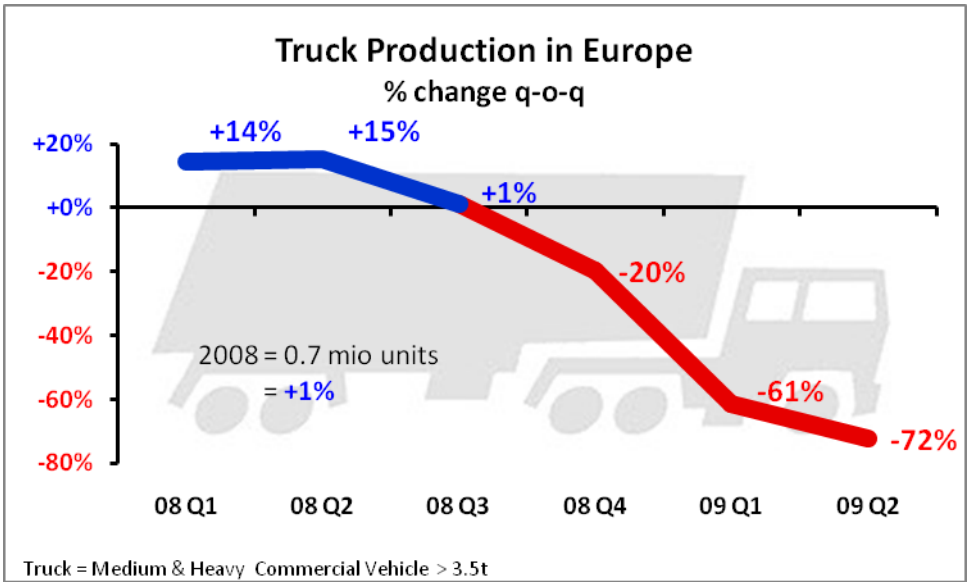
The Economic Situation of the Commercial Vehicle Industry



1. **The market for commercial vehicles is at extremely low levels; production cut sharply**
   - **Orders** are being cancelled and finished vehicles returned to manufacturers as customers cannot pay for them
     - massive order cancellations resulted in a net order intake (heavy-duty vehicles) in Europe of -16,700 units in the last quarter of 2008
       ⇨ or about as much as was ordered in the months of May and June alone
     - order intake was at 49,076 in the in the first three quarters of 2009
       compared to 178,513 in the same period of 2008 -- this is a minus of 73%

   - **Production** declined by 32.5% in the 4th quarter of 2008 (all CV)
     by 57.4% in the 1st quarter of 2009 (>3.5t: -61.3%)
     and by -58.2% in the first half of 2009 (> 3.5t: -66.9%)
     - manufacturers expect a production slump in 2009 of at least 50%

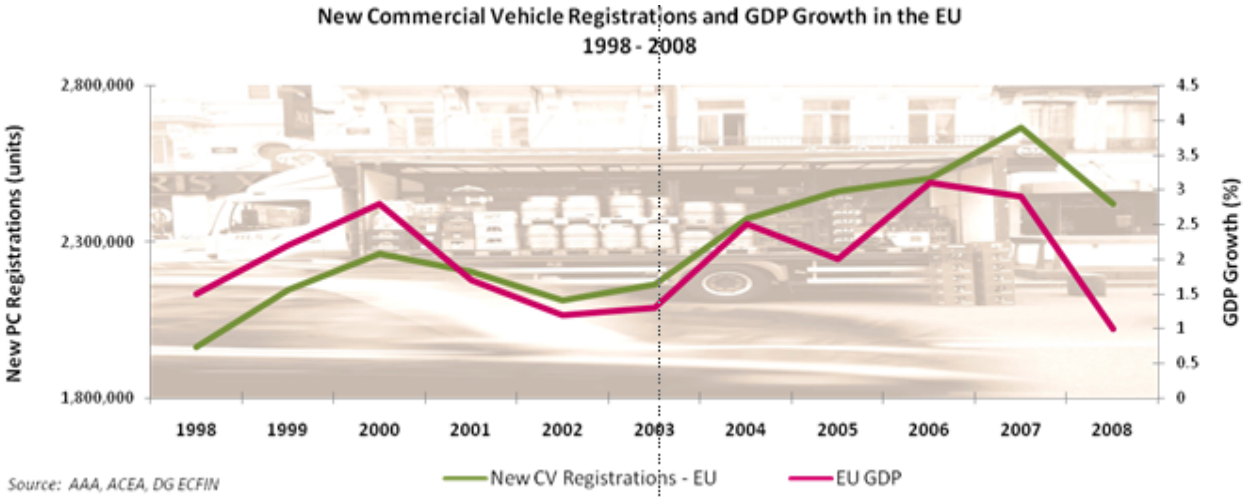
   - European **total commercial vehicle registrations** (incl. LCV & BC) fell
     by 23.2% in the 4th quarter of 2008
     by 35.8% in the 1st quarter of 2009
     by 38.0% in the 2nd quarter of 2009
     by 31.0% in the 3rd quarter of 2009
   - European **heavy truck** (>16t) **registrations** fell by 25.6% in the 4th quarter of 2008
     by 43.5% in the 1st quarter of 2009
     by 51.4% in the 2nd quarter of 2009
     by 47.7% in the 3rd quarter of 2009

2. The downturn is exceptional

- All but a 'normal cycle' ⇨ the sharpest downturn ever
- Economic recovery is still far away
- The recession is global, hitting all major markets
- In addition
  - vehicle costs are set to rise (Euro VI technologies)
  - operating costs for transport sector is to increase (Maut, Eurovignette)

3. Commercial vehicles are industrial (capital) goods

- The financial and economic crisis has triggered a sharp drop in transport activity and subsequently a sharp decline in demand for commercial vehicles
- A severe credit crunch is limiting access to finance for transport companies ⇨ commercial vehicles are no 'cash and carry' goods; their purchase is financed
- The sector does not face structural problems; the industry has the products its customers need and want



4. Suppliers are severely at risk; affecting OEM stability as well

- CV manufacturing involves thousands of suppliers, often SMEs ⇨ employment for over 1.5 million Europeans
- Low levels of own capital; lack of resources/knowledge to apply for funds
- Industry is interconnected: risk of snowball effect on all industry

5. Manufacturers have responded swiftly and responsibly to the crisis

- Temporary contracts terminated
- Shorter working hours and weeks
- Production stoppage
- Cost-cutting across the board (except R&D)
- Lay-offs when inevitable

The commercial vehicle industry is a key industrial asset for Europe

- **Technology leaders**
  - European commercial vehicle manufacturers invest yearly 6% of turnover in R&D,
    - these investments will be significantly higher in 2009 and 2010 due to necessary investments in Euro VI technologies
  - European trucks are the most technologically advanced in the world
    - they lead globally in terms of active and passive safety innovations as well as environmental technologies
  - As such, European trucks, buses and vans are the first choice around the globe
    - the EU25 exported €11 billion worth of commercial vehicles in 2007

- **Production and employment**
  - In 2007, some 2.6 million commercial vehicles were manufactured in the EU, generating revenues of nearly €70 billion
  - Direct employment in the sector is 250,000 jobs
    - up to six times more jobs depend on the industry, including parts suppliers, distributors and dealerships, after-sales support and so on, bringing the total to 1.5 million jobs in the EU
  - A further 2.6 million people are employed by road transport operators

- **A global market place**
  - European commercial vehicle manufacturers have also invested in local production sites in important markets around the world
  - European truck manufacturers dominate the heavy goods vehicle market place in North America
  - European trucks are also making inroads into Asia, where they are preferred for their durability, reliability, low emissions and comfort. European trucks lead the market in China and European-designed trucks are now assembled in China and India

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The Environmental Contribution of the CV Industry

1. **The European commercial vehicle industry is proud of its reputation for delivering the highest quality, most technologically advanced vehicles in the world**
   - The importance of road transport for the global economy requires all players to use limited resources responsibly and protect the environment
   - The commercial industry has a positive story to tell based on an on-going commitment to act
   - Advanced technologies and the increased efficiency of vehicle engines have been key to help reduce the pressure on the environment

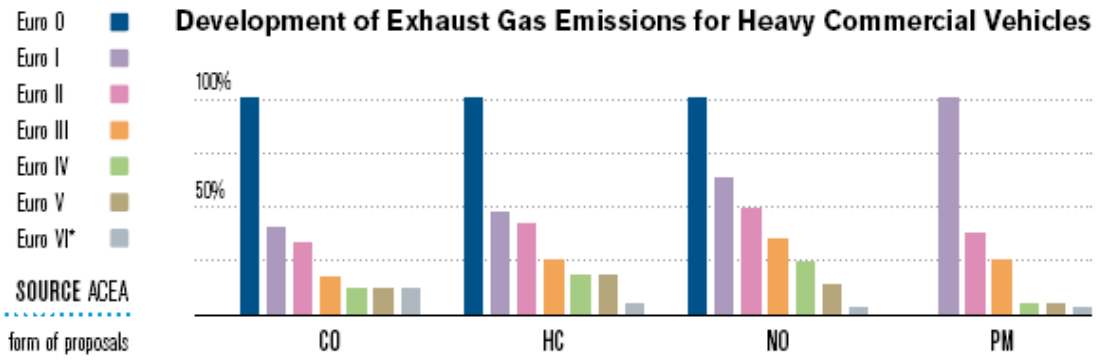
1. **The industry is an indispensable actor in achieving EU sustainability objectives in transport**
   - The sector is producing vehicles that make a difference
   - Progress in delivering solutions will continue.
   - The automotive sector invests more than any other in research and development, with €20 billion spent annually on R&D

2. **The commercial vehicle industry wants to continue driving sustainability forward**
   - Together with others in the transport business, with governments and with other industries.

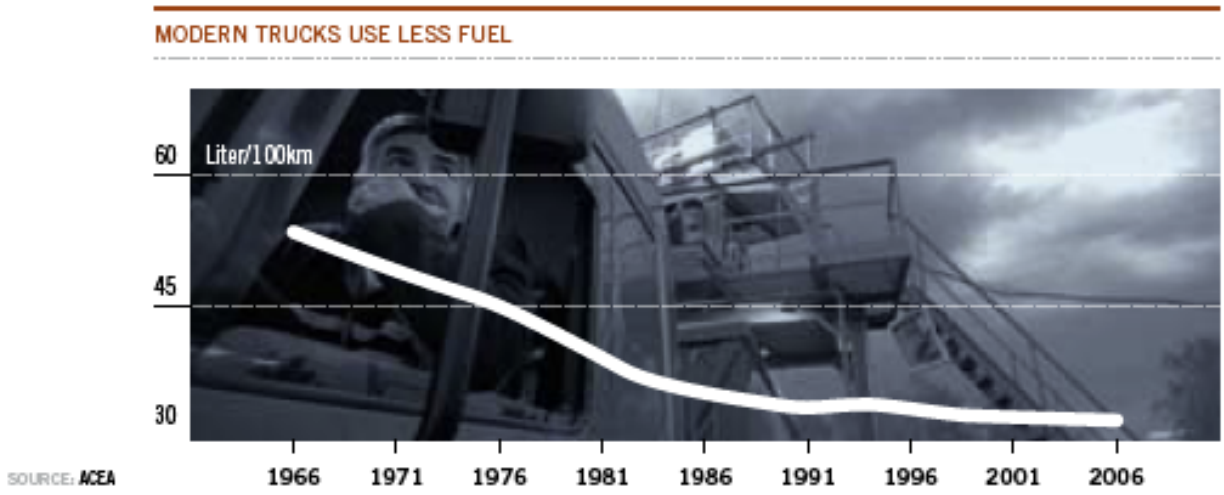
4. **It is fundamental that the many solutions brought to market by the commercial vehicle industry are urgently put to use**

What has the industry achieved?

- **A dramatic drop in air pollutants**
  - Latest Euro V models produce around a tenth of the emissions of a 1980s equivalent
  - Truck NOx emissions have been cut by 86% compared to levels in the 1990s
  - Particulate emissions are down by 95%
  - In Europe, the result has been an overall 35% reduction in particulate matter from trucks, despite a 30% increase in ‘work done’ or freight transport measured in tonnekilometres



- **A 30% hike in fuel efficiency since the 1970s**
  - Thanks to technologies like common rail injection, automated gearboxes, turbo charging and intercooling
  - Per tonne transported, this corresponds to a fuel consumption of just one litre of diesel per 100 tonnekm, with significant CO2 savings
  - Today's buses are also leading the way with average fuel consumption per bus-passenger that can challenge the performance of many a trip per train



- **Hybrid technology in all manufacturers' portfolios**
  - Lowering fuel consumption by between 15 and 25%, depending on the type and distance of transport involved and the number of stops by the vehicle

- **Dedicated vehicle models for a variety of alternative fuels,**
  - Such as compressed natural gas (CNG), bio-ethanol, renewable diesel produced from vegetable oils (HVO), synthetic diesel produced from biowaste (biomass-to-liquid) and natural gas (gas-to-liquid)

- **Investments in hydrogen fuel cells,**
  - Combining compressed hydrogen with air in a chemical reaction in a fuel cell that
  - creates electricity
  - This powers the vehicle and produces only water vapour from the tailpipe
  - Since the introduction of the first vehicle in 1997, fuel cell bus trials have taken place across the globe
  - Still, much more study is needed into hydrogen production, storage and distribution before this advanced technology is ready for a large-scale use

- **Investments in telematics and sophisticated vehicle monitoring systems**
  - to help road operators dramatically cut the number of journeys made by trucks running empty

- **Investments in vehicle-operating technologies and training**
  - for vehicle body producers and transportation companies to allow them to realise their vehicles full potential at lowest costs to the environment
  - Technology fields include tyre rolling resistance, aerodynamics and driver training

- **Road can do better than rail**

  The commonly held belief that a shift of transport modes is always beneficial, is wrong. For many commodities transported, the use of road transport can even result in lower CO2 emissions than the use of other modes
  - A 2007 study on emissions from food transport[1] found that over short distances, trucks achieved the lowest CO2 emissions per kilogramme food transported, followed by electric trains and inland sea vessels
  - Where transport in bulk is possible, sea vessels were found to be the most efficient, followed by trucks and electric freight trains
  - On longer distances, trucks beat all other transport modes, even where transport in bulk is available

Table 5.7: CO_2 emissions associated with different freight transport modes

Transport mode and transport distance	g CO_2/kg
Short distance (400 km)	
Truck	54.66
Electric freight train	69.15
Inland vessel	
Bulk	29.77
Non-bulk	79.72
Continental transport	
Truck	204.98
Electric freight train	259.32
Freight aircraft	2149.20
Sea vessel	
Bulk	599.82
Non-bulk	1605.98
Intercontinental transport	
Freight aircraft	8509.68
Sea vessel	
Bulk	2399.29
Non Bulk	6423.90

[1] van Hauwermeiren, A., Coene, G., Claes, C., & Mathijs, E. (2005). Energy life cycle inputs in food systems: a comparison of local versus conventional cases. Presentation to Fruit and Vegetable Seminar, Manchester, 1st November 2005, cited in: Hayes, Peter; Saunders, Caroline (2007): Air Freight Transport of Fresh Fruit and Vegetables: Report for the International Trade Centre (ITC) Geneva, Switzerland. Lincoln University, New Zealand.

Ways and Means to Making Urgent and Better Use of the Commercial Vehicle Industry Contributions

1. **Encourage renewal of the commercial vehicle fleet (see also annex 3)**
   - The environmental impact of the vehicle fleet is lessened
   - The vehicle fleet becomes safer
   - Fleet replacement measures underpin vehicle demand
   - Vehicle renewal schemes include incentives to buy new vehicles (replacing the pre-Euro III fleet)
   - Public procurement of urban vehicles (buses, garbage trucks) plays a significant role as well

2. **Ensure a viable fuel infrastructure and clear fuel standards**
   - An important prerequisite is the availability of alternative fuels on a viable scale. Without a proper re-fuelling infrastructure, customers will hesitate to buy the cleanest vehicles.
   - The fuel industry must be encouraged to deliver distribution networks and fuelling stations for alternative fuels
   - Government and the fuel industry should also work closely to ensure fuel production meets international quality standards
   - And, on biofuels, all stakeholders must be confident that fuel is produced in a sustainable way that does not compete with food production

3. **Invest in efficient, intelligent road infrastructure**
   - European governments levy total tax of €378 billion from the automotive sector. However, only a quarter is re-invested in better roads and traffic systems
   - China, meanwhile, will double its investment to €350 billion in the four years until 2010
   - Stop-start traffic can triple the fuel consumption and emissions of a truck. An infrastructure that prevents unnecessary stops and slow-downs will therefore cut emissions – and keep Europe's economy moving
   - Increased road capacity and improved maintenance are part of the solution. Developing intelligent traffic and transport solutions offers further benefits
   - For example, substituting just half of the current traffic lights in Europe with dynamic systems for a better flow could save more than 2 million tonnes of CO2 annually

4. **Increase efficiency: large and full is better**
   - A large truck has a significantly smaller carbon tyre print than a smaller commercial vehicle because its work rate is higher. Put simply, it uses less fuel to move more goods
   - Across Europe, the maximum permissible gross weight for a 2-axle tractor, 3-axle trailer combination is 40 tonnes. That means a maximum payload of approximately 26 tonnes
   - However, induced by environmental and efficiency reasons, a number of EU member states allow the use of Long heavy Vehicles of up to 60 tonnes
   - This must now become reality in the entire EU

- A recent study from the European Commission has found that the use of such longer truck combinations would increase efficiency, reduce transport costs and have positive effects on road safety and the environment. The annual CO2 savings would amount to at least 5 million tonnes
- Ensuring customers have the right vehicle for the job is just as important as supplying vehicles fitted with the latest engine technologies

5. Globally harmonise emissions standards and other technical regulations

- Across the globe, emission regulations are tightening. But standards, test methods and emission limits differ from market to market. In the US, Europe and Japan this has led to different technical solutions and consequently different, unique certification tests at extra costs
- The result is that it takes longer to bring the cleanest new vehicles to market
- Harmonising global standards, for example through the UNECE Global Technical Regulations, on emissions, test cycles and fuels, would cut lead times and reduce development costs.
- This would help a global truck industry roll out new technologies more quickly, making a difference to millions of people around the world

TRANSPORT EFFICIENCY IS ALSO: PICKING THE MOST APPROPRIATE VEHICLE FOR THE JOB

GCW/GVW* tonne	Load Capacity tonne	Distance km	Fuel Consumption l/100km	tonnekm	l/1000tonnekm at 100% utilisation	normal utilisation	l/1000tonnekm considering normal utilisation
LONG DISTANCE							
26	17	100	25	1700	14.7	70%	21.0
40	25	100	32	2500	12.8	70%	18.3
60	40	100	43	4000	10.8	70%	15.4
URBAN DISTRIBUTION							
3.5	1.5	100	12	150	80.0	45%	177.8
7.5	4	100	15	400	37.5	45%	83.3
12	7.2	100	19	720	26.4	45%	58.6
18	11	100	22	1100	20.0	45%	44.4

*Gross Combination Weight (Long Distance) / Gross Vehicle Weight (Urban Distribution)

SOURCE VOLVO

Fleet Renewal Schemes for Commercial Vehicles

1. **Fleet renewal schemes have proved to be effective for passenger cars and may be workable for commercial vehicles as well**
   - During the crisis, although vehicle demand will stay low as long as demand for transport does
   - To spur vehicle demand as soon as signs are imminent that the crisis is ending

2. **Vehicle renewal and replacement schemes can include both incentives to buy new vehicles and penalties on the use of old vehicles (pre-Euro III)**
   - Through tax breaks or vehicle tax differentiation on the basis of emission classes
   - Systems must be simple and effective

3. **The European Commission should investigate if and how fleet renewal schemes could be financed through EU funds**

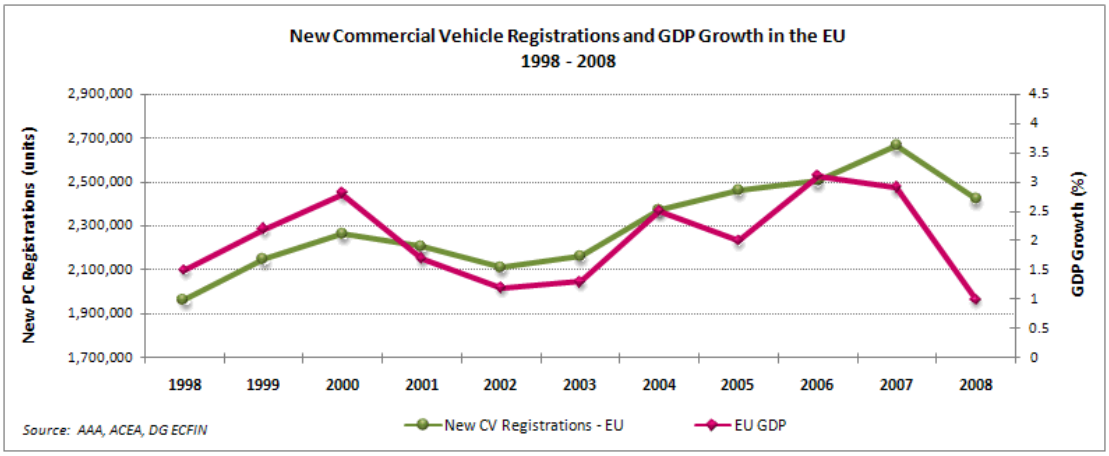
4. **Public procurement of urban vehicles (buses, garbage trucks) plays a significant role as well**
   - National implementation (by the end 2010 at the latest) of the EC Directive on the 'promotion of clean and energy efficient road transport vehicles' will oblige public authorities to take environmental operational lifetime costs of vehicles into account
     - This can be an opportunity to promote particularly eco-friendly vehicles
   - The European Investment Bank is developing a 'Clean Bus Framework Finance Facility' (CFFF) aimed at providing long term financing to municipalities and other local administrations, in order to accelerate the replacement of existing bus fleets with more fuel efficient ones. This scheme could be extended to other vehicle types, too.
     - An initial €15 million is foreseen to assist cities in developing projects, but actual financing could be much higher

Advantages

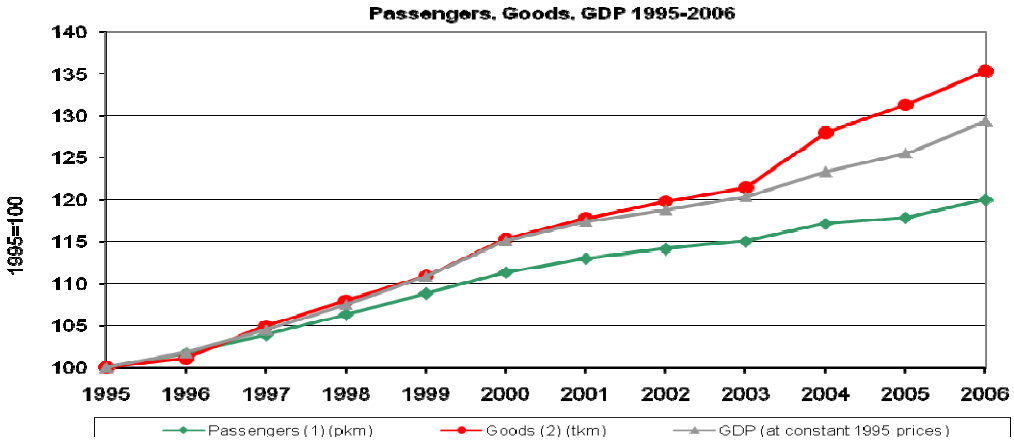
- **Fleet replacement measures underpin vehicle demand**
  - Allowing the CV industry to earn the necessary revenues to sustain investments in new technologies
  - More jobs are maintained in production facilities, component manufacturing and dealerships
  - Social welfare expenditure (unemployment benefits, job search assistance, retraining) decreases
- **The environmental impact of the vehicle fleet decreases**
  - Latest Euro V models produce around a tenth of the pollutant emissions of a 1980s equivalent
    - Truck NOx emissions have been cut by 86% compared to levels in the 1990s Particulate emissions are down by 95%
    - In Europe, the result has been an overall 35% reduction in exhaust emissions, despite a 30% increase in 'work done' or freight transport measured in tonnekilometres (Source: TREMOVE V 2.7b)
  - Modern vehicles also produce less noise
- **The vehicle fleet becomes safer**
  - Better equipment such as ABS, EVSC, navigation systems, blind spot mirrors and LDWS (Lane Departure Warning System)

Annex 5 -- Key Figures and Statistics

1. GDP and Commercial Vehicle Registrations



2. GDP and Transport Demand



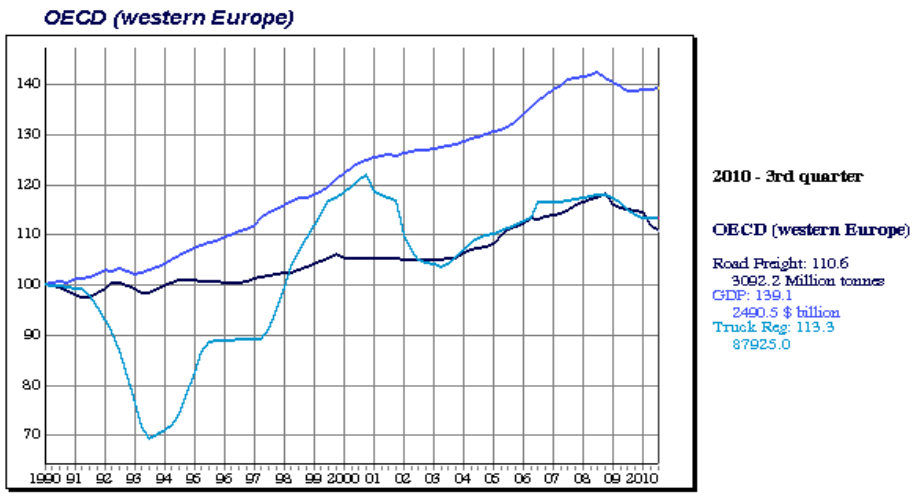
Notes :

(1) : passenger cars, powered two-wheelers, buses & coaches, tram & metro, railways, intra-EU air, intra-EU sea

(2) : road, rail, inland waterways, oil pipelines, intra-EU air, intra-EU sea

GDP: at constant 1995 prices and exchange rates

Source: DG TREN



3. CV Registrations

EU27*	2008 units	2008 %change	4th quarter 08 %change	1st quarter 09 % change	2nd quarter 09 % change	3rd quarter 09 % change
LCVs	1,942,861	-9.7%	-26.8%	-35.3%	-36.4%	-28.9%
Heavy Trucks >16t	303,561	-2.8%	-25.6%	-43.5%	-51.4%	-47.7%
Trucks >3.5t	416,677	-2.6%	-20.6%	-39.9%	-47.4%	-43.5%
Buses & coaches	39,912	+7.8%	-6.7%	-17.0%	-15.8%	+4.2%
Total	**2,399,450**	**-8.3%**	**-23.2%**	**-35.8%**	**-38.0%**	**-31.0%**

** Cyprus and Malta not included*

4. CV Production

EU	2008 units	2008 %change	4th quarter 08 %change	1st quarter 09 %change*	2nd quarter 09 %change
LCVs	1,763,246	-7.6%	-38.8%	-57.0%	-55.2%
Trucks >3.5t	681,490	+2.1%	-19.7%	-61.3%	-72.2%
Buses & coaches	40,447	+9.3%	+22.4%	-3.6%	-22.4%
Total	**2,485,183**	**-4.9%**	**-32.5%**	**-57.4%**	**-59.1%**

5. Ratio Production/Registrations

EU	2008 ratio
LCVs	0.9
Trucks >3.5t	1.6
Buses & coaches	0.9
Total	**1.0**

6. Employment

- Number of persons employed in CV manufacturing ⇨ 250,000
- Number of persons employed in total automotive manufacturing (motor vehicles, trailers and semi-trailers) ⇨ 2.2 million
- Number of persons employed in road transport ⇨ 2.6 million
- Indirect automotive employment ⇨ 10 million