Internalisation of external costs –
direct impact on the economies of the individual
EU Member States, and the consequences on
the European road haulage industry

Presentation charts for the
Breakfast Meeting with Transport Attaches
Brussels, September 09, 2010
Dr. Stefan Rommerskirchen, Managing Director ProgTrans AG (Basel)
Overview

1. **Starting situation**
   Reasons to conduct the external costs study

2. **What is the study dealing with?**
   Subjects and definitions of the external costs study

3. **Final questions/objectives of the external costs study**
   Two points of view to look at charging balances

4. **Basics and scenarios**
   Data processing and scenario definitions

5. **Study results**
   Part I – V: most important outcome

6. **Conclusions**
   Main findings and conclusions in brief
Starting situation of the External Costs study

- Amendment of Directive 1999/62/EC will allow EU Member States in future to **charge external costs** for road infrastructure usage.

- The so-called “Handbook” issued by CE Delft in 2008 on behalf of the European Commission provides a **wide range of possible tariffs**.

- The financial impact on the EU Member States, Norway and Switzerland (as road infrastructure owners), on road hauliers and on the national economies is **unclear**.

- The today’s revenues from road user charges in most European countries are **not reported**.
Subjects of the External Costs study

- Road User Charges (RUC) with regard to direct costs (as today) and to external costs (as planned)
- for Heavy Goods Vehicles (HGV)
- of and in 25 EU Member States (EU without CY and MT) + Norway + Switzerland
- quantification of four charging scenarios (base case plus, EC case, Handbook minimum / maximum cases)
Questions/Objectives of the External Costs study

➢ to work out 2 different “balances” (surplus/deficit)

[1]  Revenues  minus  Charges paid by
  from RUC  for all HGV  economy (shippers)
  for all HGV  in each individual  of each individual country
  in each individual  country (of operation)  (for inland transport + ½ international transport)

= Road user charge surplus/deficit for the economy

[2]  Revenues  minus  Charges paid by
  from RUC  for all HGV  road hauliers
  for all HGV  in each individual  of each individual country
  in each individual  country (of operation)  (in inland transport + international transport)

= Road user charge surplus/deficit for road hauliers
Basics of the External Costs study

- **official Eurostat road transport statistics** and additional national sources with regard to road goods transport in terms of tonnes, tonne kilometres and vehicle kilometres

- **modelled by ProgTrans to transfer data from nationality to territorial principle**
  
  *(such data are not available from official statistics in the required definition!)*

  - **“national principle”**: data for road freight transport of HGV registered in each individual country *(data are available)*
  
  - **“territorial principle”**: data for road transport of HGV on the roads of each individual country *(data are not available from official statistics and had to be produced by ProgTrans)*
Scenarios of the External Costs study

- **Base Case 2007**
  - Traffic demand: 2007
  - Charge rates: Actual charge rates of 2007 based on the current directive 2006/38/EC
  - Charging results: 2007
  - used to calibrate the traffic model and the model for quantifying the balances

- **Base Case plus**
  - Traffic demand: 2007, 2020 and 2030
  - Charge rates: Actual charge rates 2009 and additionally introduction of a distance-related road user charge in those countries (including the “Eurovignette countries”) in which they have not yet been implemented
  - Charging results: 2009, 2020 and 2030

- **European Commission case**
  - Traffic demand: 2007, 2020 and 2030
  - Charge rates: Actual charge rates 2009 and additionally road user charge rates with regard to external costs based on the Commission’s 2008 proposal to amend Directive 1999/62/EC
  - Charging results: 2009, 2020 and 2030

- **Handbook minimum case**
  - Traffic demand: 2007, 2020 and 2030
  - Charge rates: Actual charge rates 2009 and additionally minimum road user charge rates with regard to external costs as described in the so-called “Handbook”
  - Charging results: 2009, 2020 and 2030

- **Handbook maximum case**
  - Traffic demand: 2007, 2020 and 2030
  - Charge rates: Actual charge rates 2009 and additionally maximum road user charge rates with regard to external costs as described in the so-called “Handbook”
  - Charging results: 2009, 2020 and 2030
Main results of the External Costs study - overview

I. Part I
HGV charging *revenues* 2007 and by scenarios

II. Part II
Revenue/Charge *balances* (surplus/deficits) 2007 - 2030
*related to economies* by scenarios

III. Part III
Revenue/Charge *balances* (surplus/deficits) 2007 - 2030
*related to road hauliers* by scenarios

IV. Part IV
Scenario *comparisons* 2009, 2020, 2030

V. Part V
Overall *comparisons*
Results – Part I: 2007 revenues by country of operation

Base case 2007: Revenues by country of operation in Mio. Euro
(all countries: 10'655 Mio. Euro)
Results – Part I: revenues development by scenarios

Total revenues/charges by years and scenarios (Mio. Euro/year)

- 2007 Base case
- 2009 Base case plus
- 2010 European Commission case
- 2030 HB minimum case
- 2030 HB maximum case

- 2007 Base case
- 2009 Base case plus
- 2010 European Commission case
- 2030 HB minimum case
- 2030 HB maximum case

- 436,591 Mio. Euro
- 10,655 Mio. Euro
## Results – Part I: revenues overview by scenarios

<table>
<thead>
<tr>
<th>Year</th>
<th>Base case</th>
<th>Base case plus</th>
<th>European commission case</th>
<th>Handbook minimum case</th>
<th>Handbook maximum case</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>10'655</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>2009</td>
<td>-</td>
<td>15'294</td>
<td>23'255</td>
<td>20'689</td>
<td>304'338</td>
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<tr>
<td>2020</td>
<td>-</td>
<td>20'031</td>
<td>30'679</td>
<td>27'581</td>
<td>403'272</td>
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<tr>
<td>2030</td>
<td>-</td>
<td>21'788</td>
<td>33'584</td>
<td>30'247</td>
<td>436'591</td>
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</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Share of revenues with regard to external and congestion costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>-</td>
</tr>
<tr>
<td>2009</td>
<td>-</td>
</tr>
<tr>
<td>2020</td>
<td>-</td>
</tr>
<tr>
<td>2030</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Comparison to base case 2007 in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>-</td>
</tr>
<tr>
<td>2009</td>
<td>- 44% 118% 94% 2756%</td>
</tr>
<tr>
<td>2020</td>
<td>- 88% 188% 159% 3685%</td>
</tr>
<tr>
<td>2030</td>
<td>- 104% 215% 184% 3998%</td>
</tr>
</tbody>
</table>
Results – Part II: surplus/deficits with regard to economy by country 2007

Revenues 2007 in a country minus charges payed by the economy of the same country

[Diagram showing revenues and deficits by country, with France and Spain highlighted]
Results – Part II: Base case plus: surplus/deficits with regard to economy by country 2009 - 2030

Base case +: Revenues 2009, 2020, 2030 in a country minus charges payed by the economy of the same country

[Graph showing surplus/deficits for countries 2009-2030]
Results – Part II: European Commission case: surplus/deficits with regard to economy by country 2009 - 2030

![European Commission case: Revenues 2009, 2020, 2030 in a country minus charges payed by the economy of the same country](image)

- Germany
- Netherlands
Results – Part II: Handbook minimum case: surplus/deficits with regard to economy by country 2009 - 2030

Handbook minimum case: Revenues 2009, 2020, 2030 in a country minus charges payed by the economy of the same country

[Graph showing revenues and deficits for various countries from 2009 to 2030]
Results – Part II: Handbook maximum case: surplus/deficits with regard to economy by country 2009 - 2030
Results – Part III: surplus/deficits with regard to road hauliers by country 2007

Revenues 2007 in a country minus charges payed by the road hauliers of the same country

FR DE AT CH SE EE FI IE NO LV DK BG UK GR BE LT LU SI RO CZ IT PT SK HU NL ES PL
Results – Part III: Base case plus: surplus/deficits with regard to hauliers by country 2009 - 2030

Base case +: Revenues 2009, 2020, 2030 in a country minus charges payed by the road hauliers of the same country

France

Poland
Results – Part III: European Commission case: surplus/deficits with regard to hauliers by country 2009 - 2030

European Commission case: Revenues 2009, 2020, 2030 in a country minus charges payed by the road hauliers of the same country

- France
- Poland
Results – Part III: Handbook minimum case: surplus/deficits with regard to hauliers by country 2009 - 2030

Handbook minimum case: Revenues 2009, 2020, 2030 in a country minus charges payed by the road hauliers of the same country

<table>
<thead>
<tr>
<th>Country</th>
<th>2009 (Mil. €)</th>
<th>2020 (Mil. €)</th>
<th>2030 (Mil. €)</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>-1,600</td>
<td>-1,200</td>
<td>-800</td>
</tr>
<tr>
<td>Poland</td>
<td>-400</td>
<td></td>
<td></td>
</tr>
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</table>
Results – Part III: Handbook maximum case: surplus/deficits with regard to hauliers by country 2009 - 2030

Handbook maximum case: Revenues 2009, 2020, 2030 in a country minus charges payed by the road hauliers of the same country

FR DE BE UK IT SE CH NO EE FI GR AT BG IE LV DK LT SI LU HU RO CZ SK ES PT NL PL

-21'000 -18'000 -15'000 -12'000 -9'000 -6'000 -3'000 0 3'000 6'000 9'000 12'000 15'000 18'000 21'000 24'000 27'000 30'000 33'000 36'000
[Mill. €]
Results – Part IV: Scenario comparison 2009: surplus/deficits with regard to economy by country
Results – Part IV: Scenario comparison 2020: surplus/deficits with regard to economy by country

Scenario comparison: Revenues 2020 in a country minus charges payed by the economy of the same country

[Graph showing scenario comparison with countries and scenario cases]
Results – Part IV: Scenario comparison 2030: surplus/deficits with regard to economy by country

Scenario comparison: Revenues 2030 in a country minus charges paid by the economy of the same country

Overview
1. Starting situation
2. Subjects / Definitions
3. Questions / Objectives
4. Basics / Scenarios
5. Study results
6. Conclusions
Results – Part IV: Scenario comparison 2009: surplus/deficits with regard to road hauliers by country

Scenario comparison: Revenues 2009 in a country minus charges payed by the road hauliers of the same country

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Base Case plus European Commission case Handbook minimum case Handbook maximum case
## Results – Part IV: Scenario comparison 2020: surplus/deficits with regard to road hauliers by country

### Scenario comparison: Revenues 2020 in a country minus charges payed by the road hauliers of the same country

<table>
<thead>
<tr>
<th>Country</th>
<th>Base Case plus</th>
<th>European Commission case</th>
<th>Handbook minimum case</th>
<th>Handbook maximum case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>-21'000</td>
<td>-18'000</td>
<td>-15'000</td>
<td>-12'000</td>
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<tr>
<td>Poland</td>
<td>-9'000</td>
<td>-6'000</td>
<td>-3'000</td>
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</table>
Results – Part IV: Scenario comparison 2030: surplus/deficits with regard to road hauliers by country
Results – Part V: Surplus or deficit for all study countries – including all scenarios and all study years

- **green**: surplus in all scenarios and study years
- **red**: deficit in all scenarios and study years
- **yellow**: variation according to scenarios and/or study years
- **white**: not considered
## Results – Part V: Surplus or deficit ranges for all study countries – including all scenarios and all study years

<table>
<thead>
<tr>
<th>Country</th>
<th>Range of surplus or deficit for road hauliers</th>
<th>Range of surplus or deficit for national economy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>minimum</td>
<td>maximum</td>
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<td>SK</td>
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<td>-52</td>
</tr>
<tr>
<td>UK</td>
<td>-1'717</td>
<td>-78</td>
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</table>
Main findings

✓ Current HGV charging revenues have been calculated for the first time Europe wide: in 2007 more than 10,5 Bio. Euro

✓ HGV charging including current road charges and the imposition of all external costs at maximum rates would amount to more than 400 Bio. Euro in 2030, of which 95% stem from the internalisation of external costs

✓ Only two countries would profit from the internalisation of external costs in all scenarios and years namely Germany and France

✓ 15 countries would face losses of national income, and the remaining 10 countries would experience various outcomes, yet with overall quite large losses of national income in most years and scenarios
Conclusions

- In all scenarios, the internalisation of external costs leads to substantially increasing costs for the road freight transport industry as well as for the European economy.
- This may have also consequences for European competitiveness with regard to globalisation.
- And will show more than today disadvantages of peripheral regions.