tsunami Following the Financial Crisis





## Domino effect

3

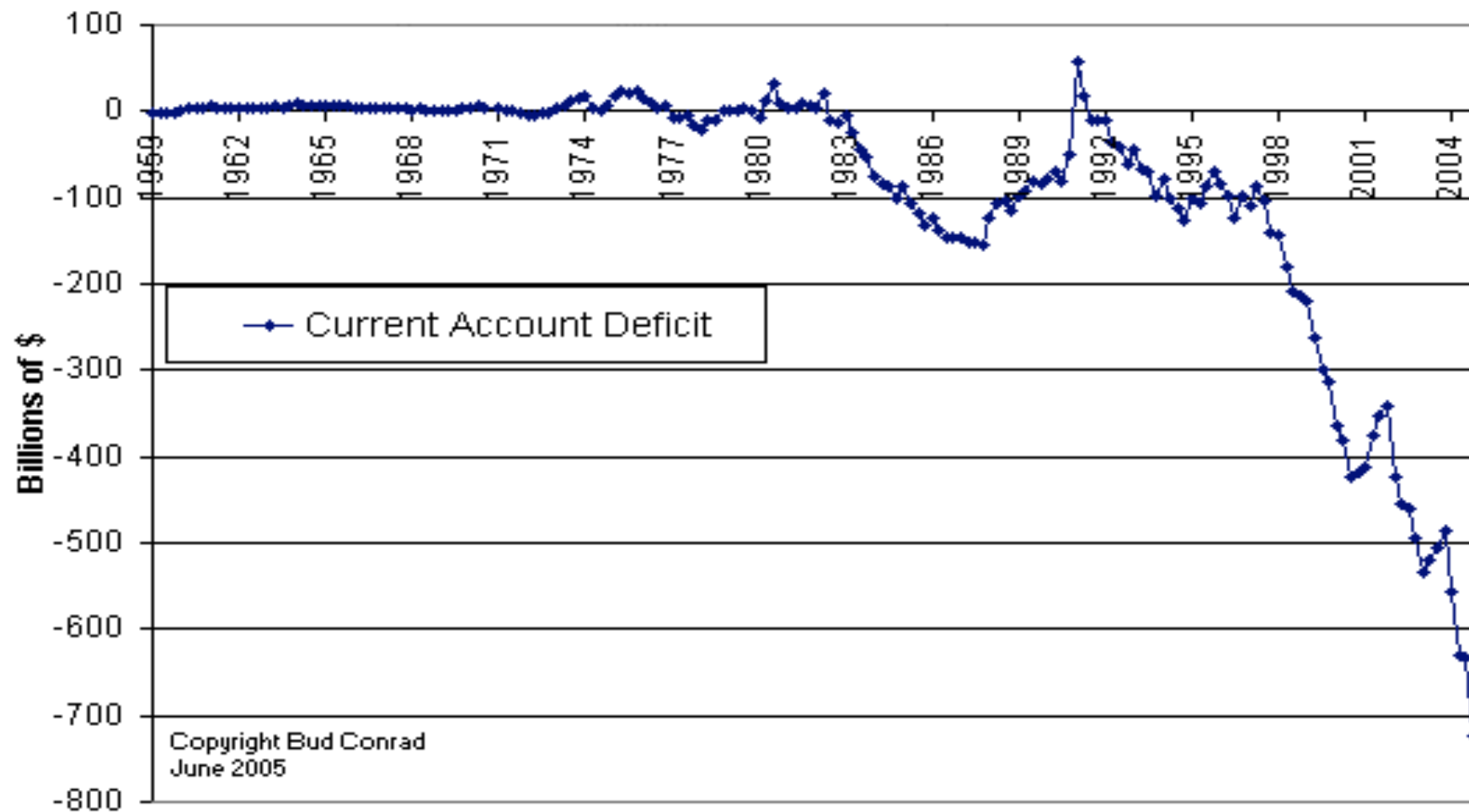




# Trade Deficit US

4

The Current Account Deficit of the US is huge

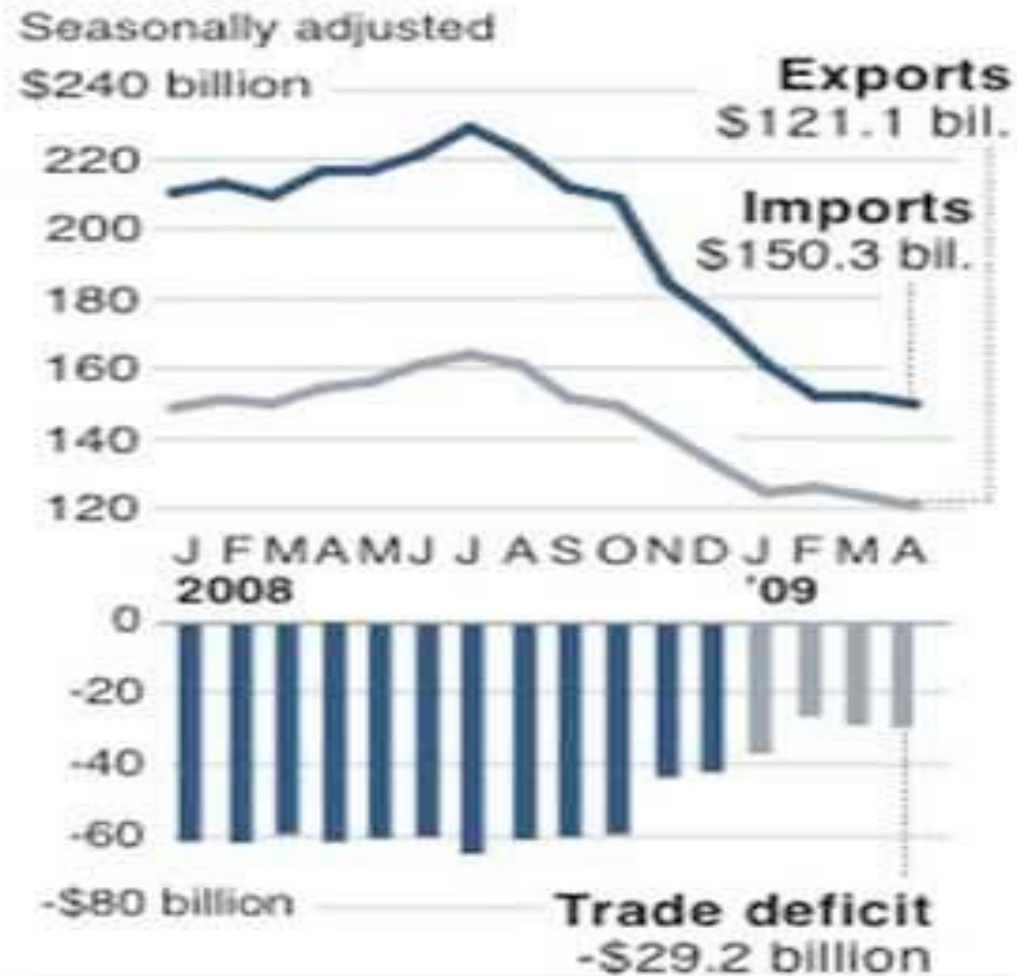




# US Trade Deficit

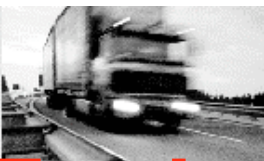
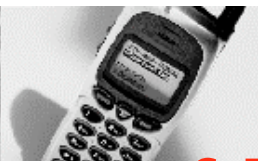
## U.S. monthly trade

The U.S. trade deficit in goods and services:  
Seasonally adjusted



SOURCE: Department of Commerce AP

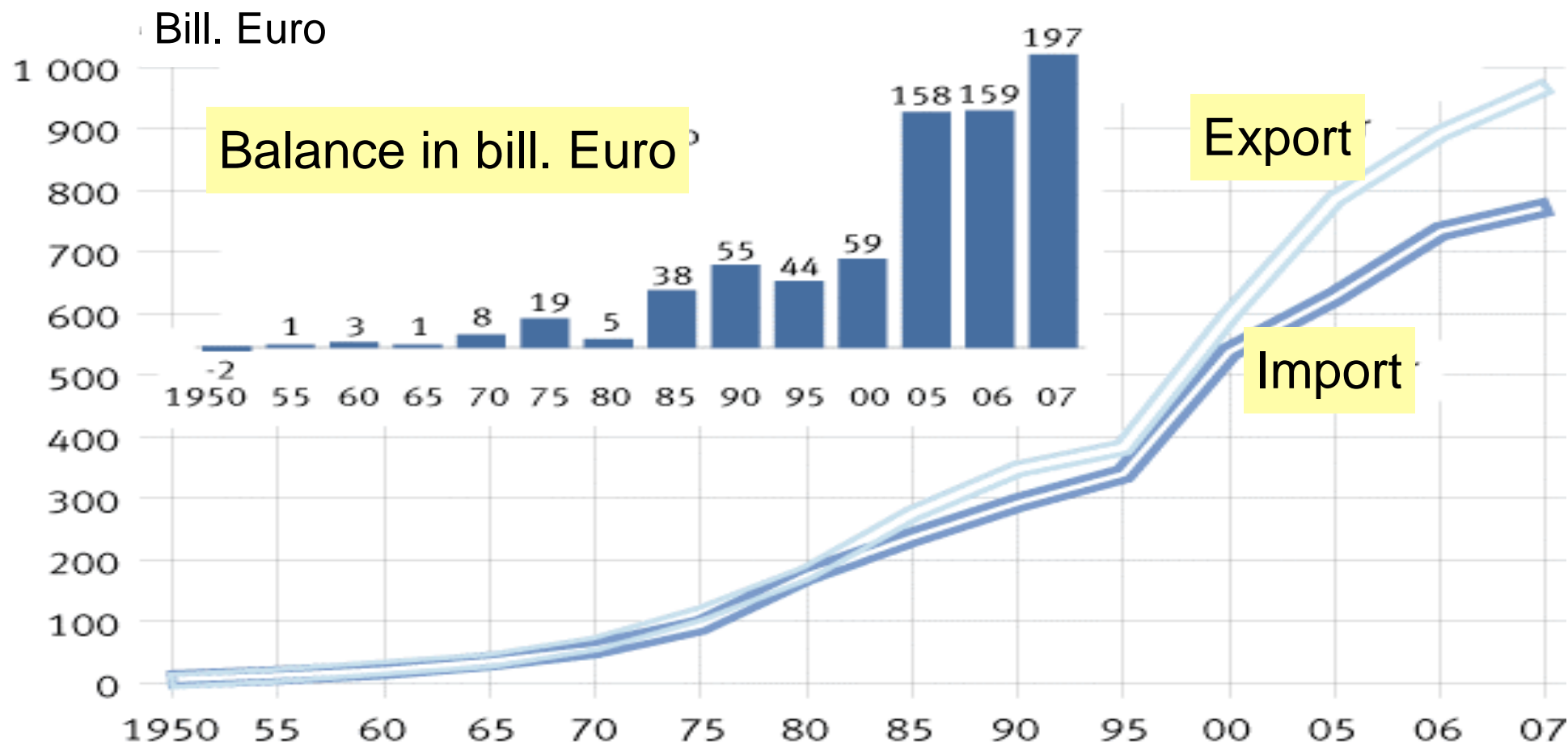




# Imbalance of Trade

6

## Development of Foreign Trade in Germany





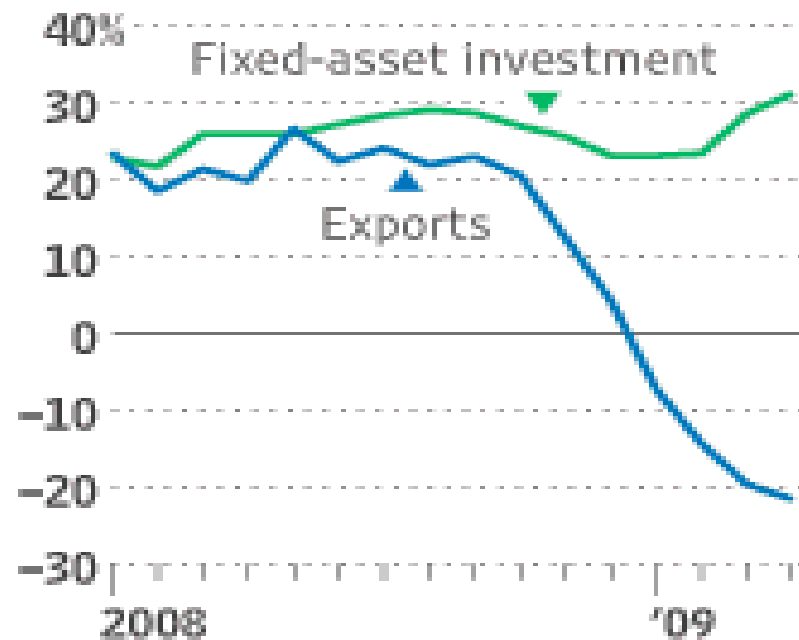
# China Exports and Investment

7

## Push and Pull

## China is boosting investment to try to offset declining exports

Change from a year earlier in  
three-month moving average



Source: China's National Bureau of Statistics, General Administration of Customs



## Decline of Macro Indicators

8

■ **World Trade: - 10%**

**2009 expected**

■ **GDP US - 7%**

■ **GDP Japan - 11%**

■ **GDP EU - 3.5%**

■ **GDP Germany - 6%**

■ **GDP China + 6%**





## Impacts on the EU Economy

9

Country	Change of GDP	Public Deficit in % of GDP	Rate of Unemployment in %
Belgium	- 3.5	- 4.5	8.5
Germany	- 5.4	- 3.9	8.6
Finland	- 4.7	- 0.8	8.9
France	- 3.0	- 6.6	9.6
Greece	- 0.9	- 5.1	9.1
Ireland	- 9.0	- 12.0	13.3
Italy	- 4.4	- 4.5	8.8
Luxembourg	- 3.0	- 1.5	5.9
Malta	- 0.9	- 3.6	7.1
Netherlands	- 3.5	- 3.4	3.9
Austria	- 4.0	- 4.2	6.0
Portugal	- 3.7	- 6.5	9.1
Slovak Rep.	- 2.6	- 4.7	12.0
Slovenia	- 3.4	- 5.5	6.6
Spain	- 3.2	- 8.6	17.3
Cyprus	+ 0.3	- 1.9	4.7



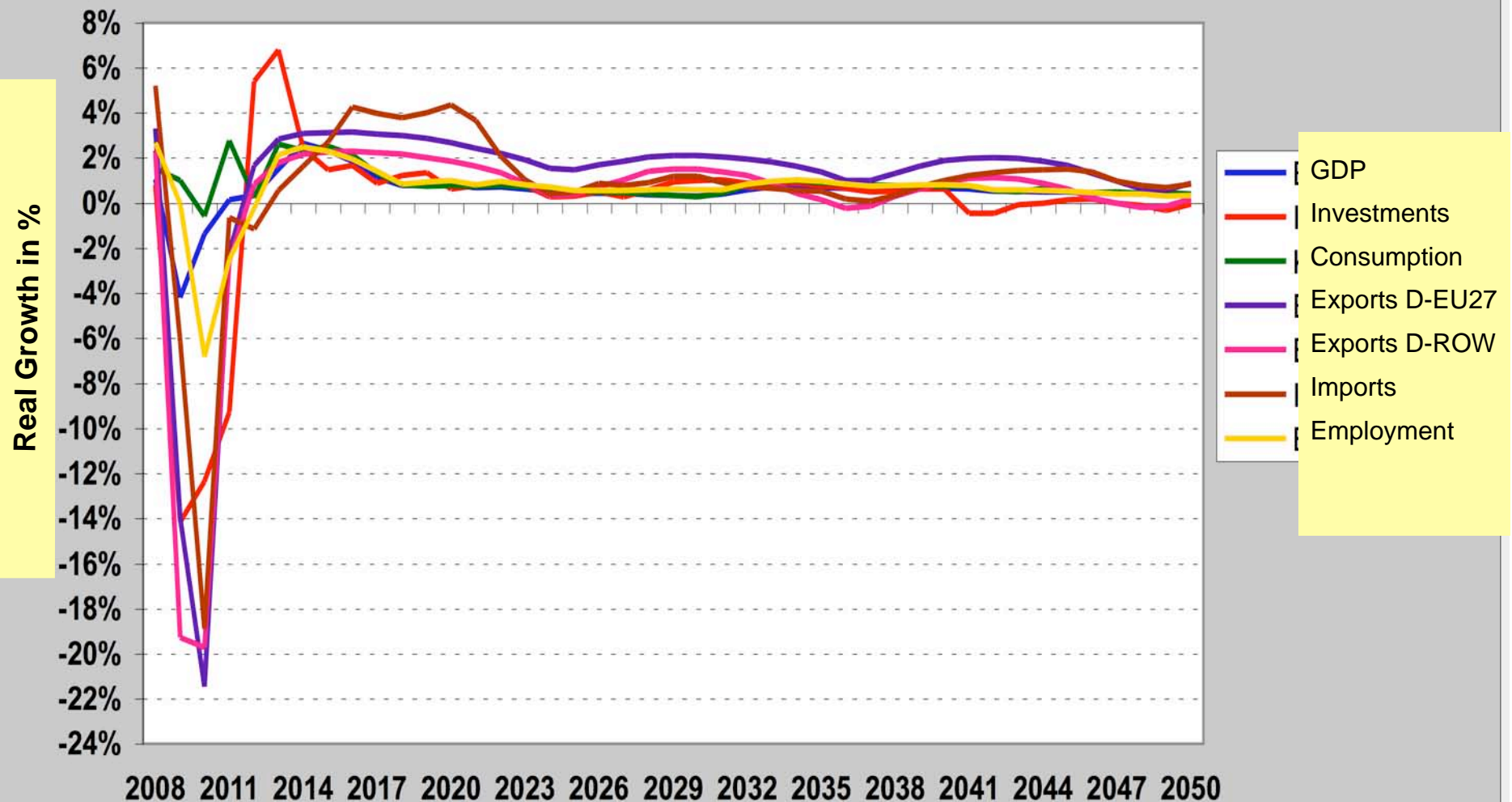
## The Situation

10

- **Most Severe Crisis since 1929**
- **Decline more Sharply**
- **Finance -> Trade -> Production -> Employment -> Domestic Demand -> Negative Multiplier**
- **Response Keynesian: Stimulus Packages**

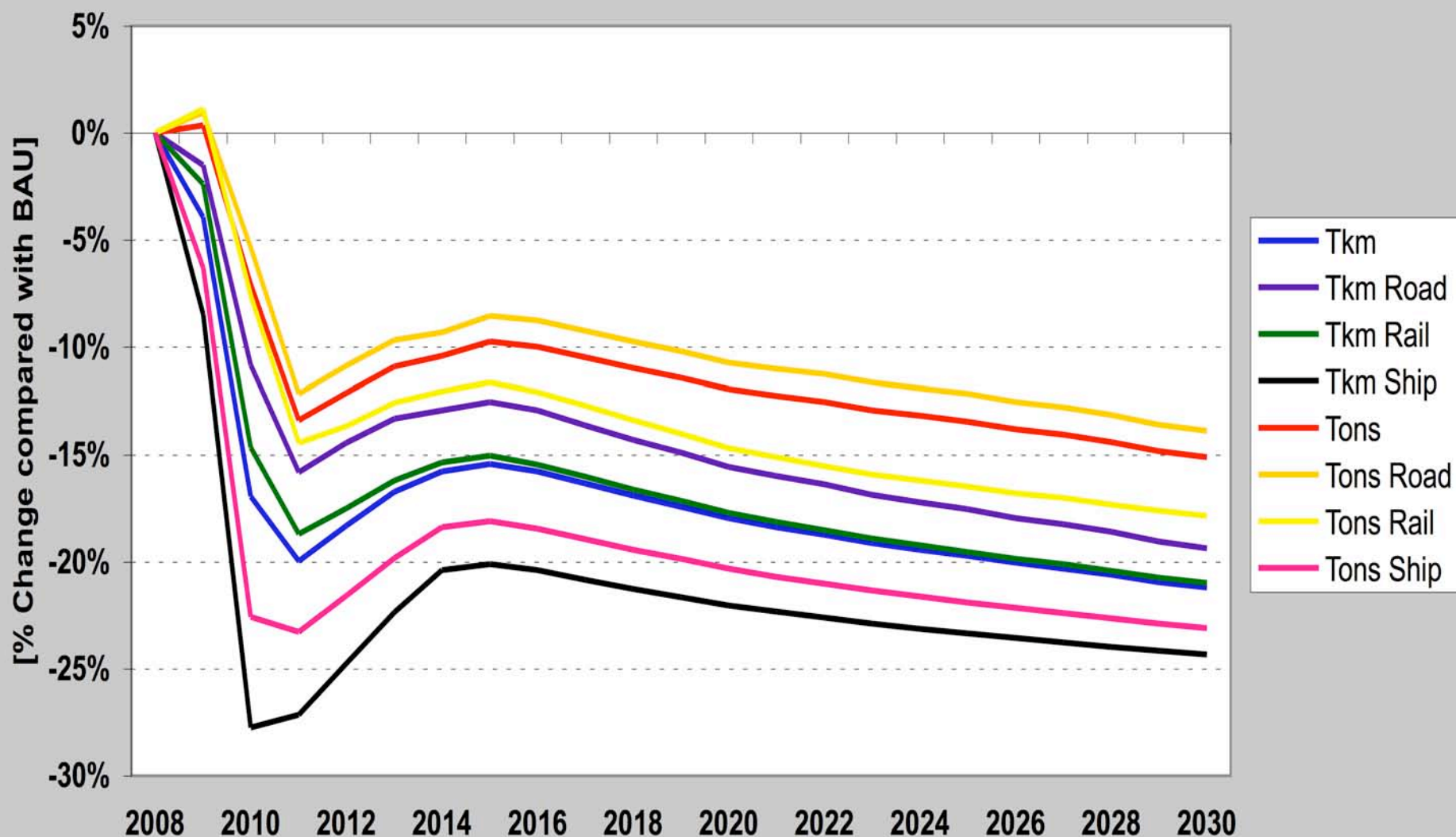


## Change of Macro-Indicators EU 27





## Change of Freight Transport in EU 27





## Impacts on Globalisation and Trade

13

- **Necessary Consolidation of Public Budgets**
- **Control of Money Supply by Central Banks**
- **New Protectionism?**
- **Increased Risk Aversion of Firms**
- **Problem of Developing Countries**
- **Continuation of Globalisation on a Lower Trajectory**
  
- **Schumpeter Paradigm: Crisis is a Starting Point for Innovation and Structural Change**
- **Promising Technology Lines: Energy Savings and CO<sub>2</sub> Reduction**







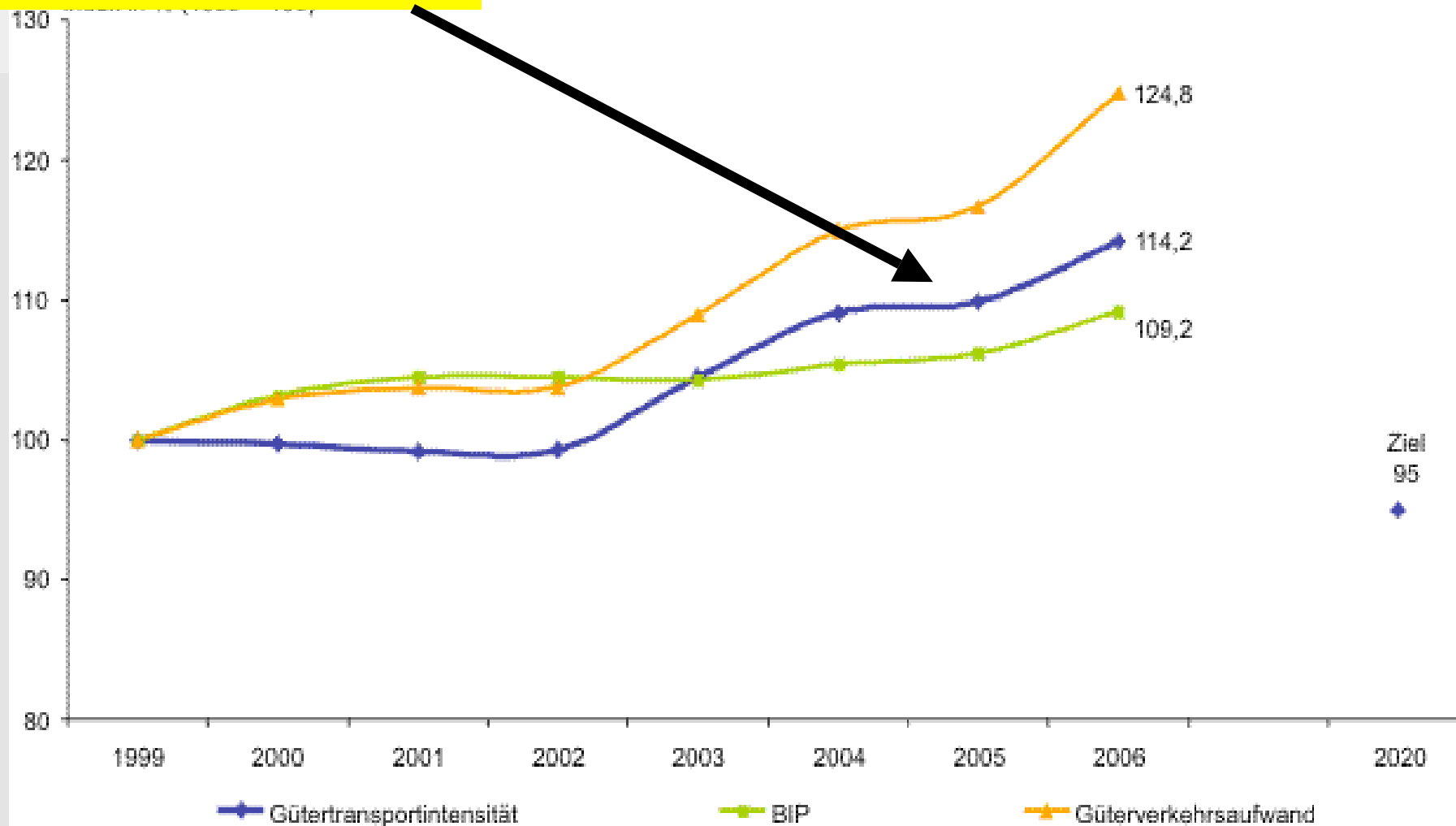




# Transport Intensity in Germany

16

Transport Intensity: 1999=100



Quelle: Bundesministerium für Verkehr, Bau und Stadtentwicklung (Hrsg.): Verkehr in Zahlen 2007/08, Oktober 2007; Statistisches Bundesamt



# Transport Action Programmes

17

- **EU Logistics Action Plan; Greening Transport Package**
- **GER Master Plan for Freight and Logistics**
- **FRA Grenelle Programme**
  
- **Climate Change Clearly Addressed**
- **Partly Concrete Action Lists (Grenelle)**
- **Aims of Changing Trends**



# Fostering Railway Transport

18

- **Climate Goals&Externalities**
- **Potentials in Non-bulk Segments**
- **Higher Logistic Requirements**
- **Increase of Productivity**
  
- **Internalisation of External Costs**
- **EC Strategy for Directive 2006/38**
- **Chances of a Combined Productivity/  
Internalisation Strategy**

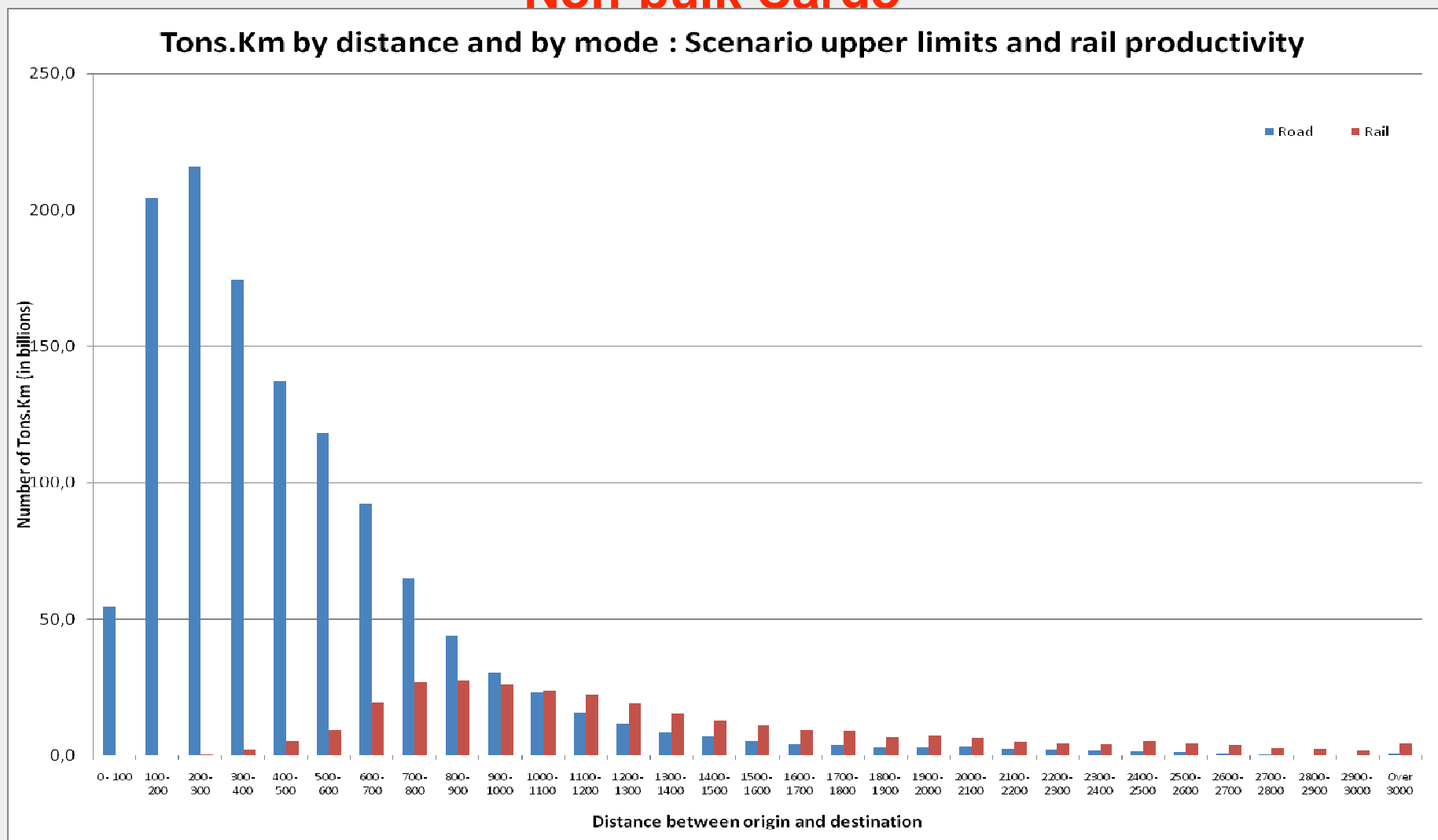




## Scen. UL+RailProd: Tonkm by Distance and Mode

### Non-bulk Cargo

19





## Road traffic transferred on the rail with the scenario 100+ and high productivity of rail and more than 500 km on the corridor

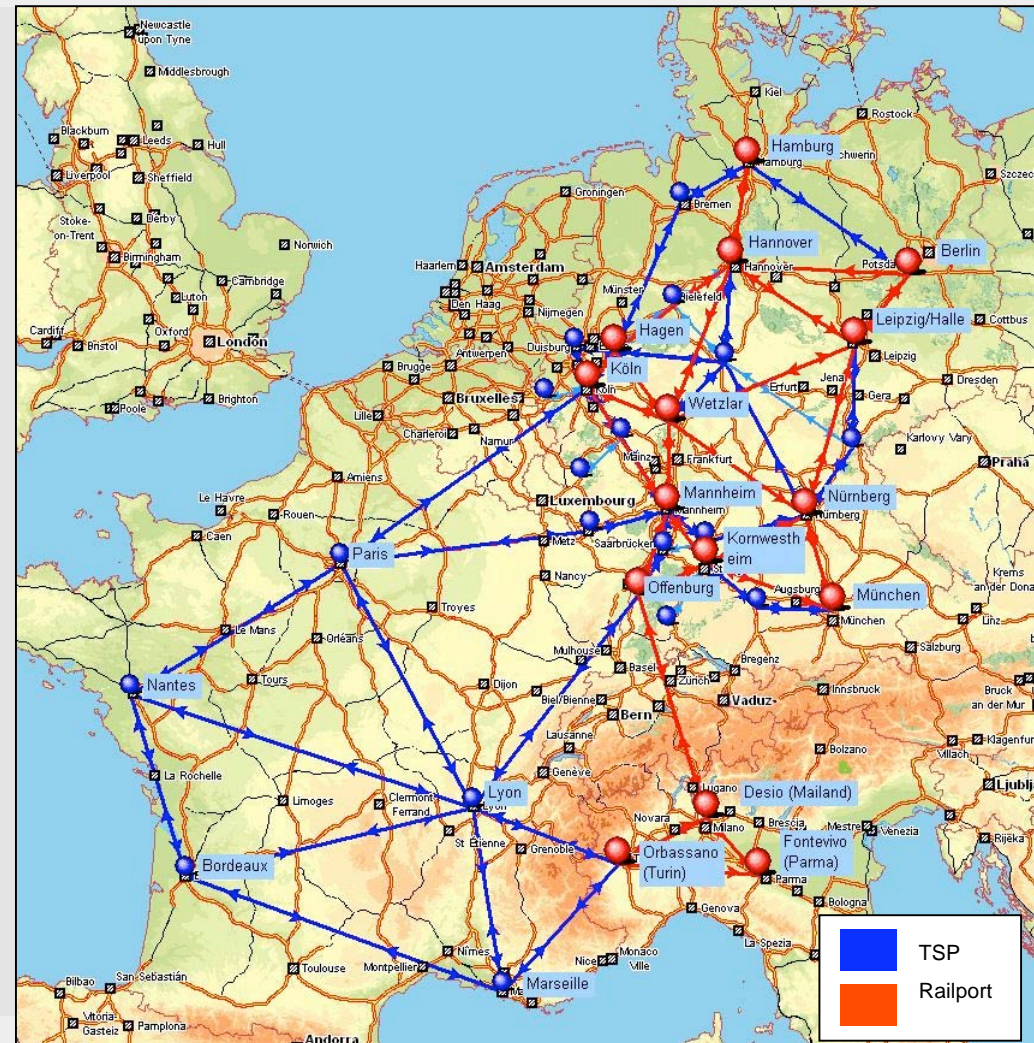
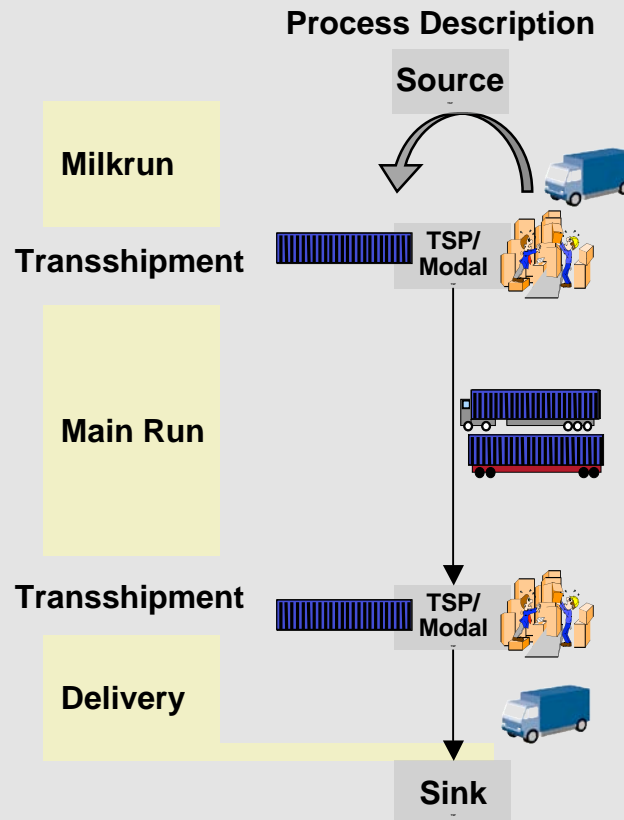






# Processes, Railports, Transshipment Points

21





# Conclusions I

22

- **Schumpeterian View: Crisis as a Chance for Structural Change**
- **Sustainability Targets as Orientation Marks for Technical Progress**
- **New Kondratieff Cycle:**
  - **Energy/CO<sub>2</sub>-Reduction**
  - **Bio-, Nano-Technology, Nuclear ?**
  - **Health Technology**
  - **Assistant Systems, Service Economy**
  - **Social Networks, Knowledge Economy**



## Conclusions II

23

- **Transport a Derived Activity**
- **Freight Transport Development More Modest Because of Technology Change, Change of Production Organisation and Change of Logistics (Co-operative Logistics)**
- **Decrease of Transport Intensity**
- **New Technologies Modal Interchange and Moving Logistic Platforms**
- **Chances of Railways to Develop in Non-bulk Market Segments**



