

# Future news of international freight transport markets – what to expect and how to be prepared

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## Abstract

Transport and logistics increasingly have to be understood and analyzed at international and interregional scales, due to fast growing international trade, developments in specific transport corridors, and the ongoing concentration process of international, multi-modal logistics providers.

In this paper, the current situation of international transport markets is described, the main trends and driving forces of the process are analyzed, some selected issues are projected into the future, and major impacts on regional and urban levels are derived. One main finding is that freight transport might be growing even faster within the next ten years than generally assumed. New solutions in different elements of the logistics value chain, elimination of current bottlenecks, and enhanced business models of multi-modal, international co-operation, and rational transport policies seem to be the candidate fields of action in this context. Nevertheless, risks of declining environmental qualities around logistics hubs and corridors have to be considered.

## 1 Introduction

Transport and logistics are fast growing businesses in nearly every region of the world. As pointed out at an earlier conference (1), current and future growth rates of the transport sector are constantly on a relatively high level, i. e. between 2 and 5% p. a. for developed countries and in the range of 5 – 8% in emerging regions. At first glance, these figures do not seem to be of dramatic impact, but just imagine that for the latter the consequence is continuous doubling every decade.



One main driver of this development is fast growing international trade. As an example, Table 1 shows the growth rates for GDP and external trade in EU15 and CEE 5 between 2000 and 2015.

Table 1: Growth of GDP and external trade 2000 – 2015. (Source [2].)

	GDP	ET
EU 15	35%	82%
CEE 5	80%	160%

These trade developments inevitably end up in cross-border transport, which is growing much faster than freight transport in general, and it is reflected in increased transport distances – in the case of German commercial trucks from an average of 92 km in 1996 up to 130 km in 2004. So, without any doubts, increasing transport volumes, especially on roads, will have to be coped with.

## 2 Some challenges

For the transport industry, these are primarily business opportunities. For citizens, having access to international products is nice, but on the other hand increasing traffic volumes might mean discomforts in terms of emissions, noise, safety, and comfort along the transport routes.

The basic trend is the changing transformation process of the production landscape in different regions and countries. Regions like Central and Eastern Europe (CEE), South America or MENA (Middle East/North Africa) are as important to see as countries like Russia, China or India. They developed visions for differentiation to overcome their dependence from raw materials or agriculture. These kinds of developments will have direct influence on the future developments in the western world.

Beyond these more obvious perspectives, some other aspects require a bit of further consideration, because they are not yet acknowledged in the public discourse:

- Location Decisions (Production, Logistic Centers, Distribution)
- Decisions on Transport Routes
- Transport Mode Choices

These are often processes managed on a global or international scale, but nevertheless can manifest essential implications on national, regional, and local levels. In all cases, the quality, reliability, speed, and cost position of logistic networks such as roads, rail, ports, airports, urban street networks serve as substantial decision factors for the entire related economy. Sometimes these logistic requirements may even outperform wage differences in evaluating investment location options. Furthermore, this probably might be even more relevant in the future, because in mature industries production and distribution logistics should offer more rationalization potential than the production process itself.



Now, the “logistic attractiveness” of regions and corridors is not the result of one single force, but different actors with conflicting interests are involved: local, regional, national, transnational authorities; producers; distributors, transport enterprises, vehicle manufacturers; consumers; the general public. In sum, one can identify current and bet on future winners and losers of economic and transport growth. For sure those bodies and organizations will benefit from these developments that are able to anticipate and cope with the logistical challenges. In the following chapter we describe the main trends and driving forces in this field that in sum will be shaping future risks and opportunities conditions.

### 3 Future trends

For better understanding we have condensed a complex and dynamic structure of observations and projections into a handy set of eight basic trends.

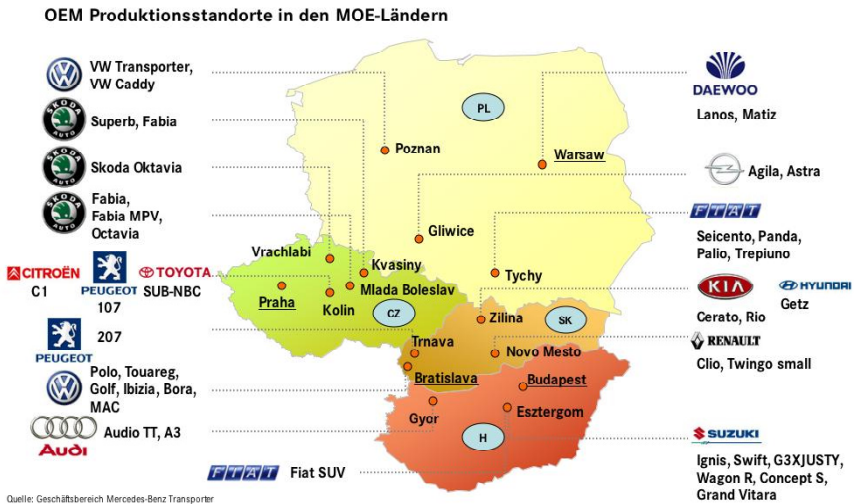


Figure 1: New or extended automobile production in Central Europe. (Source [3].)

#### 3.1 Trend 1: ongoing substantial production expansion in emerging markets

As already mentioned above, some systemic split in growth rates both for economic performance and transport volumes between developed and less developed regions has to be assumed. For the next decade, emerging regions will gain the major share of global growth. In Fig. 1 recent developments of automotive production in Central Europe are displayed to illustrate the pace of this regional shift.

Freight transport is affected intensively, because both production and distribution logistics become more differentiated and more international, heading

to transport figures above proportion. This way transport an all levels – international, regional, and even local – will be an object of substantial but evolutionary shifts, because the existing infrastructure will still play an important role.

**3.2 Trend 2: shift from bulk loads to high-value and containerized goods**

Besides rapid internationalisation of the transport business, there are two related tendencies that are driving an ongoing logistics revolution:

Until the 1960s and 1970s of the last century, the majority of border-crossing transports were carrying coal, ore, steel, timber, and agricultural raw products (bulk freight). Nowadays, the scenery has changed fundamentally, although energy in various forms still plays an important role. But the focus has substantially shifted to finished products and food, meaning that the average value of a ton transported has risen remarkably. This implies changing requirements for the transport operator – punctuality, speed, reliability, and damage-free delivery have become basic requirements without transport costs moving out of consideration.

To illustrate this fast growing share of containerized transport, Fig. 2 offers some details.

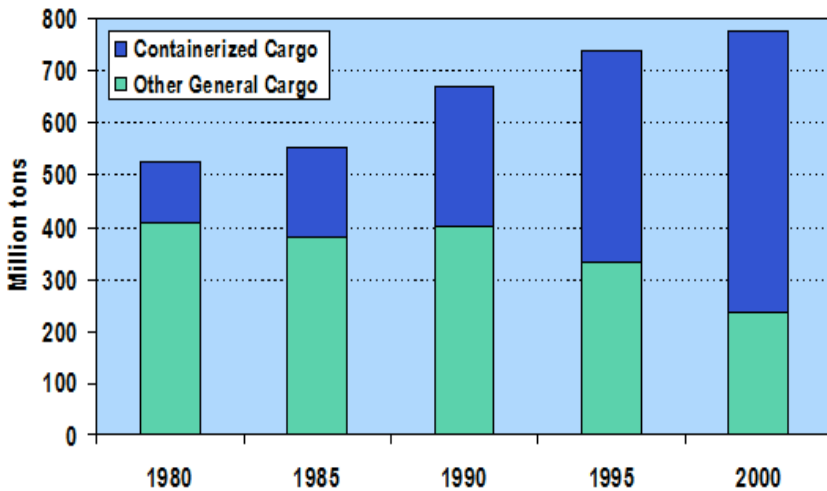


Figure 2: Share of containerized cargo 1980 – 2000. (Source [4].)

In practical terms, these developments are fostering the competences, resources, and therefore the competitive position of international logistics mega-providers and selectively acting transport specialists, while undermining classical business models of middle-sized general shippers and owner-drivers.

### 3.3 Trend 3: massive expansion of international road transport

Where will this future transport growth take place? The answer is: Mainly on the road, for several reasons

- Even in the most optimistic (official) scenarios, rail might defend its current market share – anything else is wishful thinking.
- Maritime Shipping will increase its volume especially by high capacity vessels, but congested ports, other bottlenecks, and security considerations are limits of growth – and transport to and from ports again to large portion takes place on roads.
- More and more long-distance trucking, e.g. EU, CEE, CIS, and China is set into place successfully – making road transport distances of 10.000 km and more realistic.
- In transition economies like CEE, essential shifts from rail to road are monitored and projected.

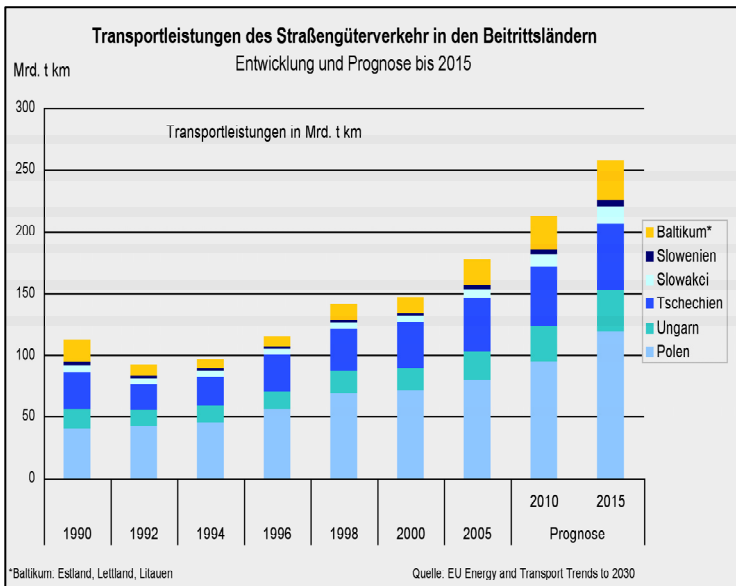


Figure 3: Road transport volumes in EU-accession countries 1990–2015. (Source [5].)

For those regions and corridors that are prepared for increasing road transport loads, positive economic impacts via transport and logistical investments are likely, and vice versa.

**3.4 Trend 4: economic growth and increasing income of the middle-class in emerging markets leads to boosting demand of energy and consumer goods (food, IT-electronics, household utensils)**

An essential proportion of international transport growth is generated by emerging regions – both as producing and as consuming markets. For the latter, increasing income and changing consumer behaviour of the fast growing middle-classes in emerging markets is the key driving force.

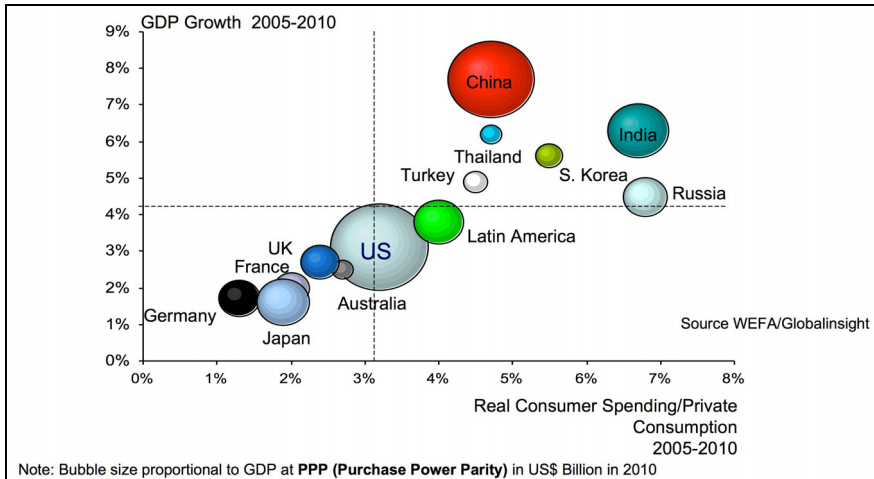


Figure 4: GDP and consumption projections. (Source [6].)

Assuming this trend continues or even accelerates, means unbroken transport growth in the future, probably on every available route and mode. It is an open question to what extent this growth might be compensated by making logistic processes more efficient, but at the end these efforts will be limited.

**3.5 Trend 5: demanding requirements in quality, punctuality, and reliability as transport performance enforce well-established international logistic networks**

Obviously, goods during the transport process are unproductive. The longer the process lasts, the more cash is burnt. For example, a European car manufacturer found that its average delivery time was ten days, with five days virtually nothing happening with the cars. Just by eliminating these unproductive days, gave the company annual savings of dozens of millions Euro. For production logistics, Just-in-time or Just-in-sequence are state of the art, thus minimizing the risks of having unproductive phases in the production process. These requirements have to be met by transport operators and logistics providers, to be 100% reliable, punctual, and damage-free (which in fact is not always the case, but more and more become selection criteria of shippers).

Somewhat surprisingly, recent research by DaimlerChrysler revealed that the driver population is currently and in the future a major obstacle in fulfilling these logistics requirements. Beneath the fact of severe driver shortage in several regions, qualification and other competence characteristics of essential parts of truckers are reasons for trucking companies underperforming. Fig. 4 illustrates the current segmentation of truckers in the US and CEE.

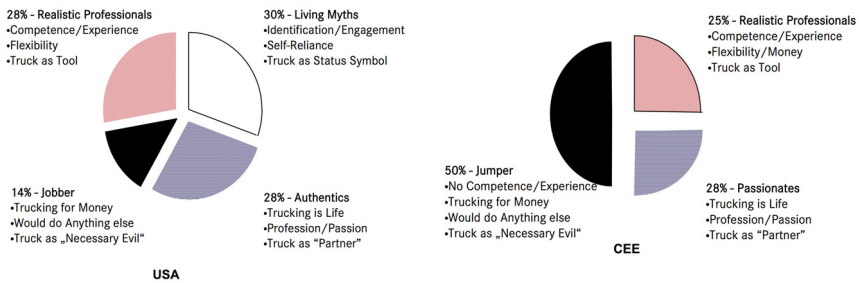


Figure 5: Trucker typology USA and CEE.

### 3.6 Trend 6: building up of globally acting, multi-modal logistics providers and alliances

One of the important developments in transportation is the building process of global logistics providers like Dubai Ports World, DHL or ICT. These kinds of providers built up their own logistics corridors, hubs and transportation capacities covering every mode and element of the logistic value chain. They need global communication standards like Galileo or GPS. The interaction between sea and land transport will be strongly developing worldwide. This way these providers will change the interaction between transport companies, the technical and emotional standards for trucks and the qualification standards for truck-drivers.

### 3.7 Trend 7: establishing of international, diversified, and well-managed transport corridors

The main trend is diversification – from oil and gas pipelines, from road and rail systems and from sea transport. In former times, there was much more land than sea transport. The western world needed the maritime transport as part of colonisation. But today we can see, that the interaction between sea and land transport systems will be the important driver. Raw materials, high cost products and foods will come around the world – just in time, everywhere in the world.

### 3.8 Trend 8: accelerated urbanization is the main driver of increasing freight transport demand

Today we take part in a major long-term process of new urbanization. Traditional terms between cities and land, as we know from European history, changed in difficult issues like “Mega-Cities”.

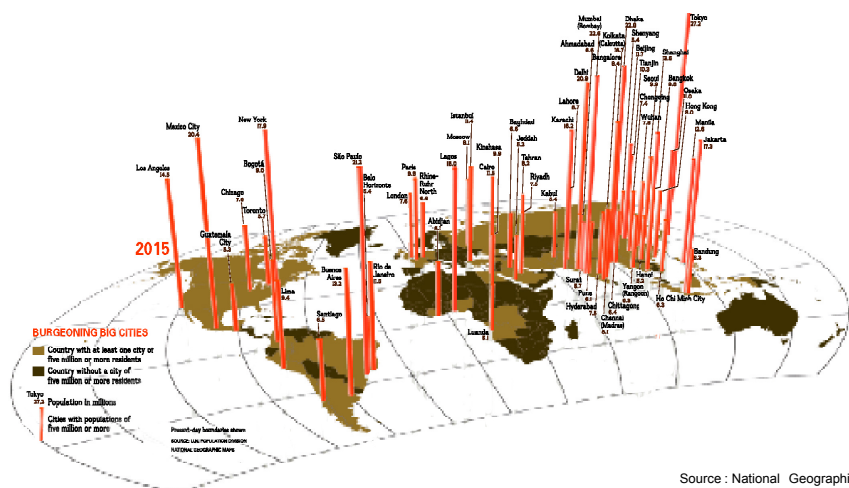


Figure 6: World urbanization 2015. (Source [6].)

But what does that really mean? How can we describe living conditions and transportation demands in agglomerations of 60 or 80 millions inhabitants, where we find rich and poor areas, industrial and agricultural areas, without sufficient public transport but with insatiable demands for transportation. Which kind of laws and rules will exist there? Obviously, all agglomerations need food, consumer articles, production and distribution articles – in other words they need transportation.

## 4 Conclusions

We pointed out that on the international scale a substantial growth in freight transport volumes has to be expected, especially on the road. To avoid negative environmental impacts on regional and local levels, simple traffic bans should not be considered, but intelligent solutions are asked for. The main reason is that transport and logistics are relevant economic factors which should be anticipated and treated very serious.

Regional and local economic impacts of the “multimodal logistics attractiveness” can hardly be underestimated. The double challenge is (a) to cope with them and (b) to design and realize environmental sensitive arrangements. In



this context, the community of international vehicle manufacturers is delivering substantial contributions.

Due to the dynamics and complexity of the logistics issue, anticipative and realistic transport policies are needed, preferably with a minimum degree of consistency on every regional level (8). Obviously this is not only the task of public administrations, for without contributions of private actors and organizations these future challenges cannot be treated successfully. Considering both positive and negative experience from the past, success unfortunately is not guaranteed just by putting together private and public project partners. But if professional competences, sufficient resources, and political power and consensus come together, effective solutions in transport and logistics should be within reach.

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