

CHAPTER 1. TRANSPORT AND THE MACROECONOMY – CURRENT SITUATION AND NEAR-TERM EXPECTATIONS

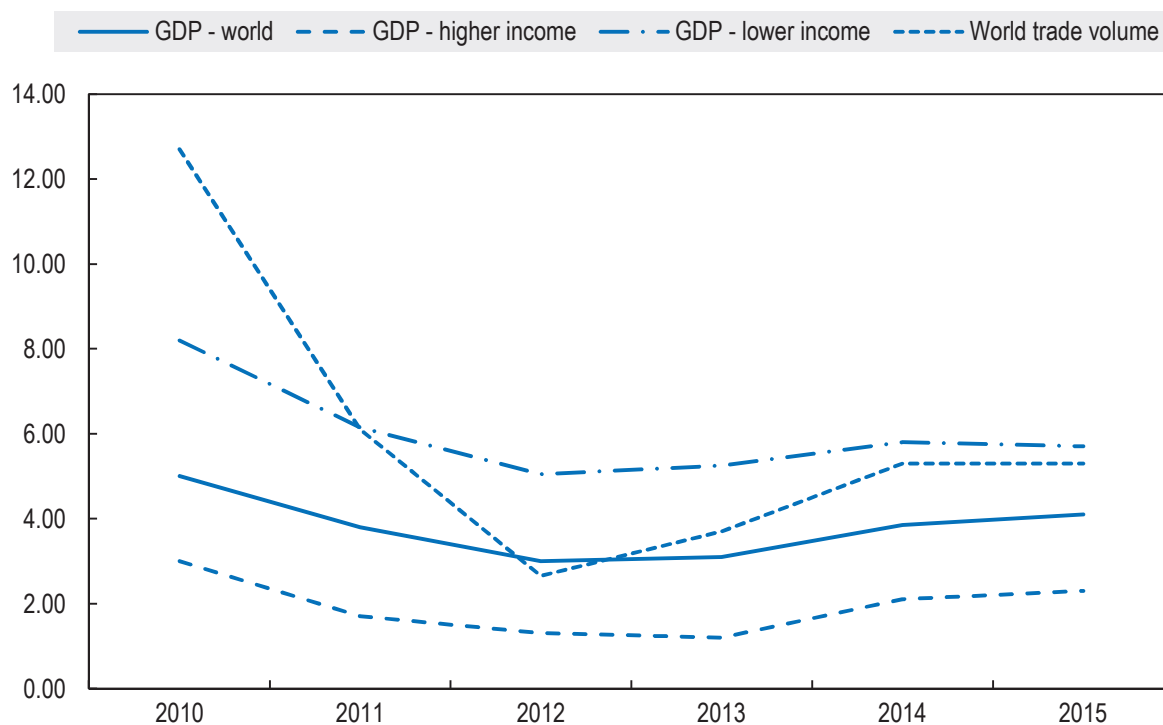
This chapter reviews some of the recent trends in economic development, trade and transport. Based on historical data on gross domestic product, trade and global transport together with near term economic projections, the chapter discusses some of the main expectations for freight and passenger transport for the near-term future. It discusses the recent observation of a shift of economic mass to emerging economies and provides evidence of some rebalancing of trade and transport flows. The chapter also reviews trends in car use in high-income economies and highlights rising uncertainty over future mobility choices.

GDP and trade volumes

Activity in the transport sector is closely tied to the level of economic development and to business cycle fluctuations. This section presents and discusses changes in the recent past and expectations for the near future in that context. In recent decades, global economic development has been characterised by the gradual shift of economic mass from developed to emerging economies. In the more recent past, there are regional differences in paths of recovery following the financial and economic shocks of 2007/2008 and after. Table 1.1 and Figures 1.1 and 1.2 illustrate both phenomena.

Table 1.1 shows Gross Domestic Product (GDP) and trade growth measures for recent years and expectations for the coming years from the most recent economic outlooks produced by the Organisation for Economic Co-operation and Development (OECD), the International Monetary Fund (IMF) and the World Bank. The figures from these different sources are sufficiently similar that they can be summarised as in Figure 1.1. The world GDP growth rate is expected to rise to around 4% in 2014 and 2015 after a two-year spell of somewhat weaker performance following the initially quick rebound after 2008, particularly in lower income economies. As is well known, this global average is the result of high growth rates in emerging economies (around 6%) and slow growth in higher income countries (2% or less). For 2014 and 2015, growth is expected to pick up somewhat in the latter, while in emerging economies growth flattens out as challenges to key emerging economies' growth models are mounting.

Figure 1.1. **GDP and trade growth, annual % change**
2010–2012: observed, 2013–2015: expected



Source: OECD Economic Outlook 93, May 2013, Table 1.1; IMF World Economic Outlook, Update July 2013, Table 1; World Bank Global Economic Prospects, June 2013, Table 1.

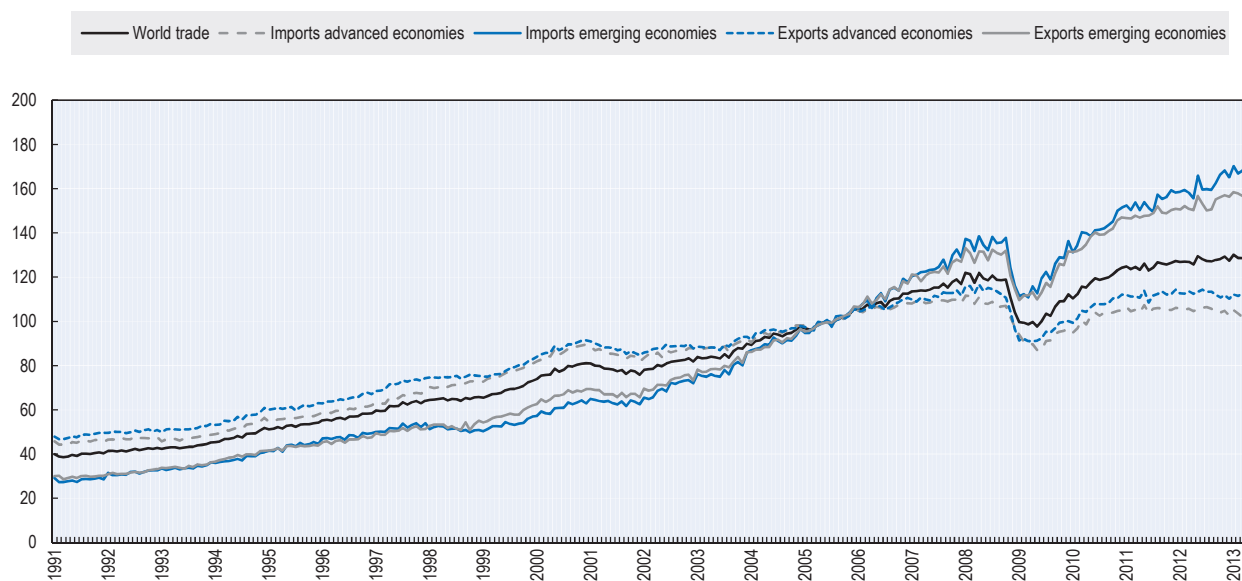
StatLink  <http://dx.doi.org/10.1787/888932943761>

Recent growth and near-term expectations differ within the broad groups of 'higher' and 'lower' income economies. Notably, the performance of the Euro area has been weak and is expected to remain so, despite some improvement, over the next two or three years. The World Bank forecast is for 1.5% growth

in 2015, compared to 3% for the United States. In contrast to the Euro area, Japan has avoided negative growth rates in 2012 and 2013, and the expectation for 2015 is of 1.3% growth. Among the lower income economies, growth is to remain strongest in the East Asia and Pacific region, although growth in China is likely to be lower than in the recent past (7 to 8%) in 2014 and 2015, as a result of low growth in high income economies and limits to strongly investment-oriented domestic growth strategies. Developing Europe and Central Asia have seen low growth in recent years, at least partly because of the fall-out of the Euro area turmoil. Growth is expected to pick up to around 4.2% by 2015.¹

Global growth expectations are more pessimistic now than in the recent past. This is most clear from the IMF projections, which in July 2013 are considerably lower than in April 2013 (see Table 1.1), and the April 2013 projections themselves were lower than those of January 2013. The IMF points mainly to downside risks for emerging economies, to protracted recession in the Euro area, and to diminishing global growth impacts of stricter monetary and fiscal policy in the United States. The IMF's Chief Economist commented that he sees the lower growth in emerging economies as structural, not cyclical, so with no expectation of returning to the high growth rates of before 2008.² China has boosted growth by strong reliance on export and on debt-financed domestic investment. This has resulted in a very low share, 35%, of household consumption in GDP. Future development will require raising this share, so that household consumption must grow faster than GDP. China-expert Michael Pettis argues that fast consumption growth will force GDP growth rates down, as wage pressure will be upwards. As long as household incomes grow, reduced growth rates need not pose a problem for China domestically, but it does mean reduced investment growth.³

Figure 1.2. **Monthly index of world trade**
Advanced and emerging economies, 2005=100



Source: CPB Trade Monitor, June 2013.

StatLink  <http://dx.doi.org/10.1787/888932943780>

Passenger and freight transport correlate closely with overall growth,⁴ but the development of global trade is a specific driver of maritime and air transport volumes. Trade between countries has grown faster than global output over the past decades, as a consequence of rising levels of development and trade liberalisation in emerging economies, increasing exchange of similar goods, and strong geographic fragmentation of production. The result is that the ratio of international trade in manufactured goods to production of these goods was twice as high in 2010 as it was in 1990.⁵

For the recent past, Figure 1.1 shows how world trade grew very strongly in 2010 but growth was slower after. As discussed in the 2011 *ITF Transport Outlook*, and as can be seen in Figure 1.2, the economic shock of 2008 had a dramatic impact on trade volumes, and this was because the drop in aggregate consumer and investment demand was particularly pronounced for traded goods. The rebound was equally quick and spectacular immediately after the shock, but growth rates slowed down strongly as of 2011. Expectations are for stronger growth in 2014 and 2015.

Figure 1.2 highlights the difference in trade growth between emerging and advanced economies, with the latter on a higher growth path since the early 2000s and the high growth resumed post-2008. It is not surprising that growth is slower over the long run in advanced economies, but the very weak performance since late 2010 is a cause for concern. The low growth rates of global trade in recent years can be attributed to tepid export growth from advanced economies and in particular to weak demand in these economies, with low import demand growth and – correspondingly – slower growth of exports from emerging economies. Similar to GDP growth expectations, global trade growth projections are now more pessimistic than a couple of months ago (see the change in IMF projections in Table 1.1).

Figure 1.3 shows the development of trade volumes for subgroups of advanced and emerging economies for 2004 through 2013. The top left panel confirms Euro area weakness, with the volume of imports declining after a quick rebound post 2008. In contrast to the United States and Japan, imports remain well below pre-crisis peak levels and are now back to the level of 2005. In terms of exports, however, the Euro area performs relatively well. In the emerging economy regions, imports grow strongly throughout whereas export volume growth is stronger and more volatile outside emerging Asia.

Table 1.1. **GDP and trade growth, percentage change over previous year**

OECD 2010–2014

	Observed		Projected		
	2010	2011	2012	2013	2014
GDP					
World	5.0	3.7	3.0	3.1	4.0
OECD	3.0	1.9	1.4	1.2	2.3
Non-OECD	8.2	6.3	5.1	5.5	6.2
Trade volume					
World	12.7	6.1	2.7	3.6	5.8

IMF 2011–2014

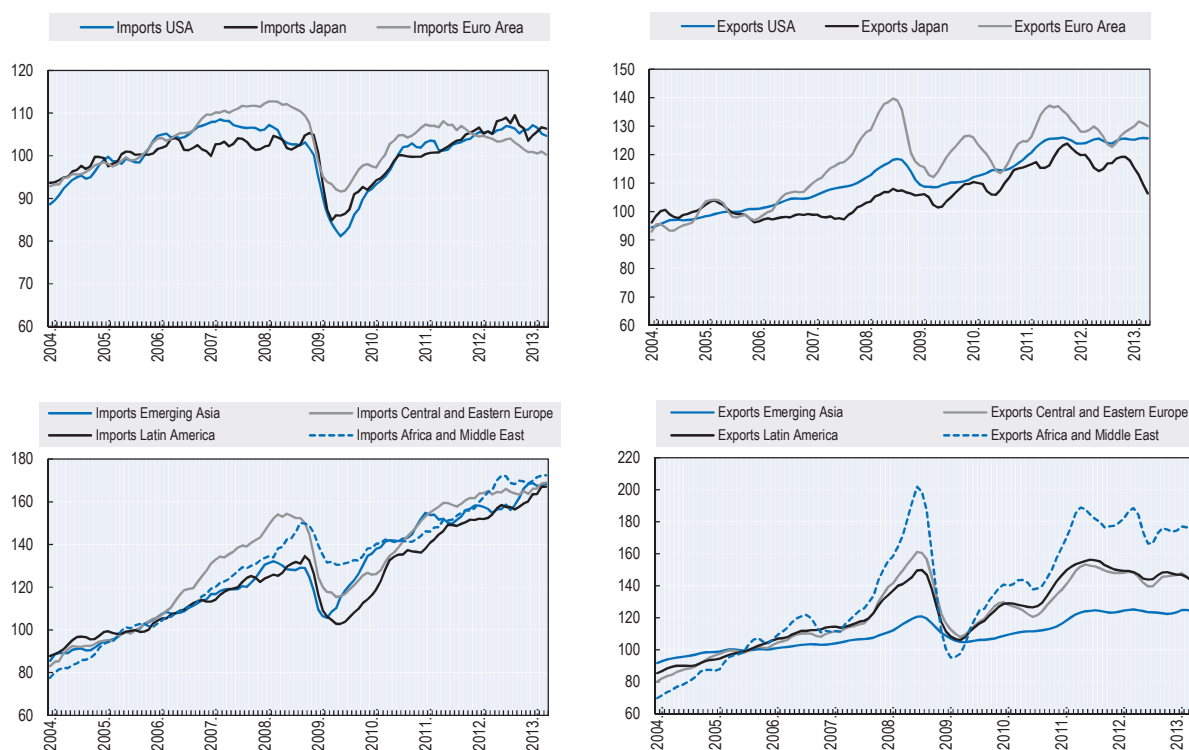
	Observed		Projected July 2013		Difference with April 2013 projection	
	2011	2012	2013	2014	2013	2014
GDP						
World	3.9	3.1	3.1	3.8	-0.2	-0.2
Advanced econ.	1.7	1.2	1.2	2.1	-0.1	-0.2
Em. & dev. econ.	6.2	4.9	5.0	5.4	-0.3	-0.3
Trade volume						
World	6.0	2.5	3.1	5.4	-0.5	0.1
Imports adv.	4.7	1.1	1.4	4.3	-0.8	0.1
Imports em. & dev.	8.7	5.0	6.0	7.3	-0.2	0.0
Exports adv.	5.6	2.0	2.4	4.7	-0.4	0.2
Export em. & dev.	6.4	3.6	4.3	6.3	-0.5	-0.2

World Bank 2011–2015

	Observed		Projected		
	2011	2012	2013	2014	2015
GDP					
World (PPP weighted)	3.8	2.9	3.1	3.8	4.1
High income countries	1.7	1.3	1.2	2.0	2.3
Developing countries	6.0	5.0	5.1	5.6	5.7
Trade volume					
World	6.2	2.7	4.0	5.0	5.4

Source: OECD Economic Outlook 93, May 2013, Table 1.1; IMF World Economic Outlook, Update July 2013, Table 1; World Bank Global Economic Prospects June 2013, Table 1.

Figure 1.3. **Index of imports and exports, 3-month moving average**
Advanced and emerging economies, 2005=100



Source: CPB World Trade Monitor, June 2013.

StatLink  <http://dx.doi.org/10.1787/888932943799>

Transport volumes

Maritime and air freight volumes

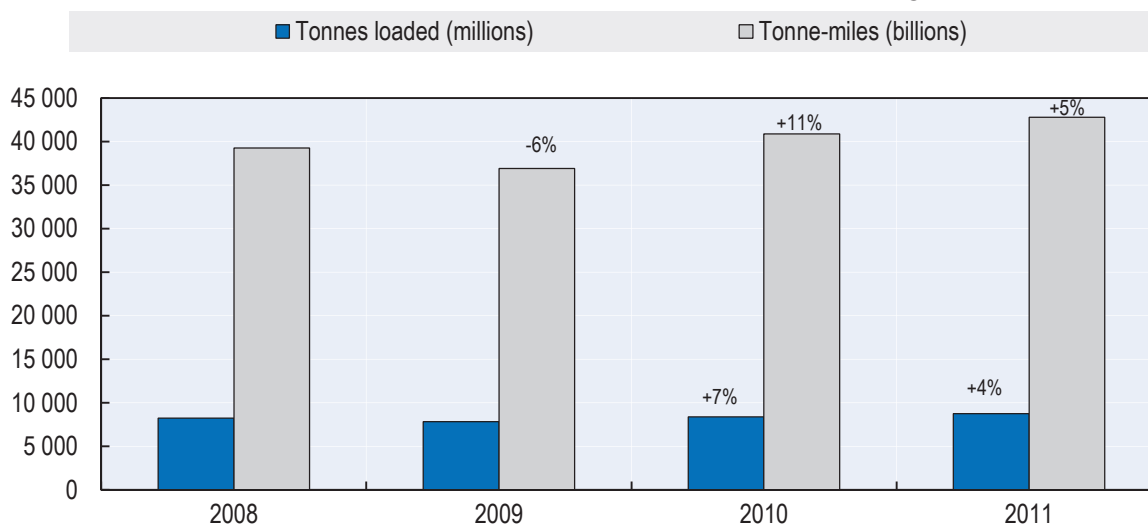
Maritime transport is the backbone of international trade, with over 80% of world cargo volumes transported by sea. Following the 2009 recession, world seaborne trade experienced robust growth in 2010 (see Figure 1.4). The United Nations Committee for Trade and Development (UNCTAD) preliminary data show that seaborne trade, measured in tonnes loaded, grew by 4% to 8.7 billion tonnes in 2011. This is 6%

above the pre-crisis peak in 2008. In tonne-miles, the maritime transport grew by 5%, reaching 42.8 billion tonne-miles.

The movement of seaborne freight reflects the two-speed growth in the world economy, with developing economies faring better than developed economies (Figure 1.5). The total amount of goods unloaded (in tonnes) in developing economies grew to 19% above pre-crisis peak levels while in developed economies volumes were still 10% below their 2008 peak. Growth of cargo loaded in developed countries outpaced that in developing countries, indicating relatively strong growth of import demand in developing economies. In 2011, 58% of world seaborne cargo was unloaded in developing countries.

Asia was by far the most important region for container trade. The world's ten leading container ports are all located in East and Southeast Asia, with only one of the ten biggest ports, in terms of container traffic, located outside this area; see Figure 1.6.

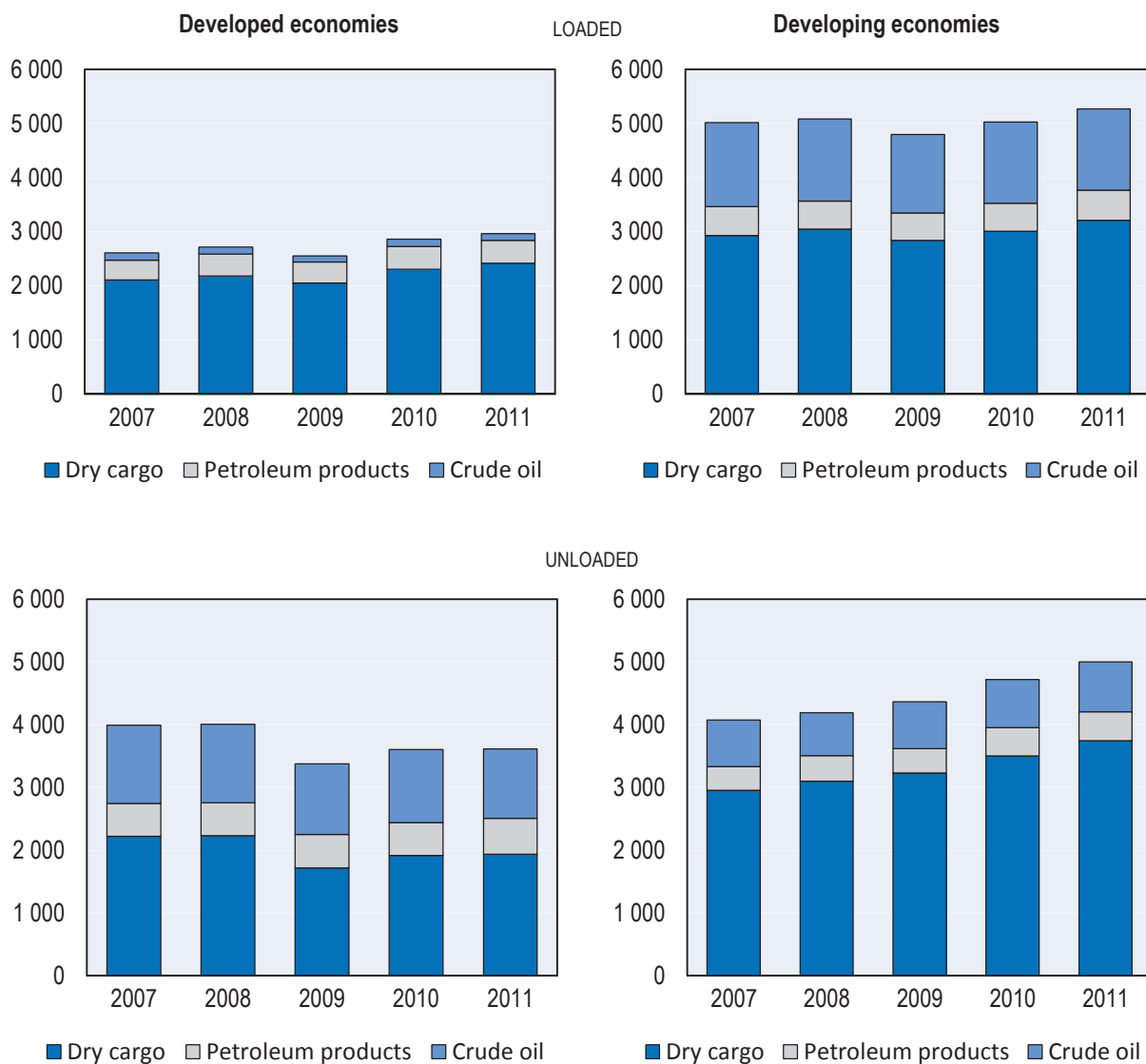
Figure 1.4. **World seaborne trade 2008-2011**
Million tonnes and billion tonne-miles and annual % change



Source: UNCTAD Review of Maritime Transport 2012.

StatLink  <http://dx.doi.org/10.1787/888932943818>

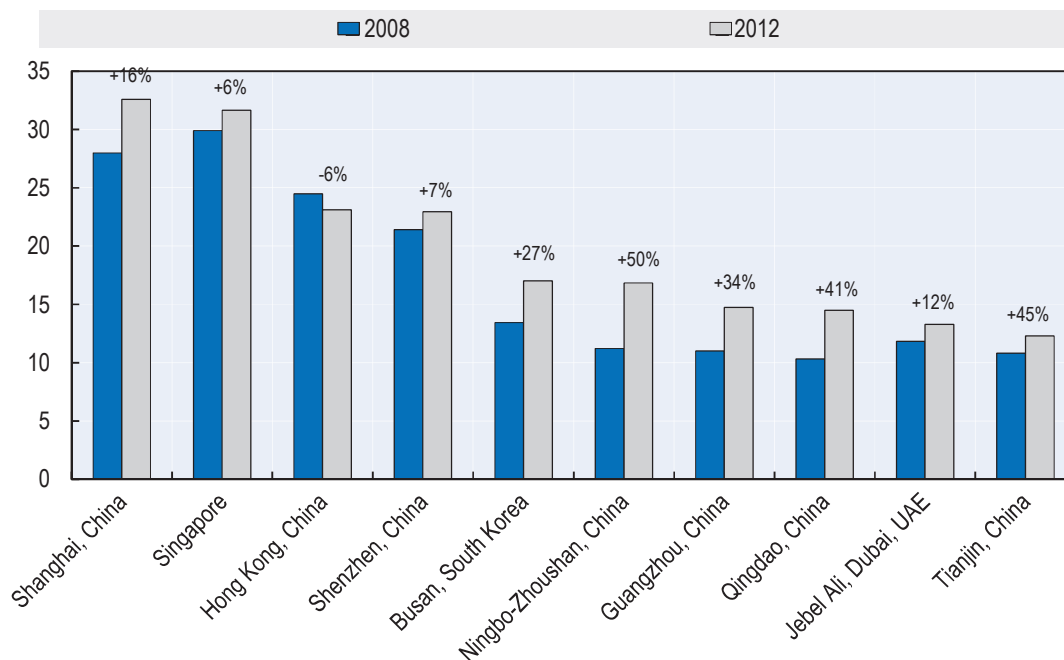
Figure 1.5. World seaborne trade by type of cargo and country group
Million tonnes



Source: UNCTAD Review of Maritime Transport 2012.

StatLink  <http://dx.doi.org/10.1787/888932943837>

Figure 1.6. **The 10 leading world ports in terms of container traffic**
20 foot equivalent units (TEU) and annual % change



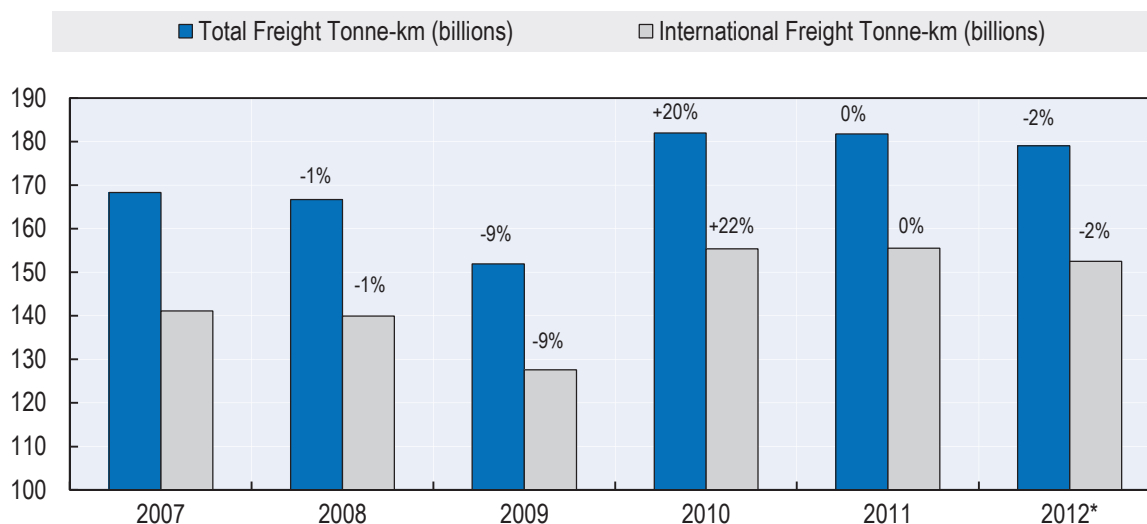
Source: Based on World Shipping Council and Containerisation International. TEU: Container traffic measured in twenty-foot equivalent unit as all containers handled, including full, empty and transhipped containers.

StatLink  <http://dx.doi.org/10.1787/888932943856>

As can be seen in Figure 1.7, following two consecutive years of negative growth due to the economic crisis, air freight transport rebounded in 2010 and grew 20% from the previous year to a new high of 172 billion freight tonne-kilometres. The strong performance of air freight in 2010 was partly led by inventory rebuilding after the economic downturn, together with rising consumer demand. This growth did not sustain, however, and air freight stagnated to zero growth in 2011, followed by a decline of 1.5% in 2012, measured in freight tonne-km. International air freight traffic outperformed domestic traffic in the recovery. International traffic increased to 10% above the pre-crisis peak, while domestic air freight traffic remained just below the pre-crisis peak of 2007.

The slowdown in world trade growth, shifts in the commodity mix favouring sea transport and continuing economic weakness in developed countries are among the factors contributing to the negative growth in the air freight market in 2012 (IATA Air Transport Market Analysis 12/12). Asia Pacific airlines were the most affected (-5.5%), followed by European (-2.9%) and North American carriers (-0.5%).

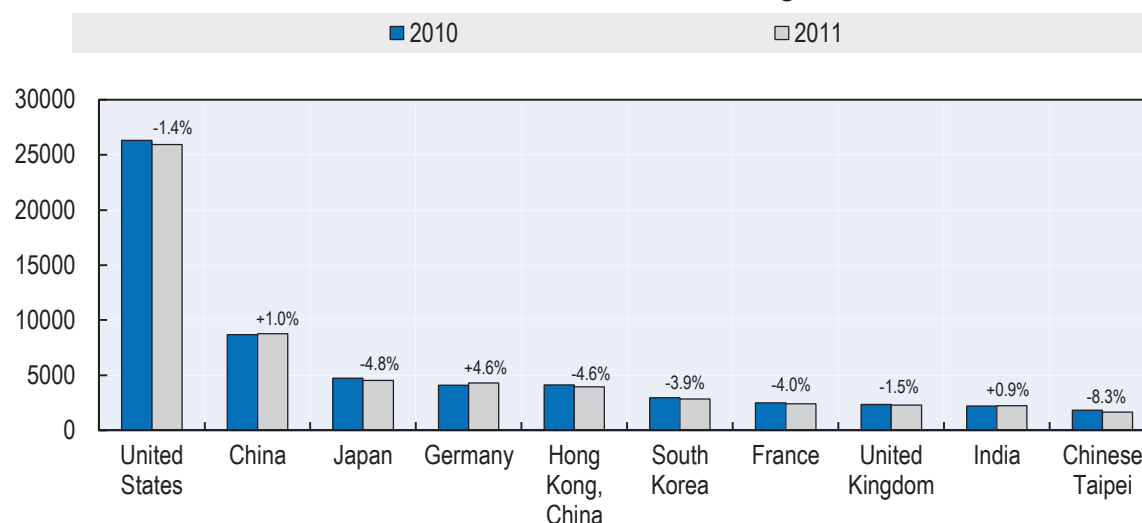
Figure 1.7. **World airline freight traffic**
Total and international



Source: Based on IATA Annual Review 2013 and ICAO Annual Report of the Council 2011. Data for 2012 a preliminary estimate.

StatLink  <http://dx.doi.org/10.1787/888932943875>

Figure 1.8. **Air freight volume by country**
Thousand tonnes and annual % change



Source: Airport Council International.

StatLink  <http://dx.doi.org/10.1787/888932943894>

Finally, we provide an overview of the evolution of transport volumes, measured in tonnes instead of value. Data are from the ITF Trade and Transport database, which compiles data from several sources to obtain a picture of weights transported by sea and by air from the EU27 and the United States point of view. Figures 1.9a through 1.9d show tonnes imported to and exported from the EU27 and the United States, from and to major global regions.

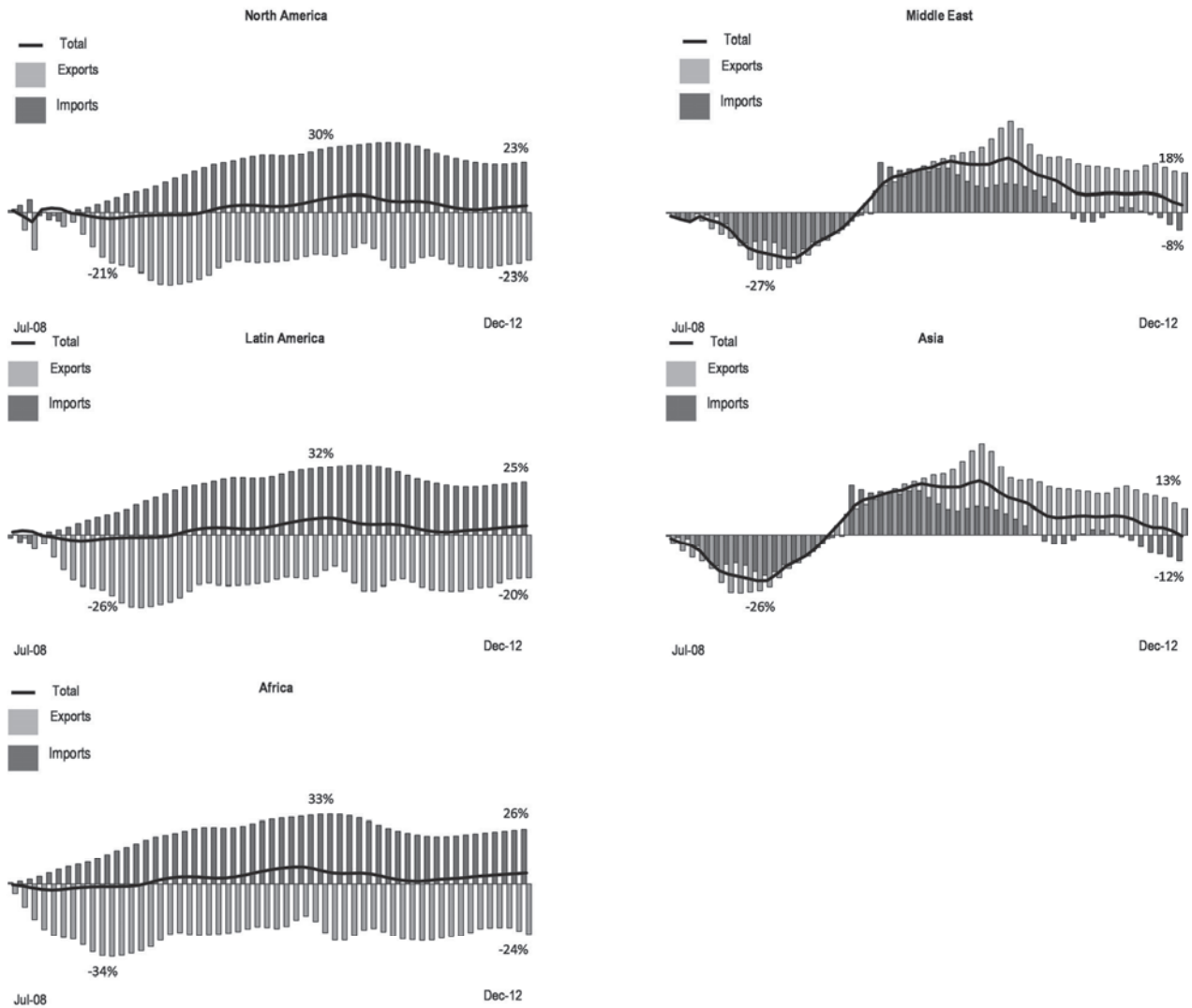
Broadly, the patterns emerging from the figures mirror those discussed earlier. The main messages are as follows:

- *Tonnes moved by air from and to the EU27* declined strongly after the shock of 2008, then rebounded quickly but more recently have been on a downward path again. The recent decline affects both exports and imports. The overall pattern is similar for most regions with which the EU trades but plays more strongly for the United States (itself hard hit by the crisis but recovering more quickly) than for Latin America, Asia and Africa (on average less affected by the crisis), so that air transport volumes are about as high for the latter regions in December 2012 as they were in July 2008. The downward tendency, however, does not bode well for the near future, as air transport volumes are a good leading indicator of economic performance.
- *Tonnes moved by sea from and to the EU27* fell strongly in the second half of 2008 and the rebound was slower and more gradual, so that tonnes moved remain below pre-crisis levels for most regions. For North America, exports remain 23% below the peak level and imports are nearly at the peak level in December 2012. For the other regions, exports increase strongly and imports decline markedly, in line with the weak internal performance of the European Union and the stronger economic momentum in emerging economies.
- *Tonnes moved by air from and to the United States* exhibit a pattern resembling that of the EU27, with the initial rebound following the crisis-induced drop reverting to renewed decline. One difference, however, is that in the most recent months reported in the Figures, exports to and imports from Asia increased, as did imports from Europe (but not exports to Europe). This change is suggestive of improved economic performance in the United States.
- *Tonnes moved by sea from and to the United States* have not changed very strongly from the pre-crisis peak, but this is the result of opposite movements in imports (declining from all regions) and exports (increasing from the main trading regions). This can be seen as a correction to the strong consumption- and import-orientation of the United States economy in the decade before the crisis, a correction initiated by weak domestic demand and facilitated by the depreciation of the US dollar.

In short, data on tonnes moved by air and sea reinforce the observation of a shift of economic mass to emerging economies, and of weak recovery from the crisis in advanced economies and in Europe in particular. There is some rebalancing of trade and transport flows, that is to say a move away from the strong export surplus in some emerging economies and a heavy import-orientation in some of the advanced economies. However, this rebalancing appears to be driven mostly by the weak performance of the advanced economies, and less by more domestically oriented development models in the emerging economies. The challenge of structural change in, for example, China's growth strategy remains strong as ever, with increasing downside risks to continuing along the path of export orientation and a domestic focus on investment rather than consumption.

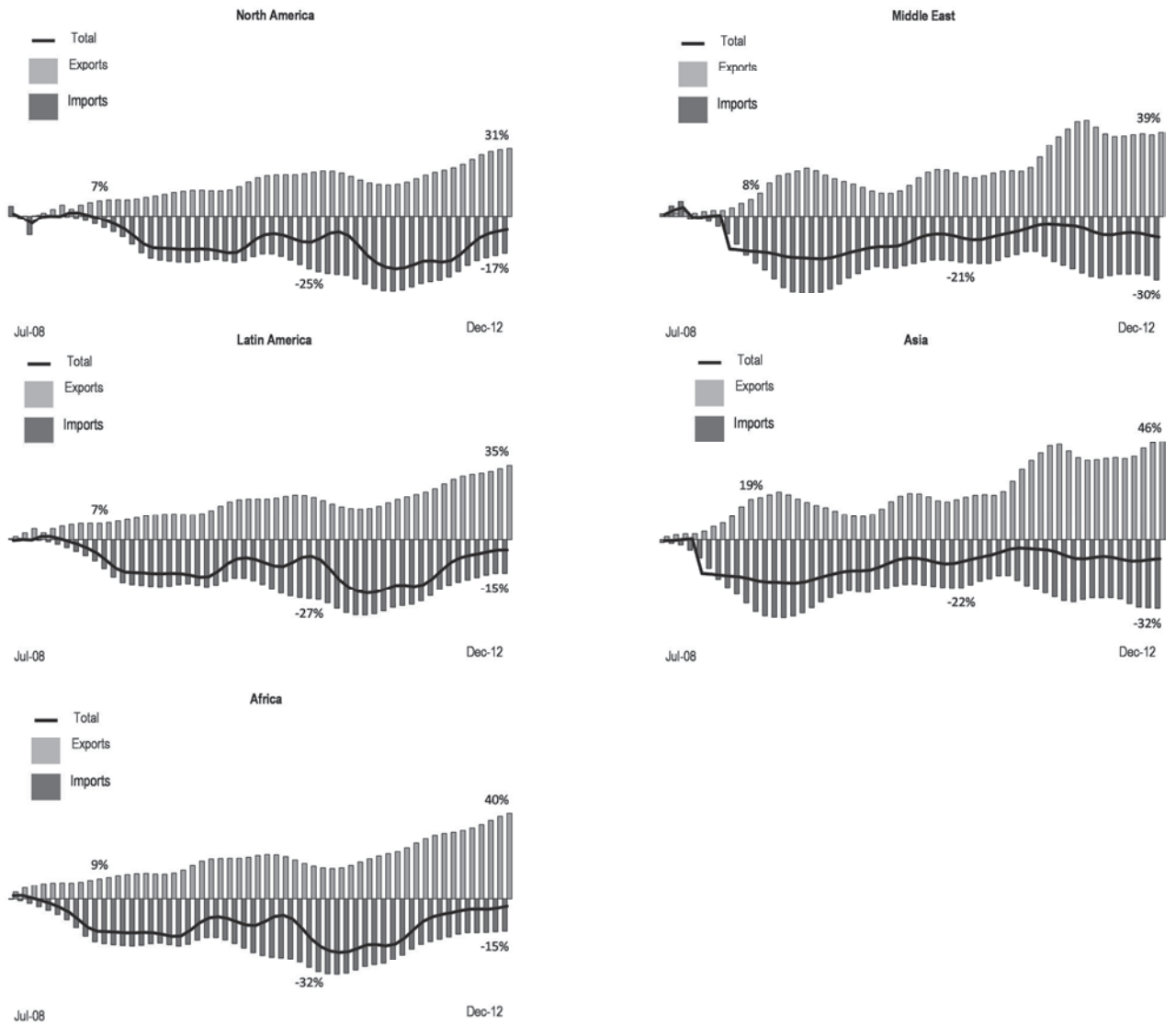
Reconnecting with solid growth in advanced economies appears to be no easier than converting to other growth sources in emerging regions. Chapter 3 briefly discusses what contribution transport policy might be able to make to this challenge in the short and long run.

Figure 1.9a. Freight transported by air to and from the EU27, monthly trend from pre-crisis peak June 2008
Tonnes, % change



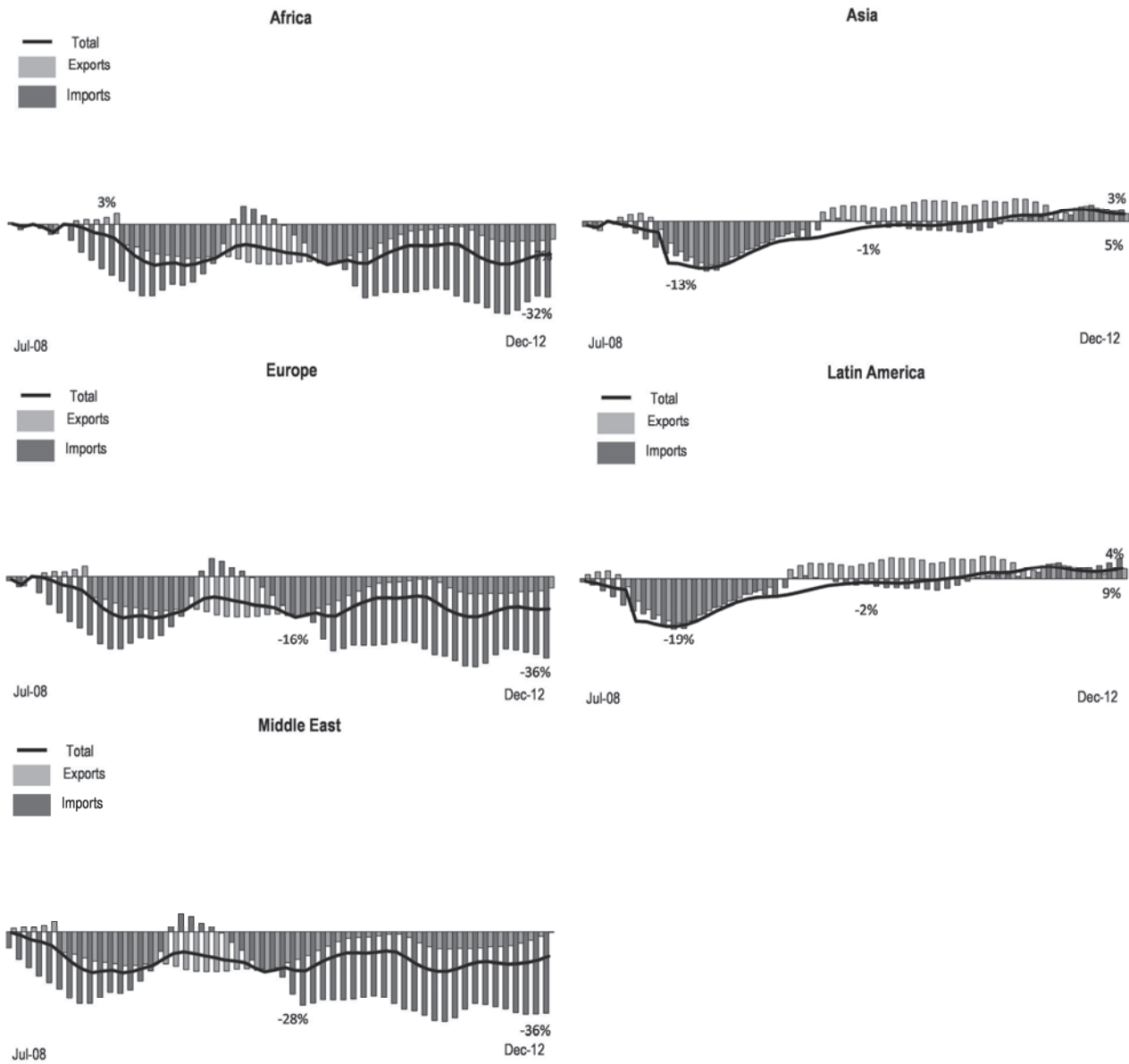
StatLink  <http://dx.doi.org/10.1787/888932943913>

Figure 1.9b. Freight transported by sea to and from the EU27, monthly from pre-crisis peak June 2008
Tonnes, % change



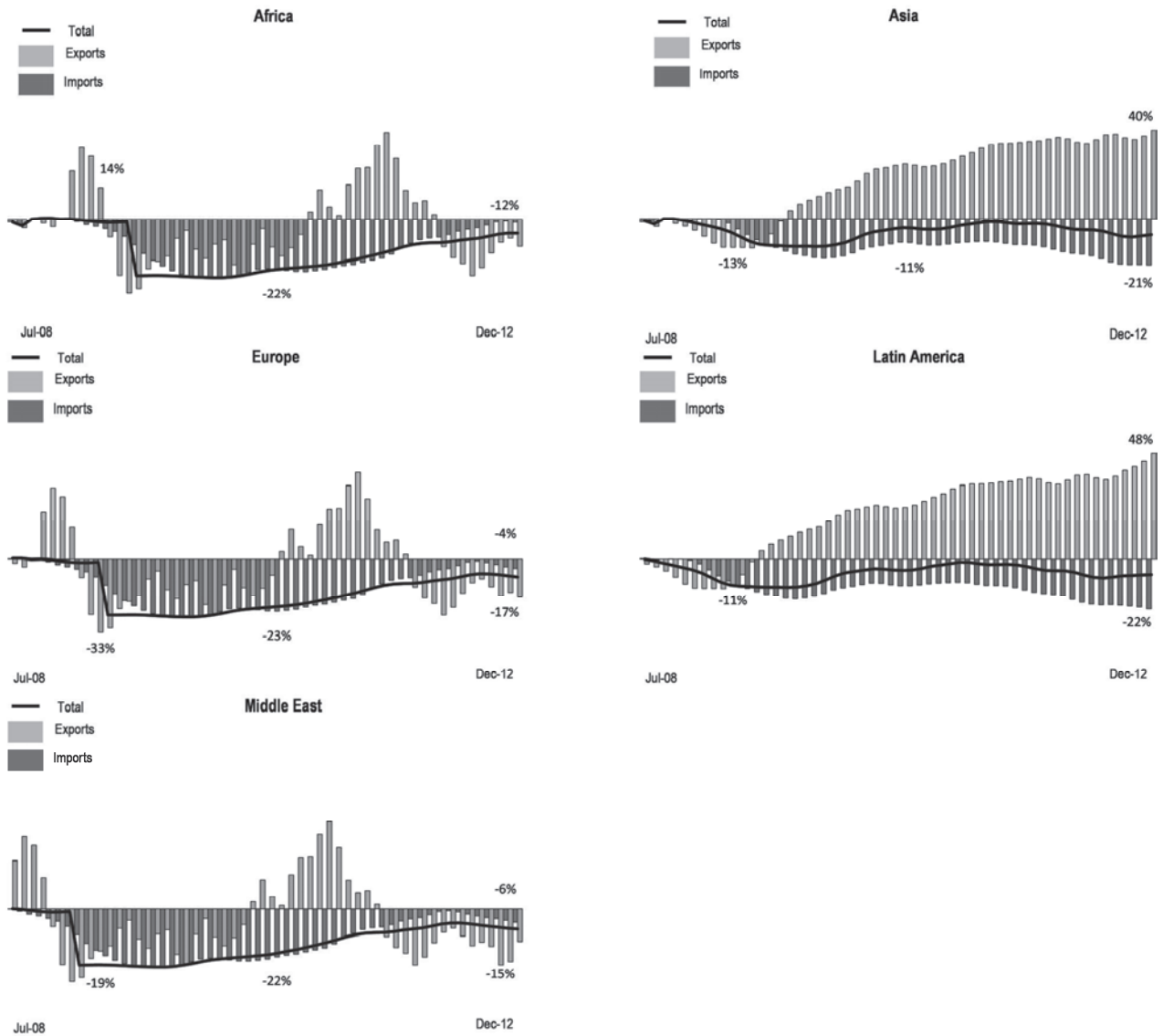
StatLink  <http://dx.doi.org/10.1787/888932943932>

Figure 1.9c. Freight transported by air to and from the United States, monthly trend from pre-crisis peak June 2008
Tonnes, % change



StatLink  <http://dx.doi.org/10.1787/888932943951>

Figure 1.9d. Freight transported by sea to and from the United States, monthly trend from pre-crisis peak June 2008
Tonnes, % change



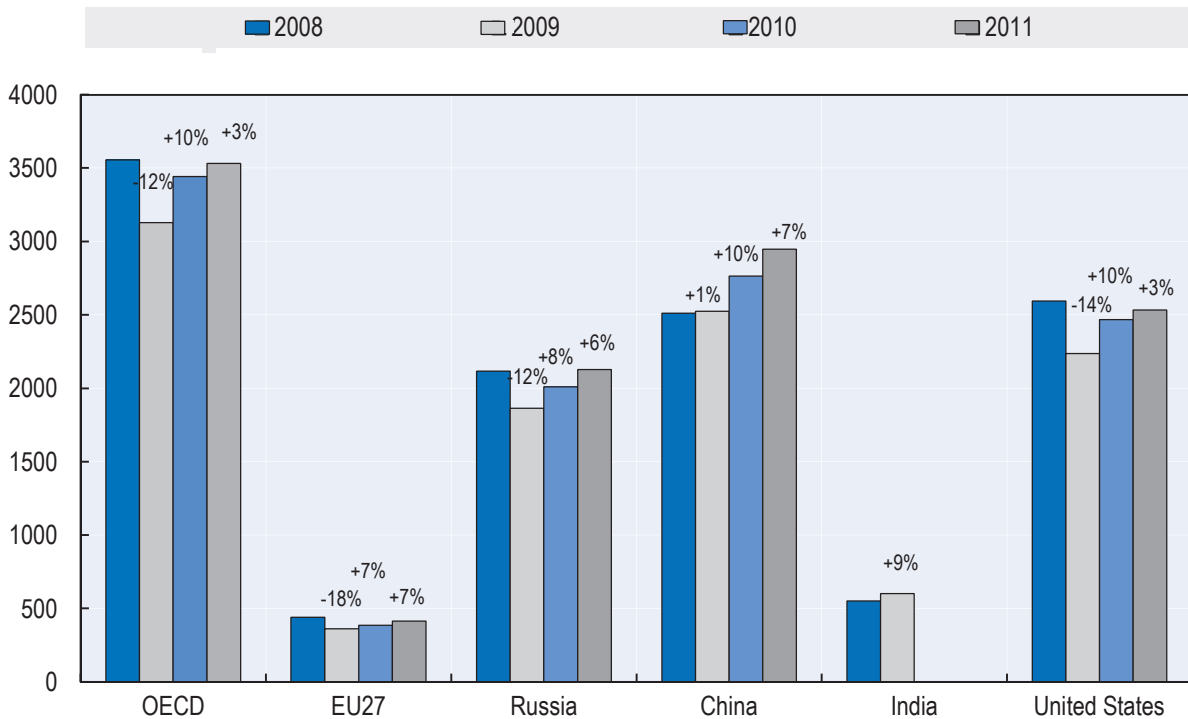
StatLink  <http://dx.doi.org/10.1787/888932943970>

Rail and road freight volumes

Rail freight transport in the OECD countries was severely hit by the global economic crisis in 2009 (-12% compared with 2008), see Figure 1.10. Rail tonne-kilometres increased 10% in 2010 and 3% in 2011, reaching pre-crisis levels. After the initial shock in 2008 (-18%) in the European Union, the rail freight volume has increased 7% annually to slightly over 400 billion tonne-kilometres in 2011. This is still 6% below the level in 2008. In the United States, rail freight volumes increased by 10% and 3% respectively in 2010 and 2011, nearly reaching the 2008 level. In the Russian Federation, tonne-kilometres exceeded the 2008 after 6% increase in 2011. In China, rail freight growth continued in 2011, with the volume increasing by 7%. The United States, Russia and China account for nearly 80% of total estimated global rail freight.

Preliminary data for rail freight in the United States and Europe, based on our quarterly statistics, indicate a stagnation in Europe and freight volume growth turning negative in the United States. In the Russian Federation, rail freight growth has slowed down to 4% in 2012.

Figure 1.10. **Rail freight**
Billion tonne-kilometres and annual % change



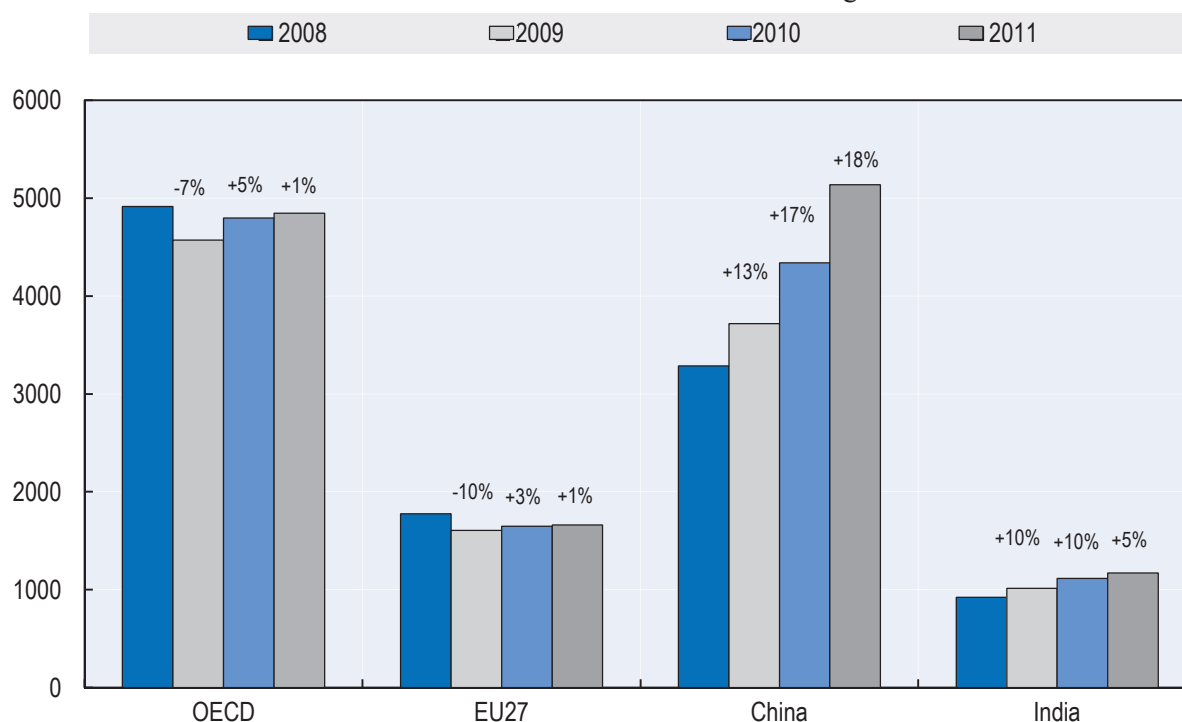
Note: 2010 and 2011 data for India are not available. Data for Italy estimated for 2011.

StatLink  <http://dx.doi.org/10.1787/888932943989>

Road freight transport suffered in 2009. The decline in activity, measured in tonne-kilometres, was 7% in the OECD and 10% in the European Union in 2009. Data for 2010 show an overall increase but volumes remain below their 2008 levels. The increase in tonne-kilometres was 4% in the EU in 2010. In 2011, the growth in tonne-kilometres has slowed down both in the OECD and EU countries, increasing by only 1%. Our preliminary estimate for the EU area in 2012, covering 75% of the total road tonne-kilometres, indicates a decline of around 4% for road freight in the European Union.

Road freight activity in emerging economies, especially China and India, continued to increase throughout the period. Tonne-kilometres grew by 13% to 18% per year in China in the period 2008-2011. In India, road freight increased by 10% in 2009 and 2010 while growth slowed down in 2011 to 5%.

Figure 1.11. **Road freight**
Billion tonne-kilometres and annual % change

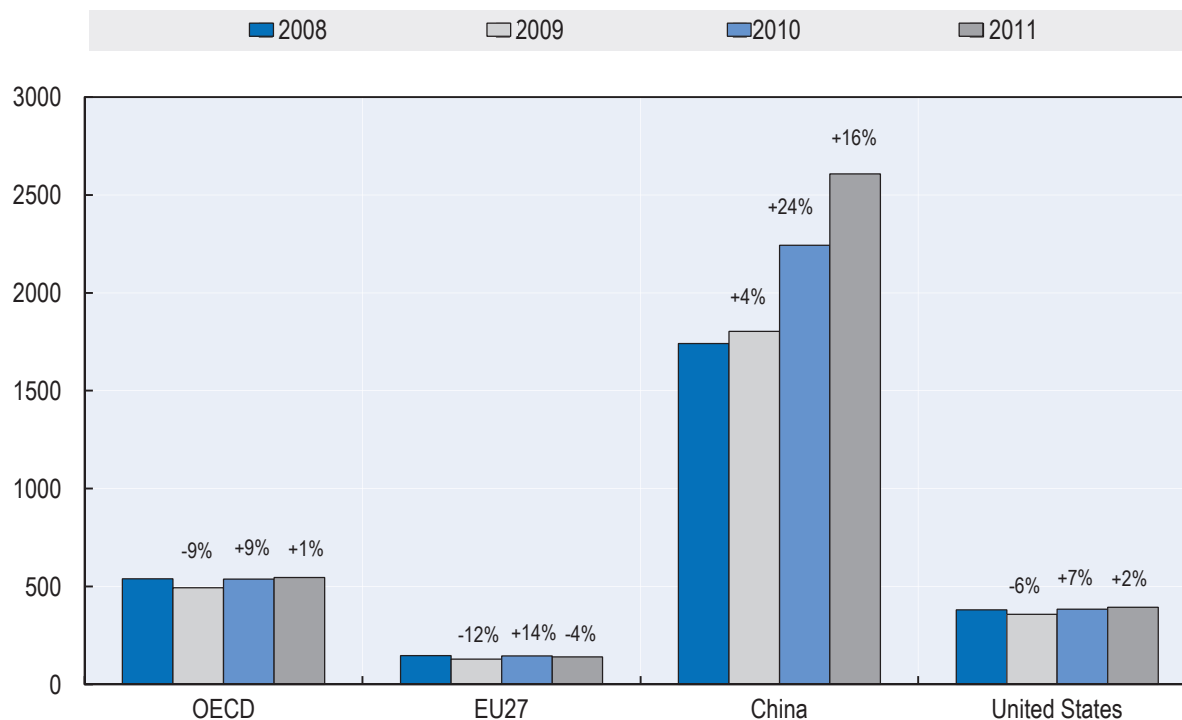


Note: Data for Canada, Greece, Italy, United Kingdom and United States estimated for 2011. Data for Malta not available.

StatLink  <http://dx.doi.org/10.1787/888932944008>

Data on freight transport by inland waterways shows a rapid recovery in tonne-kilometres in the OECD and the EU in 2010 after the decline in 2009. The growth in volume slowed down in the OECD in 2011 (+1%) and turned negative in the European Union (-4%). The economic crisis had an impact also on inland waterway freight in China where tonne-kilometres grew only by 4% in 2009. In 2010 and 2011 inland waterway freight volumes have grown rapidly in China, by 24% and 16% respectively.

Figure 1.12. **Inland waterways freight**
Billion tonne-kilometres and annual % change



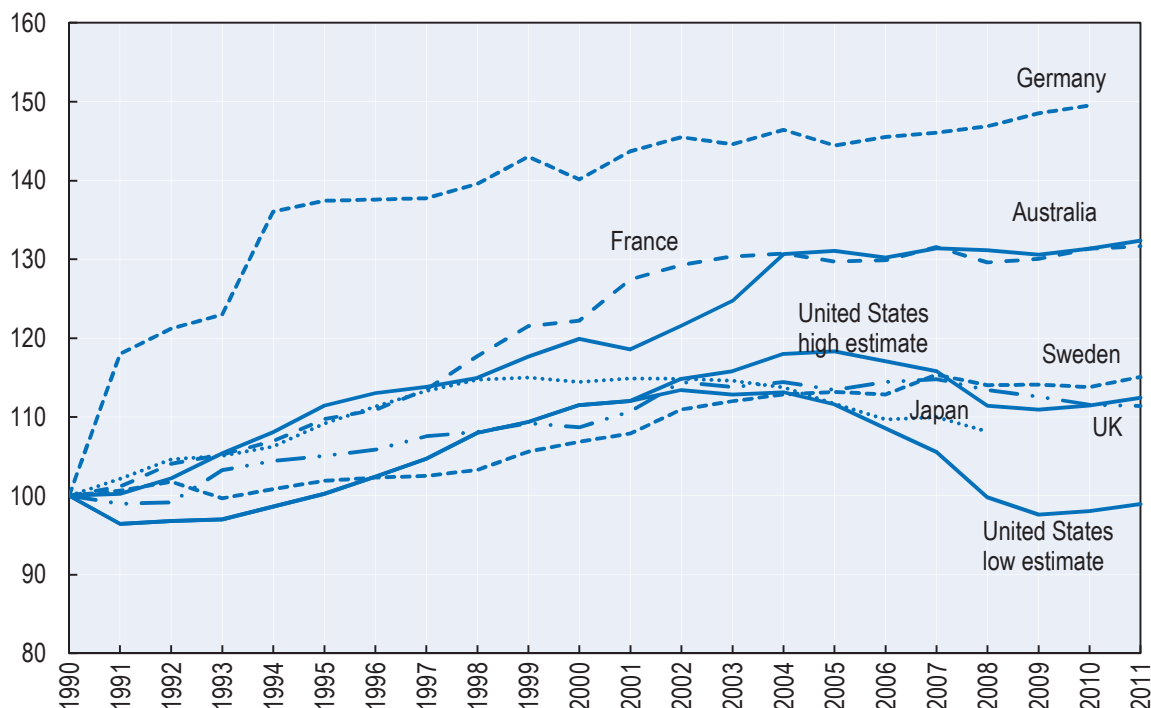
Note: Data for Switzerland estimated for 2011.

StatLink  <http://dx.doi.org/10.1787/888932944027>

Car use in high income economies

Over the past 10 to 15 years, the growth of passenger vehicle travel volumes has decelerated in several high-income economies and in some growth has stopped or turned negative.⁶ Figure 1.13 shows an index of passenger-kilometre volumes by car (and by light trucks and/or vans where relevant) in a selection of high-income economies from 1990 through 2011. The slowdown in growth is clear in Germany. In France, car use is virtually unchanged since 2003. In Japan, car use has been declining since 1999. In the United Kingdom growth is negative since 2007 and it had slowed down considerably since 2003. The United States displays a decline since around 2005 or even earlier.⁷ Where available, data for 2011, however, appear to suggest an increase in growth rates.

Figure 1.13. **Passenger-kilometres by private car**
1990=100



Note: The Federal Highway Administration estimate of vehicle occupancy in the United States has been revised for 2009 based on the 2009 National Household Travel Survey (NHTS), resulting in a lower occupancy rate than previously. High estimate applies the vehicle occupancy based on 2001 NHTS while low estimate is based on a gradual decline from 2001 rate to 2009 rate.

StatLink  <http://dx.doi.org/10.1787/888932944046>

The economic recession and relatively high fuel prices explain part of the decline in the growth of travel but not all of it. Slowing population growth, population ageing and increasing urbanisation contribute to the change in passenger vehicle use in several countries. There is evidence that car use growth has been reduced through policy interventions, particularly in urban areas and sometimes at the national level.

Research also reveals remarkable changes in the intensity of car use within some socio-demographic subgroups. Notably, car use per capita among young adults (men in particular) has declined in several countries in recent years. It is as yet not entirely clear why this decline occurs, with competing – or complementary – potential explanations relating to attitudinal and lifestyle changes (e.g. starting a family at later age), to unfavourable economic conditions for increasing numbers of young adults (e.g. rising inequality and higher unemployment) and to increased availability of options other than car use to participate in activities (e.g. more ubiquitous public transport, internet shopping and socialising).

Mobility choices, including car ownership and use, appear to be changing but it is not entirely clear why and explanations sometimes are place-specific. As a consequence, confidence in projections of mobility and car use volumes is undermined and simple, reduced form approaches based mainly on GDP and population further lose their appeal. Rising uncertainty over mobility choices is exacerbated by rising uncertainty over the future development of factors like household income. The rising uncertainty in forward looking analysis needs to be acknowledged and if some policies are more robust to uncertainty than others, such policies become relatively more appealing.

One emerging insight is that transport users are becoming more diverse, both in terms of preferences for lifestyles and mobility and in terms of budgets. Some groups choose less car-oriented lifestyles and the increased availability of other transport modes and online alternatives makes it easier for them to do so. However, in many (but not all⁸) cases such choices require a relatively high level of affluence, for example because of relatively high costs of living in urban centres and of choosing high speed rail and air travel as substitutes for long-distance road travel. Other groups appear to adapt mobility patterns out of necessity. Rising inequality and unfavourable economic conditions, including low wages and high unemployment, restrain budgets for increasing numbers of households. Rising costs of getting a driving license and of car insurance exacerbate these constraints, perhaps most for young adults. The affordability of mobility is a rising concern.

Aggregate car use is the result of location and travel choices made by a diverse set of potential car users. These choices depend on preferences, incomes, and prices of various transport options and alternatives to travel. Preferences are subject to change, and there are signs that car use is less of a priority in groups preferring urban lifestyles and more reliant on online networks. Income growth is now less self-evident with rising inequality and weaker growth prospects in many OECD economies. Prices are partly determined in markets and partly depend on transport policies broadly defined, where the latter now often are less favourable to car use than before. Together with ageing and saturation of access to cars, these changes contribute to slower growth of car use. They also reflect increasing heterogeneity among potential car users. Whereas car ownership and use was a common aspiration for most, and an aspiration that was satisfied for increasingly many, it has become a somewhat less universal goal, and perhaps one that is more difficult to reach for some.

Aggregate car travel is a variable of some policy interest, as it is roughly indicative of a country's resource needs for car transport (including road and parking infrastructure, energy, etc.), of environmental and climate change impacts, and of the sector's tax revenue generating capacity. Aggregate travel is particularly relevant for gauging investment needs when transport and economic growth are high and networks are under development, as it provides an indication of overall resource needs. In more mature economies, decisions on where and how to invest in infrastructure are driven less by overall growth than by specific needs in the network. It is, for example, anything but obvious that slower growth in aggregate car use changes the case for relieving current bottlenecks.

Goodwin (2012) argues that the broad class of 'smart' and less car-oriented mobility policies fares better than standard policies that can be characterised as accommodating towards car usage aspirations. At any rate, the need to select policies that consider overall benefits ('balanced mobility policies') rather than focussing on direct user benefits is strengthened by the rise in uncertainty over the development of car use. Appraisal, in the form of comprehensive cost-benefit analysis of policy strategies rather than just projects, is instrumental to such a policy approach. Of course, the case for such policies is not contingent on any particular pattern of development of car use, but on the need to align individual travel aspirations and choices with their social costs and benefits. This does not mean that the observed changes are irrelevant to the debate. First, to the extent that user preferences diverge less from what is socially beneficial, as is the case according to some readings of the observed change in aggregate car travel, implementing balanced mobility policies will meet with less resistance. Second, there are several indications that, apart from a possible change in preferences, behavioural change now is easier given the changing nature of travel (a larger share of non-work trips, for which own- and cross-price elasticities may be larger) and the increased availability of alternatives (more public transport, more cheap air travel, more online activities, etc.).⁹ Such changes may translate into more flexibility in travel choices, so that higher prices for car travel result in larger declines of that travel. This suggests that pricing reforms (more efficient road, parking, fuel and insurance pricing, and less favourable company car policies) can be more effective at reducing vehicle travel and encouraging use of alternative modes, and road tolls will generate less revenue than assumed in many travel models.

Revenues needed for maintaining the integrity and quality of current road networks, let alone of upgrading them, do not diminish in proportion to slower growth of network usage. If transport infrastructure is to be funded from user charges, slower or zero traffic growth will need to be accompanied by increasing charges (especially if user charges are mainly fuel taxes and fuel economy improves, as is clear from the current experience in the United States). If funding is from general revenue, transport tax revenues will grow more slowly or stagnate, unless rates are raised and/or new taxes introduced. In either case, the possibility of prolonged slow growth of car use volumes adds to the already considerable set of arguments for reforming the funding basis for transport infrastructure.

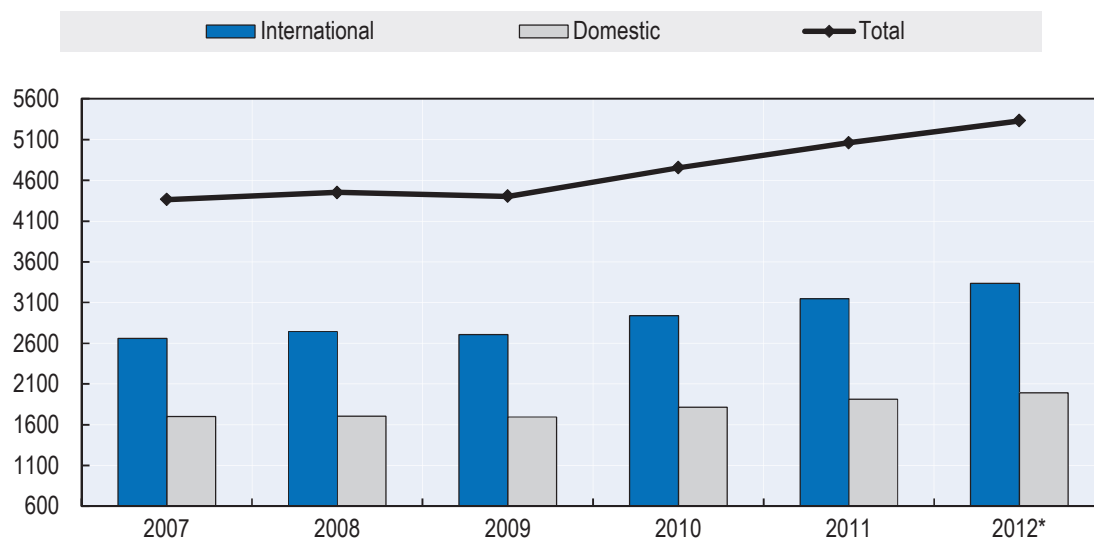
In developing economies, the rule of thumb that mobility and in particular car use will develop in line with GDP as long as policies do provide strong steering in the opposite direction, remains broadly applicable. Furthermore, strong natural population growth and rural migration to cities where motorisation is often twice that of rural areas due to higher incomes will induce pressure towards higher motorisation. Possibly, attitudinal changes related to availability of online activities could curb growth at an earlier stage than in high income economies, and faster urbanisation leading to congestion can reduce growth in car use. However, this curbing effect will not necessarily materialise in the absence of policies that disincentivise car use. Balanced mobility policies conceivably could induce levelling off of car use at lower per capita car use volumes than are observed in currently high income economies. Providing public transport is not enough for this – car use itself needs to be regulated through appropriate prices, and land-use policy. And even when car use is inconvenient because of high congestion and high purchase prices, the preference for personal mobility may lead users to turn to two-wheelers (motorcycles, in particular), as currently is the case in Asian and Latin American cities.

Air, rail and bus passenger transport

Air passenger-kilometres fell by 1.1% in 2009 as a consequence of the economic crisis. Despite the volcanic ash crises that substantially disrupted air passenger traffic in the first half of 2010, total passenger air transport has recorded a new high each year since recovery started in 2010. Passenger-kilometres increased by 8% in 2010, reaching 4 754 billion revenue passenger-kilometres (RPK) or 2.6 billion passengers. In 2011, RPKs grew by 6.5% while the estimate for 2012 puts growth at 5.3%, reaching 5 330 billion passenger-kilometres or 2.85 billion passengers.

Domestic passenger-km traffic markets grew by 4% in 2012. China, the second largest domestic passenger air transport market, recorded the strongest growth. Traffic expanded by 9.5% reaching 85.8 billion passenger-kilometres in 2012. Domestic air travel in Brazil grew by 8.6%. The United States, with over 900 billion passenger-kilometres, remains the world's largest domestic air travel market albeit passenger-kilometres increased only by 0.8%.

Figure 1.14. **World total air passenger traffic – international and domestic**
Billion passenger-kilometres

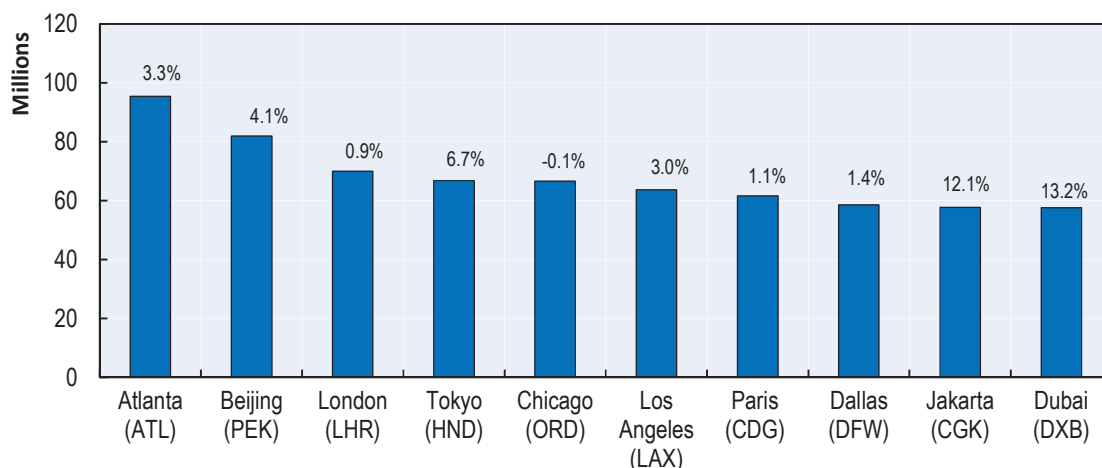


Source: Based on IATA Annual Review 2013 and ICAO Annual Report of the Council 2011. Data for 2012 a preliminary estimate.

StatLink  <http://dx.doi.org/10.1787/888932944065>

Total international passenger traffic increased by 6% in 2012. Middle Eastern carriers recorded the strongest international passenger-kilometre growth in 2012 (15.4%), followed by Latin America (8.4%) and Africa (7.5%), according to the International Air Transport Association's (IATA) preliminary release. In terms of number of passengers, Airport Council International's (ACI) preliminary data also show the highest growth for Middle East airports (12%). The number of passengers in Asia Pacific and European airports increased by 5%, while in North America growth was just over 1%.

Figure 1.15. **Top 10 busiest airports in 2012**
Number of passengers and % change over previous year



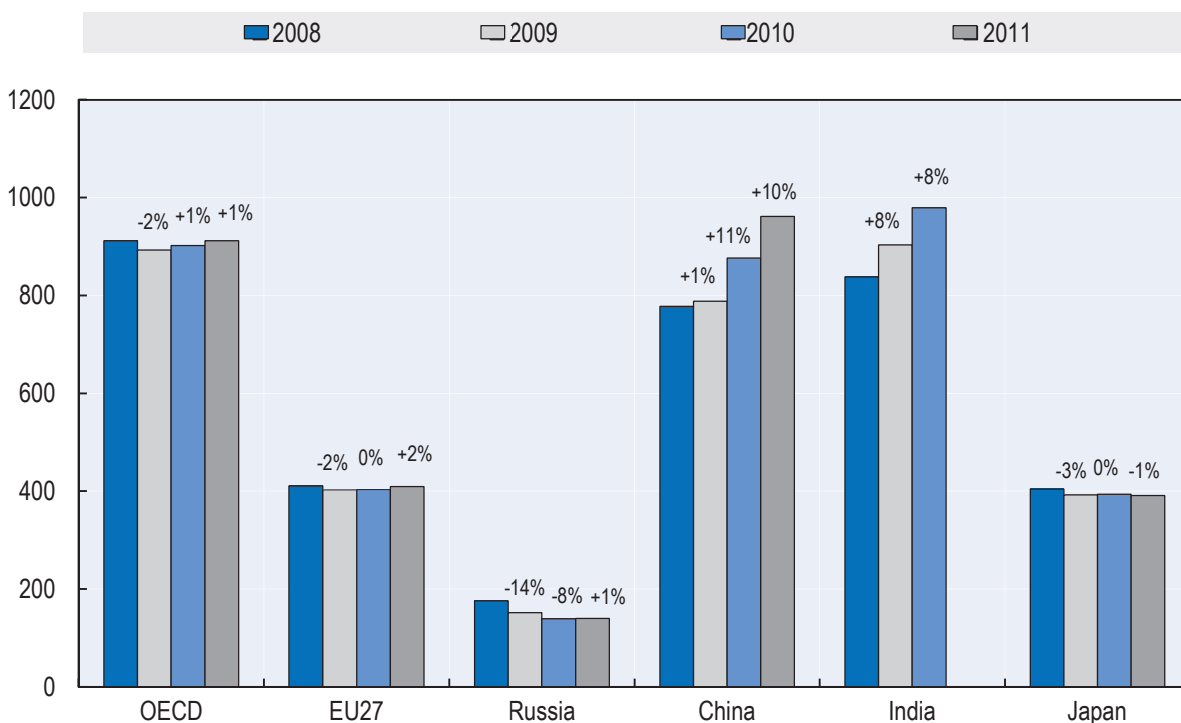
Source: Airport Council International Media Release

StatLink  <http://dx.doi.org/10.1787/888932944084>

The economic crisis had a relatively small impact on *rail passenger transport*. Rail passenger-kilometres fell around 2% in the OECD countries in 2009 after which the volume recovered back to the pre-crisis levels by 2011. In the European Union, passenger-kilometres stagnated in 2010 after falling 2% in 2009. In 2011, rail passenger-kilometres increased again by 2%, reaching the pre-crisis levels. There are marked differences between individual countries. Preliminary data from our quarterly database show that the overall passenger rail traffic for the EU area has remained stable in 2012 at near pre-crisis levels, measured in passenger-kilometres.

Outside Europe, available rail passenger-kilometres data for Russia and Japan show close to zero growth in 2011. Rail passenger-kilometres continue to show strong growth in China and India with 10% and 8% increase respectively in 2011 compared with 2010. To put these figures into perspective, the annual growth of passenger-kilometres in these two countries equals to 40% of the total rail passenger transport in the EU in 2011. India and China further account for nearly 70% of the estimated global rail passenger transport.

Figure 1.16. **Rail passenger traffic**
Billion passenger-kilometres and annual % change

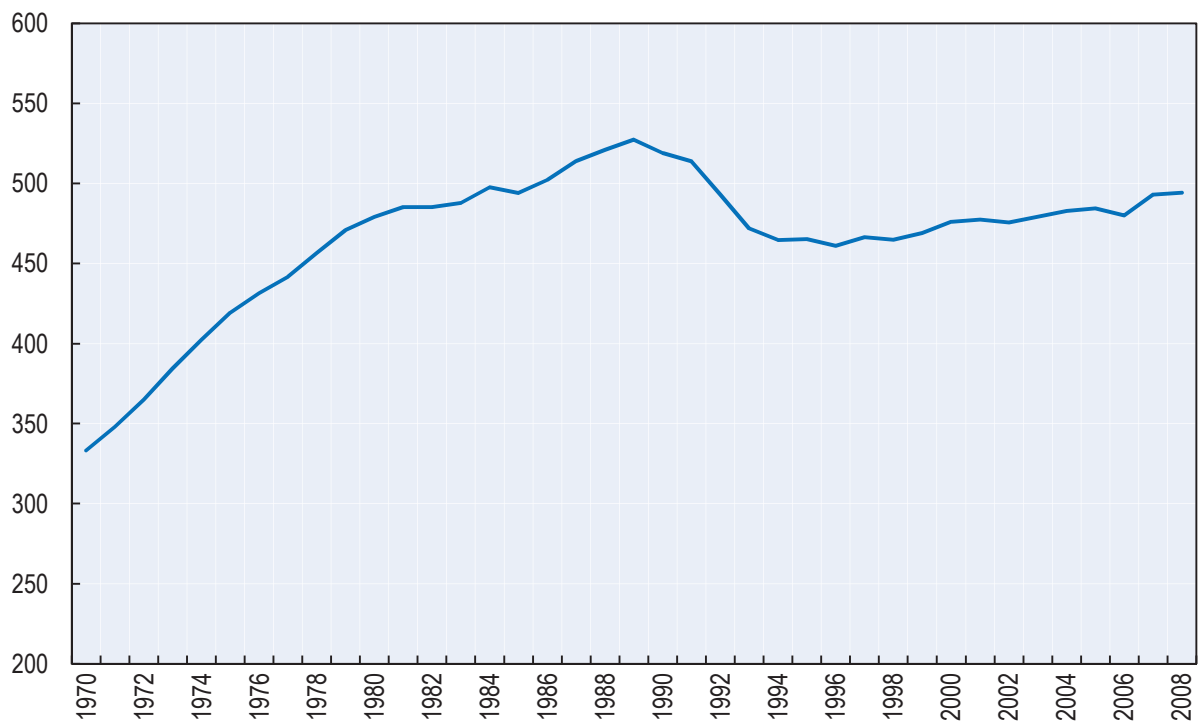


Note: 2011 data for India are not available. Japan 2011 estimate based on ITF quarterly statistics.

StatLink  <http://dx.doi.org/10.1787/888932944103>

Data on buses and coaches are less detailed. In the European Union, *bus passenger transport* experienced high growth rates in the 1970s and the 1980s. Recent data suggest a mix of trends in the EU countries. In 2011, bus transport grew in France (2.4%), Italy (1.0%), Latvia (0.3%), Lithuania (2.2%), Norway (4.8) and Spain (9.5%); while it declined in Bulgaria (-1.2%), Croatia (-4.2%), Denmark (-1.2%), Poland (-4.4%), Romania (-1.5%) and the United Kingdom (-4.4%). Outside Europe, passenger-kilometres grew in Australia (2.3%), Mexico (3.3%) and the United States (0.1%) and fell in the Russian Federation (-1.5%).

Figure 1.17. **Passenger transport by bus in the EU**
Billion passenger-kilometres



Note: European Union excludes Ireland, Luxembourg and Malta.

StatLink  <http://dx.doi.org/10.1787/888932944122>

NOTES

1. Figures in this paragraph are from *World Bank Global Economic Prospects June 2013, Table 1*.
2. Financial Times, 10 July 2013 – <http://www.ft.com/intl/cms/s/0/ab4a801c-e8a0-11e2-aead-00144feabdc0.html#axzz2YcmhyDda>).
3. Financial Times, 28 July 2013 – <http://www.ft.com/intl/cms/s/0/2f018d1c-f475-11e2-a62e-00144feabdc0.html#axzz2bGZUSD00>.
4. However, in the highest income economies there are signs that at least some forms of mobility, particularly car use, are now growing less quickly than GDP, whereas the connection between growth and freight transport remains tight. Recent evolutions of and potential impacts for future car use in high income economics are discussed separately in chapter Car use in high-income economies.
5. See <http://krugman.blogs.nytimes.com/2013/07/03/unprecedented-globalization/>.
6. For a more elaborate discussion, see <http://www.internationaltransportforum.org/jtrc/DiscussionPapers/DP201309.pdf>.
7. Two lines are shown for the United States, with the upper one assuming car occupancy rates remain at the level measured in 2001, and the lower one assuming they decline as of 2001 to the level observed in the most recent household travel survey. The true path likely is in between those two bounds.
8. For example, incomes in many U.S. city cores are relatively low, and more generally the sum of commuting and housing costs in urban centres may not differ strongly from that in suburbs.
9. Elasticities are not constant over time, although data limitations often lead to time-independent estimates. Whereas some studies have found a declining elasticity of mileage with respect to the fuel price, more recent evidence suggests a renewed increase.

References

- Airport Council International Media Release on Preliminary 2012 World Airport Traffic and Rankings on 26/03/2013; <http://www.aci.aero/News/Releases/Most-Recent/2013/03/26/Preliminary-2012-World-Airport-Traffic-and-Rankings->
- Containerisation International DataHub, accessed in 2011.
- CPB Netherlands Bureau for Economic Policy Analysis, World Trade Monitor, June 2013.
- Federal Highway Administration (FHWA), *National Household Travel Survey 2009*, United States Department of Transportation.
- Financial Times, 10 July 2013, <http://www.ft.com/intl/cms/s/0/ab4a801c-e8a0-11e2-aead-00144feabdc0.html#axzz2YcmhyDda>.
- Financial Times, 28 July 2013 - <http://www.ft.com/intl/cms/s/0/2f018d1c-f475-11e2-a62e-00144feabdc0.html#axzz2bGZUSD00>.
- Goodwin P., 2012, *Peak Travel, Peak Car and the Future of Mobility: Evidence, Unresolved Issues, and Policy Implications, and a Research Agenda*, ITF Discussion Paper No 2012-13 - <http://www.internationaltransportforum.org/jtrc/DiscussionPapers/DP201213.pdf>.
- International Air Transport Association (IATA), *Air Transport Market Analysis 12/12*.
- International Air Transport Association (IATA), *Annual Review 2013*.
- International Civil Aviation Organisation (ICAO), *Annual Report of the Council 2011*.
- IMF, *World Economic Outlook, Update July 2013*, International Monetary Fund, Washington D.C.
- Krugman, P. <http://krugman.blogs.nytimes.com/2013/07/03/unprecedented-globalization/>.
- OECD (2013), *Economic Outlook*, No. 93, Vol. 2013/5, OECD, Paris.
- UNCTAD, *Review of Maritime Transport 2012*, United Nations, Geneva.
- Van Dender K. and Clever M., 2013, *Recent Trends in Car Usage in Advanced Economies – Slower Growth Ahead? Summary and Conclusions of the ITF/OECD Roundtable on Long-run Trends in Car Use*, Paris, 29-30 November 2012, ITF Discussion Paper 09-2013. <http://www.internationaltransportforum.org/jtrc/DiscussionPapers/DP201309.pdf>.
- World Bank (2013), *Global Economic Prospects*, June 2013, World Bank, Washington D.C.
- World Shipping Council, *Top 50 World Container Ports*, <http://www.worldshipping.org/about-the-industry/global-trade/top-50-world-container-ports>



From:
ITF Transport Outlook 2013
Funding Transport

Access the complete publication at:
<https://doi.org/10.1787/9789282103937-en>

Please cite this chapter as:

International Transport Forum (2013), "Transport and the macroeconomy – current situation and near term expectations", in *ITF Transport Outlook 2013: Funding Transport*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789282103937-4-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.