European Environment Agency

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Transport infrastructure investments (TERM 019) - Assessment published Jan 2011

Generic metadata

Topics:

Transport (Primary topic)

Tags:

GDP | TERM | infrastructure | Assessment10 | TERM2010 | TERM19 | TERM019 | transport

DPSIR: Driving force

Typology: Descriptive indicator (Type A – What is happening to the environment and to humans?)

Indicator codes

- TERM 019

Temporal coverage:

1995-2008

Geographical coverage:

Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Italy, Liechtenstein, Lithuania, Luxembourg, Norway, Poland, Portugal, Slovakia, Spain, Switzerland, United Kingdom

Contents

Key policy question: Are we giving investment priority to environmentally friendly transport systems?

Key messages

Spending on transport infrastructure has increased over the decade to 2008 for the 20 Member States included in the EEA-32 analysis, both in absolute terms and as a proportion of GDP. Road infrastructure continues to receive the majority of investment, and although other modes of transport (rail, sea and air) have increased their share of investment overall in the last decade, the most recent five years have seen a return to increasing proportions of investment in road infrastructure. The EU-12 Member States have seen proportionally much greater rises in the level of transport investment than the EU-15 Member States in all modes except sea transport infrastructure. Overall investment in transport infrastructure grew by almost 3% in 2007-2008 for the EEA-32 Member States included in the analysis, despite a general economic recession and reduction in transport activity in that year.

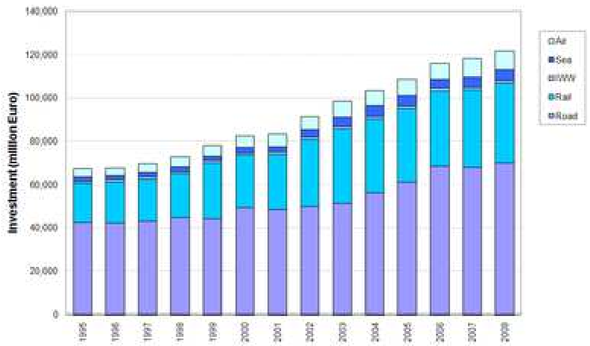

Fig. 1: Investment in transport infrastructure (million Euro) in EEA member countries

Note: Investment in Infrastructure in EEA member countries, in term of million euro. Only those countries (20 in total) for which complete datasets were available for road, rail, inland waterways, sea and air have been included. They are: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Italy, Liechtenstein, Lithuania, Luxembourg, Norway, Poland, Portugal, Slovakia, Spain, Switzerland and the UK. Data was not available for Italy in 2008, so 2007 data was used as a proxy.

Data source:

OECD/ITF, Infrastructure investments in million EUR , http://www.internationaltransportforum.org/statistics/investment/data.htm. date of extraction: 13 September 2010

Eurostat, B1GM Gross domestic product at market prices, Table NAMA_GDP_C = GDP and main components - Current prices, available from the website of Eurostat via following path.

Downloads and more info

Key assessment

For the 20 Member States included in the EEA32 analysis, the annual investment in transport infrastructure in absolute terms has risen steadily from around €67 bn in 1995 to more than €120 bn in 2008. This equates to a rise from around 0.9% of GDP to approximately 1.2% of GDP in the same period (a third increase). Road infrastructure has accounted for by far the largest expenditure in every year, though its share is smaller than a decade ago (from 62% to 58% in the decade to 2008). The share of investment in rail has increased slightly (28-30%) in the last 10 years, as have the shares of investment in sea (3-4%) and air (6-7%) infrastructure. However, looking over the last 5 years this trend reverses: the share of road infrastructure has increased between 2003 and 2008 (52%-58%), whilst the share of investment in all other modes has dropped. Inland waterways continue to attract the lowest share of infrastructure investment; its share has shrunk by nearly a third over 10 years to just over 1% in 2008. The 10-year increase in the share of investment directed towards rail and sea infrastructure could be seen as a positive shift towards more environmentally friendly modes of transport. However, in the case of sea infrastructure it could equally be argued that the investment has enabled an overall increase in freight movement, rather than shifting freight away from less environmentally friendly modes. Additionally, the more recent trend for road transport to take an increasing proportion of infrastructure investment could be seen as regressive from an environmental perspective.

In the European Union, there is a marked difference in investment trends between the EU-12 and EU-15. Although overall investment in transport infrastructure in the EU-12 is around one tenth that of the EU-15, growth in investment over the last decade is far higher – around 400% growth in the EU-12 compared to just over 50% in the EU-15. There are two likely contributing factors to this large rise: firstly, the increase may reflect efforts to compensate for earlier underinvestment in transport infrastructure, and is compounded by the increased demand for transport in growing economies. Secondly, accession to the European Union, and resulting financial aid, can act to facilitate investment. Expenditure on road and air infrastructure in the EU-12 both grew by a factor of 6 and 5 respectively, whilst investments in rail and inland waterways grew by a factor of 3. Investment in sea transport infrastructure grew comparatively little (90% in the decade to 2008), but this is likely a product of the EU-12's geography: many Member States are landlocked, and those that have coastlines are not well positioned for international shipping. In contrast, shipping infrastructure investment in the EU-15 has seen the greatest 10-year increase of any mode (130% to 2008), and is the only area where growth in spending in the EU-15 has been greater than the EU-12. In particular, Italy reported a huge increase in expenditure between 2000 and 2005, and in 2004 accounted for almost half of all shipping infrastructure investment in the EU-27. It is interesting to note that, although over the ten years to 2008 investment in rail infrastructure in the EU-15 has risen by nearly 80%, virtually all of this increase occurred in the first five years, with very little growth (0.7%) in investment since 2003.

Transport infrastructure investment grew by around 3% in 2007-2008 across the EEA-32 Member States included in the analysis. This is in contrast to a decrease in transport activity - both passenger and freight - in the same period (see TERM12, passenger transport demand and TERM13, freight transport demand). As transport infrastructure investments are largely public-sector driven, they are less affected by economic recession in the short term. However, it is possible that the resulting pressure on government spending will impact on infrastructure investments in future years.

Specific policy question: What is the GDP share of infrastructure investment by mode in EEA Member Countries?

Fig. 2: Percentage of GDP used for transport infrastructure investment by mode (EEA32)

Note: Trends of transport infrastructure investments in relation to GDP between 1995 and 2008. Only those countries (20 in total) for which complete datasets were available for road, rail, inland waterways, sea and air have been included in Figure 1. They are: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Italy, Liechtenstein, Lithuania, Luxembourg, Norway, Poland, Portugal, Slovakia, Spain, Switzerland and the UK. Data was not available for Italy in 2008, so 2007 data was used as a proxy.

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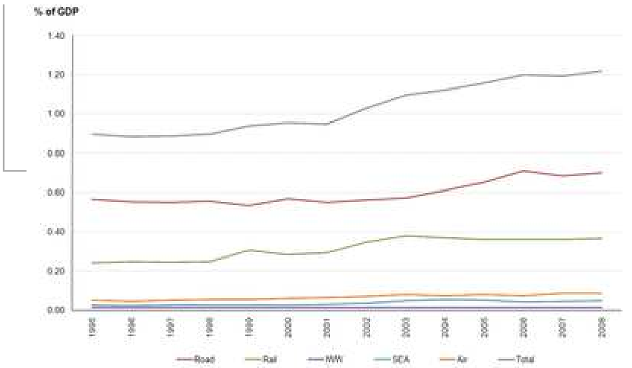

Eurostat, B1GM Gross domestic product at market prices, Table NAMA_GDP_C = GDP and main components - Current prices, available from the website of Eurostat via following path or direct link. http://epp.eurostat.ec.europa.eu/portal/page?_pageid=0,1136173,0_45570701&_dad=portal&_schema=PORTAL

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Specific assessment

The proportion of GDP invested in transport infrastructure for the EEA-32 Member States (for which data were available) has risen steadily over the decade to 2008, when it accounted for just over 1.2% of GDP. The first five years' (1998-2003) growth in investment has been driven mainly by an increase in spend on rail infrastructure (from 0.25% to 0.38% of GDP) whilst the latter five years (2003-2008) have seen a rise in spend on road infrastructure (from 0.57% to 0.70% of GDP) driving the increase in overall investment. Investment in seaports and airports also grew strongly over the 10-year period (but from much lower starting levels), however in the last five years the share of GDP spend on seaports has declined slightly, and increase in share of spend on airports has slowed.

Data sources

- Infrastructure Investment (external data reference)
- National accounts (Eurostat) (external data reference)

Justification for indicator selection

Infrastructure development is important to enhance market integration, improve trade and foster development in order to strengthen regional cohesion inEurope. In order to increase the capacity of transport infrastructure, the European Commission has set itself the objective of offering users high-quality and safe infrastructure that includes all transport modes and to allow for optimal use of existing capacities by either creating new or upgrading existing infrastructure (White Paper and TEN-T revision objective).

The original priority of TEN-T (Trans – European Transport Network) was the elimination of bottlenecks, in particular in the frontier regions of the accession countries and the development of infrastructure projects crossing through natural barriers. The Gothenburg European Council in 2001 invited the Community institutions to adopt revised guidelines for the TEN-T, with a view to giving priority, where appropriate, to infrastructure investment for railways, inland waterways, short sea shipping, intermodal operations and effective interconnections (European Commission, 2004).

The Community Decision No. 884/2004/EC of 29 April 2004 amending the Community guidelines for the development of the TEN-T identified a set of thirty priority projects. Of these 18 are railway projects, 3 are mixed road/rail projects, 2 are inland waterway projects and 1 a sea project. The choice reflects a shift towards supporting more environmentally friendly transport modes

Based on the Green Paper issued in February 2009 and the subsequent consultation process (“Consultation on the future trans-European transport network policy” COM(2010)212), the Commission aims to develop a dual layer TEN-T, with a core network of the strategically most important nodes and links overlaying the relatively dense comprehensive network. At the time of writing (August 2011), the policy revision process is still ongoing.

Scientific references:

- European commission (2004). Decision No. 884/2004/EC of the European Parliament and of the Council amending Decision No 1692/96/EC on Community guidelines for the development of the trans-European transport network of 29 April 2004
- EC Trans-European Transport Network (TEN-T)
- European Commission, 2009. TEN-T: a policy review - Towards a better integrated trans-European transport network at the service of the common transport policy. COM(2009)44 final.
- EEA, 2001. Indicators tracking transport and environment integration in the EU EEA TERM2001

More information about this indicator

See this indicator specification for more details.

Contacts and ownership

EEA Contact Info

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Ownership

- European Environment Agency

EEA Management Plan

2010 2.9.2(note: EEA internal system)

Dates

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