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TRANSPORT TRENDS AND CHALLENGES

REVIEW OF THE TRANSPORT SITUATION AND EMERGING TRENDS IN THE ECE REGION

Note by the secretariat

Introduction

1. At its fifty-fifth session in February 1993, the Inland Transport Committee adopted its terms of reference. These include, inter alia, the analysis of transport trends and economics and transport policy trends (ECE/TRANS/97, Annex 2). At its twenty-first session (9-10 September 2008), the Working Party on Transport Trends and Economics took note of the review of the transport situation and development trends in 2007 (ECE/TRANS/WP.5/44, para. 17).

2. This document was prepared by the secretariat on the basis of the data available in May 2009 and national contributions received from Belgium, Croatia, Germany, Hungary, Ireland, Lithuania, Norway, Romania, Turkey, Switzerland and the United Kingdom of Great Britain and Northern Ireland. National contributions are available as informal documents to session participants and are also accessible on the UNECE Transport Division website: http://www.unece.org/trans/Welcome.html.

3. In addition to describing briefly the principal economic and inland transport developments in the Economic Commission for Europe (ECE) region, this review considers impacts of the global economic crisis and fuel price fluctuations on the transportation sector as well as some policy responses. It also assesses briefly emerging economic and transport trends.

I. ECONOMIC AND TRANSPORT TRENDS

4. The deepening financial crisis and increasingly tight credit conditions resulted in a remarkable reversal of economic growth throughout the ECE region in the final quarter of 2008 and first quarter of 2009. The composite leading indicators released by the Organisation for Economic Co-operation and Development (OECD) as well as diverse measures of business and consumer sentiment indicate that aggregate output in the ECE region will decline in 2009 (Chart 1). Falling demand in large ECE economies is bound to depress international trade.

5. Most ECE economies experienced a pronounced growth slowdown in 2008 when GDP grew by 1 per cent in the European Union and United States. Eastern Europe, the Caucasus and Central Asia (EECCA) continued to outperform other ECE sub-regions, with GDP growth of 5 per cent and freight transport growth of 2 per cent in 2008. However, declining demand in the EECCA commodity sector, including construction materials, steel and energy, is expected to depress economic activity in 2009. Transport is likely to move in line with these developments.

6. According to the information available from statistical sources and industry associations, GDP and freight transportation declined rapidly across the ECE region in the first quarter of 2009. [1/] Both rail and road freight traffic experienced dramatic double-digit declines in the final quarter of 2008 and first quarter of 2009. Bankruptcies and layoffs grew at an alarming rate in a highly competitive road transport industry, characterized by a large number of relatively small operators. Employment in the more concentrated rail sector fell at a slower pace; however, in the first quarter of 2009 an increasing number of rail freight operators phased in part-time work or resorted to layoffs.

7. In contrast, developments in the passenger sector were less dramatic. Whereas passenger car traffic declined somewhat in a number of ECE countries in 2008, rail passenger traffic (measured in passenger-km) increased over the same time period in the EU and United States by 4.1 per cent and 6.8 per cent respectively. [2/] The global economic crisis deflated commodity prices, including oil prices that declined rapidly from the peak reached in the summer of 2008 (Chart 2). This translated into lower prices at the pump; however, road traffic volumes remained subdued in the early months of 2009.

8. Container traffic on Euro-Asian inland transport links continued to grow. International container shipments by Russian Railways (RZD) exceeded for the first time 1 million twenty-foot equivalent units (TEU) in 2007, growing by 34 per cent (year-on-year) and consisting of imports (42 per cent of the total), exports (44 per cent) and transit traffic (14 per cent). Container traffic on the Trans-Siberian route alone reached 637,000 TEU in 2007, increasing by a phenomenal 44 per cent (year-on-year). The pace of traffic growth on this route decelerated to 12 per cent in 2008, reflecting apparently the strong decline of merchandise trade between Europe and East Asia in the last quarter of the year.[3/]

[1/] For instance, GDP and freight transportation in the EECCA area declined (year-on-year) in the first quarter of 2009 by 11 per cent and 18 per cent respectively (http://www.cisstat.com/eng/mac1_ann.htm).

[2/] For details, see the UIC quarterly traffic data at http://www.uic.org/spip.php?article1348.

[3/] For details see http://www.unece.org/trans/wp24/wp24-presentations/documents/pres09-05.pdf.

II. SELECTED TRANSPORT ISSUES AND POLICY RESPONSES

A. Effects of the global financial crisis

9. The initial effects of the global financial crisis were mild in some ECE emerging market economies, reflecting their relatively weak integration into the global economy. The second-round effects were however much stronger, resulting in a reversal of capital flows and indiscriminate debt and equity market sell-offs by increasingly risk averse investors. The volume of global trade is projected by international organizations to decline in 2009 for the first time since 1982, reflecting inter alia an unprecedented lack of standard credit facilities. How will adverse credit conditions and declining growth rates impact transport services, production of vehicles and infrastructure investment?

10. Sales of cars and trucks plummeted throughout the ECE region in the last quarter of 2008. Some European governments responded by providing temporary incentives to buyers of new cars that saw sales increase in the early months of 2009. State support was made available to major motor vehicle manufacturers on both sides of the Atlantic. Both American and European car makers also benefited from access to bank recapitalisation packages for their financial arms. In the maritime sector, following the collapse of shipping rates, ship owners minimized their losses by cancelling a number of orders for sea freight vessels. Similarly, orders for planes were cancelled by some air carriers.

11. The adverse psychological effects of the financial crisis have reduced the short-term availability of funds for privately financed infrastructure projects, especially in Eastern Europe, the Caucasus and Central Asia (EECCA) and Southeast Europe (SEE). While new equity finance became scarce in EECCA and SEE countries as initial public offerings failed to materialize, major depreciations against the dollar made foreign currency denominated debt too expensive. However, private funding for transport infrastructure projects may become increasingly important during the era of post-crisis fiscal consolidation in both mature and emerging market economies.

12. In the *short term*, the key issue is how to protect infrastructure investment, especially in countries with fragile fiscal positions. Typically, public infrastructure spending cuts follow a worsening fiscal situation while current expenditure and employment are maintained. This pattern would threaten transport infrastructure investment for future development, especially in ECE emerging market economies. Some of these economies rely on official development assistance that should be increased in order to neutralize the negative effects of slower growth on investment.[4/]

13. Over the *medium term*, transport infrastructure spending may well pick up. Following massive financial operations to recapitalise strategic banks and insurers, credit conditions have continued to be tight. In order to avoid the liquidity trap, [5/] easy monetary policy needs to be

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[4/] For details, see 'Global Financial Crisis: Responding Today, Securing Tomorrow." World Bank, 15 November 2008 <http://go.worldbank.org/TM8VAV33P0>.

[5/] The liquidity trap refers to a situation in which monetary policy becomes ineffective when demand for money remains flat at low interest rates. This case was extensively analyzed by Keynes in his *General Theory* that also presented logically consistent arguments for the use of expansionary fiscal policy to overcome the trap.

reinforced by a powerful fiscal boost to enhance demand for goods and services. This objective could be achieved by large public infrastructure programmes that would be beneficial to the economy as a whole by stimulating aggregate demand *and* increasing long-term growth.

14. A number of countries in the ECE region have adopted fiscal stimulus packages for macroeconomic stabilization in 2009, ranging from 1 per cent of the 2008 GDP in the EU area and 2 per cent of the 2008 GDP in the United States to 10 per cent in the Russian Federation. Such packages often include some acceleration of planned public investment in transport infrastructure (e.g. roads and rail tracks) as well as new outlays. Given the time lags associated with the implementation of public works programmes, transport infrastructure spending could pick up sometime in the second half of 2009 and in 2010. According to the available information on the composition of the fiscal packages adopted, the share of investment exceeds 1 per cent of 2008 GDP in Canada and Poland and amounts to 0.7-0.9 per cent of 2008 GDP in Denmark, Germany, Luxembourg and Spain. In contrast, public investment expenditure is expected to decline in Hungary, Iceland and Ireland.[6/]

15. In some new member States of the EU as well as most EECCA and SEE countries the public transport infrastructure expenditure will be supplemented by loans and equity investments by international financial institutions. The future lending pipeline of the World Bank and European Bank for Reconstruction and Development (EBRD) includes some 30 transport projects over the next two to three years worth over $8 billion. In addition, both institutions announced additional infrastructure investments in 2009, aiming to ameliorate the effect of tight credit conditions.

16. In the *longer term*, the form and delivery of transport services are likely to be influenced by the emerging widespread scepticism about the desirability and efficiency of competitive markets. While strict regulation and even state control for a limited time period may well be desirable in the financial sector in order to avert an excessive destruction of credit and real assets, there is no equally compelling argument for stronger regulation and state intervention in the transport sector and goods-producing industries. Nevertheless, important shifts in public attitudes to markets were observed in opinion polls and could translate into intervention-prone policies in transport and other key sectors of the economy.

B. Effects of volatile fuel prices

17. Oil prices reached an historical peak in July 2008 and subsequently started to fall in response to changing supply and demand conditions when expectations of a major economic slowdown or recession started to prevail (Chart 2). While production from a new oil field in Saudi Arabia boosted global supply, demand started to decrease as consumers responded to the price shock. Faced with unprecedented gasoline and diesel prices at the pump, American and European drivers began to purchase less fuel, switching to more efficient cars, driving less and using public transit more often. It remains to be seen whether these behavioural changes are transitory or permanent.

[6/] For details, see *OECD Economic Outlook*, May 2009, Table 3.2.

18. Despite recent price volatility, the authoritative *World Energy Outlook 2008* of the International Energy Agency assumes that the imported crude oil import price averages $100 per barrel (in constant 2007 dollars) until 2015 and rises subsequently to $120 by 2030. High oil prices have a significant impact on numerous industries, including the transport sector in particular because of its dependence on oil products. In most ECE countries, petroleum products are subject to an excise tax as well as value-added tax (VAT). Excises are usually set in absolute amounts per unit of fuel whereas VAT is an ad valorem tax. Even though income and substitution effects reduce demand for fuel when oil prices are high, the increase in VAT revenue tends to over-compensate the losses due to lower demand, resulting in a higher tax intake. Consequently, the road industry often questions the use of this revenue windfall, claiming that the extra tax amounts should be returned to those who paid them or be invested to their benefit, e.g. for developing or maintaining the road transport network.

19. The redistribution or use of such additional revenues is the responsibility of governments. Ideally, the authorities would use the extra revenue to improve society's welfare. Whether this should be done via spending increases or tax cuts or reduction in public debt can only be assessed on a case by case basis. When taking into account the externalities of transport, in particular road transport, it can be argued that high tax collection due to higher fuel prices is a first - inadvertent from the public policy point - step towards their internalization that would be desirable from the efficiency point of view.

20. Given the current costs of transport and wage differentials, cost minimization sometimes leads to counterintuitive economic behaviour. An example often mentioned by environmentalists is the transport of shrimp by truck from Scandinavia to Morocco with the sole purpose to have them peeled at low cost and shipped back. The cost of fuel is not the only factor underlying such a practice (wage and tax differentials play a major role). In any case, the actual environmental and health costs generated by such transport operations are not fully paid by the companies undertaking them. Some countries have already attempted to internalize some externalities with the aid of flexible taxation schemes. A good example is Switzerland with its heavy-duty vehicle fee (HVF) introduced in 2001, which is calculated on the basis of distance, weight and emissions standards.

21. Higher fuel costs have manifold effects on the logistics chain, including an increased use of intermodal transport or changes in the management of stocks. There is not yet a viable alternative to diesel for road transport and other modes of transport offer limited substitution possibilities. Trucking enjoys a considerable comparative advantage when it comes to speed and flexibility. Trains and inland waterway vessels are not adequate for door to door delivery but could play an increased role in long distance transport, if the intermodal shift induced by relatively high fuel prices were to persist.

22. The car industry is developing vehicles that use alternative power sources. This could reduce dependence on fossil fuels and improve air quality, especially in urban areas. Hybrid passenger vehicles, consistent with improvements in air quality and fuel efficiency, are being introduced in the most developed markets. While hybrid engines have demonstrated their effectiveness in vehicles up to a certain size, technological innovation has provided cleaner diesel engines for bigger vehicles. Diesel vehicles generally achieve about 30 per cent better fuel

economy than comparable gasoline-powered cars.[7/] The new generation of diesel engines, unveiled at the end of 2006, will emit fewer particulates than previous models. Other new clean technologies such as hydrogen and fuel cell vehicles will contribute to the reduction of pollutants and CO_2 emissions.

23. A growing number of observers have argued that high fuel prices would ultimately reverse the globalization process by increasing the cost of container shipping from East Asia to final destinations in Europe and North America.[8/] This provides incentives to European and American manufacturers to rely increasingly on less remote factories rather than Asian suppliers. But even if recent declines in crude oil prices below $50 per barrel could be sustained, the economies of scale associated with container transport may have been largely exhausted in the United States and major efficiency gains are unlikely unless the capacity of port-hinterland linkages can be expanded significantly with the aid of massive investment.[9/] The situation in Europe is broadly similar, even though there is, at least in principle, more room for improving the efficiency of hinterland transport by the creation of a competitive rail transport regime, including the optimal "last mile" access to container terminals.

24. Competitive rail freight networks have emerged in parts of Western Europe in the wake of the uneven implementation of the first railway package of the European Commission. A number of UNECE governments have also continued to implement national measures to promote intermodal transport.[10/] Some countries have continued to use discriminatory measures to ensure that that freight shippers favour domestic ports. While this makes sense from the geopolitical point of view, national preferences are usually not conducive to supply chain efficiency.

III. CONCLUSIONS

25. The expected prolonged recession in large economies of the ECE region will have various effects on the transport sector. Growth of transport services will decline broadly in line with GDP. Freight traffic will be affected by the decline in merchandise trade. Passenger traffic will see shifts to public transport modes, providing that they are available. The automotive manufacturing sector will be hit hard by falling consumer and business demand for motor vehicles. Transport infrastructure investment could be accelerated by governments that decide to stimulate aggregate demand.

26. High oil prices are beneficial to export revenue recipients in producing countries and oil companies. For oil importing countries, there is no reason to treat the additional VAT revenue

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[7/] On the other hand, the relatively low price of diesel relative to gasoline in most UNECE countries provides an incentive for owners of diesel-powered cars to drive more. This undesirable effect (from the social point of view) could be eliminated by the rebalancing of relative diesel-gasoline pump prices with the aid of excise taxes as, for example, in Switzerland and United Kingdom.

[8/] For an elaboration of this argument and some references see "Port Competition and Hinterland Connections: Summary and Conclusions," p. 14. *OECD/ITF Joint Transport Research Centre Discussion Papers*, No. 2008-19, October 2008 <http://www.internationaltransportforum.org/jtrc/DiscussionPapers/DP200819.pdf>.

[9/] See M. Levinson, "Freight Pain: The Rise and Fall of Globalization." *Foreign Affairs*, Volume 87, No. 6, November-December 2008.

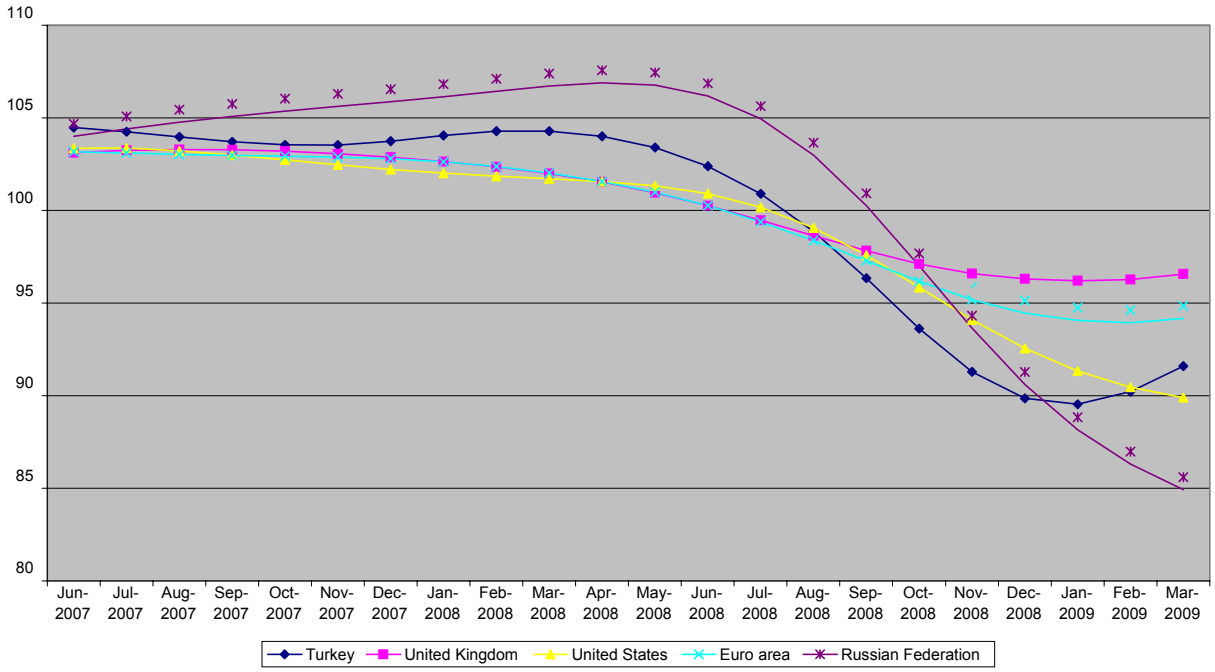
[10/] For details for 12 UNECE countries, see the document ECE/TRANS/WP.24/2008/5 and addenda 1 to 6 <http://www.unece.org/trans/wp24/wp24-official-docs/24docs.html>.

resulting from oil price hikes differently from other tax revenues. The best use of the tax revenue is where it is optimal for the economy as a whole which does not necessarily imply a direct compensation of major taxpayers. High fuel prices should encourage a substitution of long distance transport from road to rail or inland waterways, if no substitutes for diesel are found.

The approaching exhaustion of economies of scale in intercontinental maritime container transport and lack of capacity and/or competition on hinterland links could result in some globalization reversals that would see a relocation of production from East Asia to North American and East European factories. The consequent shortening of supply chains would probably entail positive environmental effects.

Chart 1

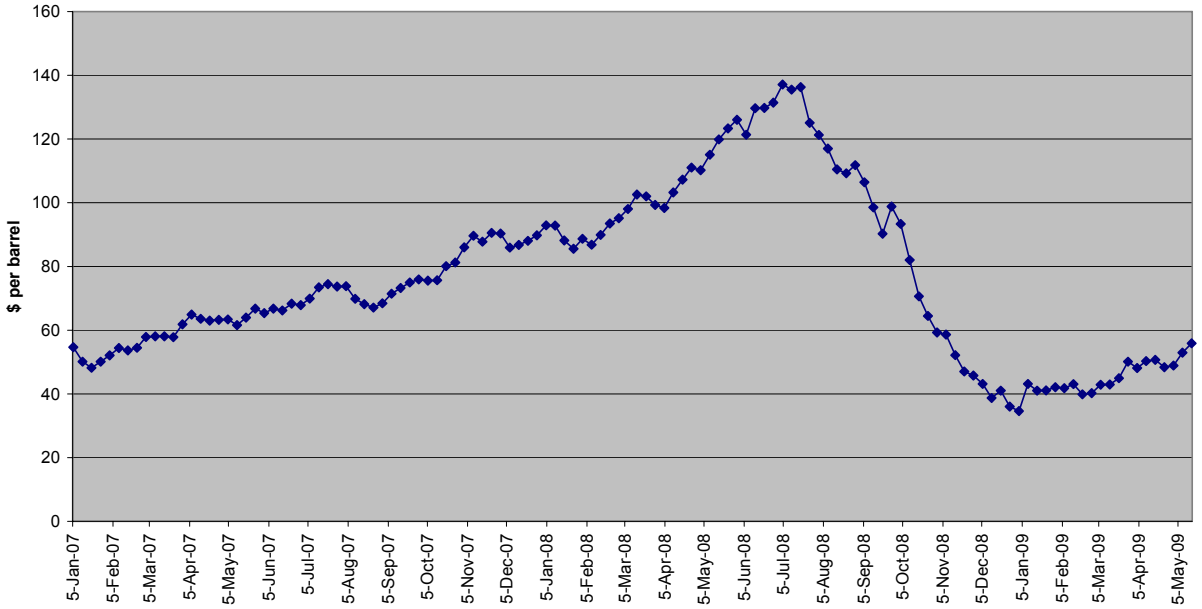
Composite leading indicators



Source: OECD < http://stats.oecd.org/wbos/Index.aspx?datasetcode=MEI_CLI >.
Note: A long-term average = 100.

Chart 1

Spot prices of imported crude oil
5 January 2007 - 15 May 2009



Source: Energy Information Administration, Official Energy Statistics from the U.S. Government < http://tonto.eia.doe.gov/dnav/pet/pet_pri_wco_k_w.htm >.
Note: Weekly All Countries Spot Price FOB Weighted by Estimated Export Volume.

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