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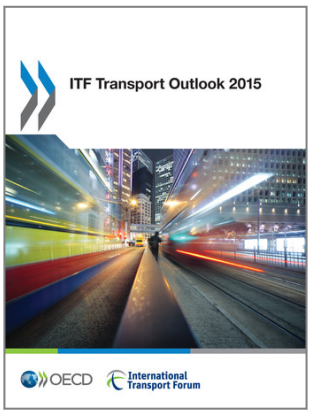
ITF Transport Outlook 2015

Summary in English



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Surface passenger transport

Growth in global road and rail passenger travel to 2050 ranges from 120% to 230%, depending on future fuel prices and urban transport policies. This growth is driven by non-OECD economies, where passenger volumes are projected to grow between 240% and 450%.

CO2 emissions from global surface passenger transport will grow by between 30% and 110%. The lowest growth scenario assumes high fuel prices and urban transport development that is mass transit/public transport-oriented with slow expansion of road infrastructure. The highest growth occurs when fuel prices are low and urban transport development is private-vehicle oriented, with strong road infrastructure expansion.

Urban transport

The growing population and economic concentration in urban areas call for particular attention to be paid to urban transport policies in emerging economies. By 2050, of the 2.7 billion additional urban dwellers, over 90% will live in developing countries. Long-term urban transport planning and policy alignment supporting private transport or public transport-oriented urbanisation will translate into significant differences in urban transport systems in Latin America, China and India.

Public-transport oriented urban policies would reduce CO2 emission growth by around 30% compared with the baseline scenario in Latin American and Chinese cities, and by almost 40% in Indian cities. Alignment of policies that contain sprawl, set higher fuel prices, and prioritise expansion of public transport infrastructure over urban road infrastructure can maintain current shares of public transport in Latin American and Indian cities, and significantly limit the reduction in China (with the public transport share in 2050 being twice what it would be in a baseline scenario in the three cases).

Same policy strategies do not necessarily achieve similar reductions in CO2 emissions and in negative health impacts. Integrated policies aiming at climate and health objectives work best. Promoting low sprawl and road development, and higher rates of public transit can achieve substantial climate change mitigation, and lower negative effects on health if implemented alongside more stringent controls for vehicle emissions (in particular for buses). In contexts with relevant participation of two-wheelers, these can bring positive results in terms of CO2 reduction, congestion and affordable mobility, but adequate regulations for motorcycle emissions are critical to avoid severe public health impacts.

Road and rail freight

Growth in world road and rail freight volumes to 2050 ranges from 230% to 420% depending on freight intensity of future GDP growth. The reduction in the transport intensity of GDP partly results from a dematerialisation of production, mainly driven by growing services shares in GDP. Growing service sector shares in advanced economies or increasing production and trade of lighter weight goods like electronic devices reduces actual tonnages shipped. The related CO2 emissions are projected to grow between

140% and 350% over the same period, driven by the changes in freight intensity and the share of rail in delivering future freight.

The world growth of surface freight volumes and related CO2 emissions will be driven by non-OECD economies. Asia, including China and India, will account for over 50% of world surface freight transport by 2050 (compared with 35% today). The growth ranges between 330% and 630% for freight volumes and between 240% and 600% for the CO2 emissions. The difference between the highest and the lowest scenario for non-OECD economies reflects uncertainties related to the direction these economies will take in terms of composition of production and the share of different types of freight transport.

Trade related international freight is projected to grow by a factor of 4.3 by 2050. Future growth is driven by changes in the product composition of trade and by growth in the average hauling distance caused by changes in the geographical composition of trade. Some 85% of total international freight volume is carried by sea. Road freight share in global trade will increase from 6% to 10% by 2050, driven by increasing intra-regional trade, especially in Asia and Africa where efficient rail networks are underdeveloped.

Over the period 2010-2050, international trade related CO2 emissions will grow by a factor of 3.9. Road freight accounts for around 50% of the total CO2 emissions from international trade-related freight and the share is projected to increase to 56% by 2050. International freight requires intermodal transport and is often performed by trucks. This domestic freight linked to international trade accounts for around 10% of total trade-related freight volume globally and 30% of the total trade-related CO2 emissions.

Trade-related international freight

Multilateral trade liberalisation will have an increasing impact on trade oriented towards the non-OECD area, reflecting stronger underlying growth performance in this area and comparatively larger reductions in tariffs. Under a multilateral trade liberalisation scenario, global freight will grow by 380% (compared with a baseline 330%). This would also yield CO2 emissions 15% higher than in the baseline scenario.

Increasing international trade will set unprecedented challenges to the transport system, particularly around ports. Port volumes are projected to increase nearly fourfold by 2050 with similar growth in most of the shipping-related emissions in ports. Already today shipping-related Particulate Matter (PM) emissions in port cities are responsible for approximately 60 000 cardiopulmonary and lung cancer deaths annually. This has implications regarding road transport investment and traffic management as well as CO2 mitigation policies.

Options for such policies include improving the emission intensity of existing fleet, developing alternative modes of transport, improving the efficiency of supply chains and introducing new technologies. In addition to environmental and social benefits, an efficient and well-organised transport system provides a number of operational benefits, including reduced waiting times and cost reductions. Overall, international freight requires targeted policies to minimise negative impacts while ensuring maximum economic benefits from trade.

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