

EU-27 construction activity falls by 16 % from its pre-crisis high by the second quarter of 2011

The impact of the financial and economic crisis on construction in the EU

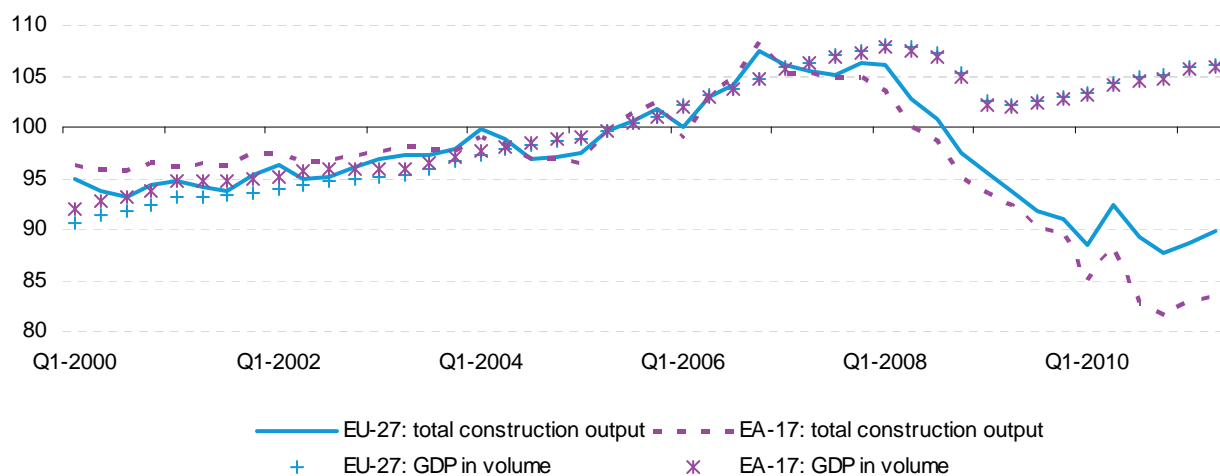
The EU-27's construction activity accounted for 6.0 % of GDP in 2010 and generated EUR 655 388 million of added value. This publication provides data on short-term business statistics (STS) for construction over the period 2000-2011. It shows that the financial and economic crisis had a deep negative impact in most Member States, with construction activity more than halved in Latvia, Lithuania and Ireland, while Poland and Sweden were the only Member States where construction activity continued to grow during the crisis.

Figure 1 presents the index of production for total construction in the EU-27 and the euro area (EA-17), alongside development of GDP (in volume terms). Both indicators provide information relating to real changes in activity, with the effect of inflationary price changes being removed.

GDP in volume terms grew, on average, at a somewhat faster pace in the EU-27 than in the euro area in the first half of the reference period. Figure 1 shows that from 2007 onwards construction activity slowed – in comparison with the overall economic growth which continued to follow an upward path through to the first quarter of 2008. After the EU-27 economy went into recession, the downturn in construction activity was far greater than the average losses recorded for the whole economy.

The downturn in euro area construction activity started earlier than for the EU-27; the length of the downturn and its magnitude were also larger for the euro area. In the aftermath of the financial and economic crisis, the gap between the indices of production for the EU-27 and euro area widened, as construction output continued to fall until the final quarter of 2010 in the euro area.

Figure 1: Index of production for total construction and GDP, EU-27 and euro area, 2000-2011 ⁽¹⁾
 (2005=100)



⁽¹⁾ Construction output index: seasonally adjusted, includes estimates. Index for constant price GDP: seasonally adjusted and working day adjusted.

Source: Eurostat (online data codes: [sts_copr_q](#) and [nama_gdp_k](#))

Largest annual reduction in total construction activity was in 2009 when EU-27 production fell by 8.5 %

Table 1 provides a summary of the development of annual production indices for the EU-27 and the euro area between 2000 and 2010. It shows that over that decade the largest declines in total construction activity took place in 2009, when the index of production fell by 8.5 % in the EU-27 and by 7.9 % in the euro area.

The decline of the EU-27 index of production in 2010 was only half as big as in the previous year (-4.1 % compared with -8.5 %). This was in contrast to developments for the euro area where the pace of declining output was more or less stable throughout 2009 and 2010, with only a 0.2 percentage point difference between the rates.

Table 1 also shows a breakdown of the index of production for total construction: this was dominated by building which accounted for 78.0 % of the value added generated within the EU-27 construction sector in 2005.

Table 1: Annual growth, index of production for construction, EU-27 and euro area, 2000-2010 ⁽¹⁾
(% growth – comparison with the previous year)

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EU-27	Total construction	4.0	0.5	1.1	1.8	0.8	1.9	3.6	2.0	-3.8	-8.5	-4.1
	Building	5.2	0.4	0.7	2.7	1.8	2.2	4.3	1.9	-4.3	-10.9	-3.4
	Civil engineering	0.2	1.1	1.7	-1.5	-3.2	1.9	-1.2	2.9	-1.4	2.3	-7.1
EA-17	Total construction	4.1	0.6	0.4	0.9	0.0	2.2	3.7	1.3	-5.5	-7.9	-7.7
	Building	5.3	0.4	-0.1	1.6	0.8	2.6	4.7	1.2	-6.1	-10.1	-6.7
	Civil engineering	1.4	0.8	0.5	-0.8	-2.1	2.7	-1.8	2.1	-4.2	0.6	-12.0

⁽¹⁾ Estimates; working day adjusted series.

Source: Eurostat (online data code: [sts_copr_a](#))

Building more dynamic, yet more affected by the crisis than civil engineering

From the start of 2003, the respective EU-27 indices for building (residential and non-residential) and civil engineering (railways, roads, bridges, etc.) started to diverge, a pattern which was amplified as a result of the fairly rapid expansion in building output between 2003 and 2006.

However, these developments were counteracted in the aftermath of the financial and economic crisis, as building output fell at a rapid pace from 2008 onwards. In contrast, the pattern of development for EU-27 civil engineering output was more stable through to 2009 – fluctuating within a relatively narrow range (+/-5 % of its average level in 2005). The largest declines in EU-27 building activity (on the basis of annualised rates of change) were recorded in 2009 (-10.9 %), whereas the largest contractions for civil engineering occurred in 2010 when the index of production fell by 7.1 %.

Within the euro area, the development of the index of production for civil engineering followed more closely (than in the EU-27) the pattern for total construction. In terms of annualised rates of change, the largest year-on-year reduction in

building activity in the euro area was recorded in 2009 (-10.1 %). This was surpassed by the reduction in civil engineering activity in 2010 as production fell by 12.0 %; this latter rate of change was the biggest annual reduction in activity for either building or civil engineering in the EU-27 or the euro area during the last decade.

Long term development of construction activity across the EU Member States

For 2010, full information on the share of construction in GDP is not yet available. However, in 2009 the relative importance of construction ranged from 10.9 % of GDP in Romania and 10.8 % in Spain, to 4.5 % or less in Greece (provisional), Germany, Hungary and Malta.

The relative importance of construction is also reflected in the share of each Member State's construction activity (as measured by gross value added) in the EU-27 total; this information forms the basis for deriving the weights that are used within STS to compile the EU-27 indices; these weights are shown in Table 2.

It should be noted that the importance of the different Member States in EU-27 construction activity was rather atypical in 2005. The highest shares of EU-27 construction activity were

recorded for the United Kingdom (21.2 %) and for Spain (18.8 %); the latter was particularly influenced by a rapid growth in construction activity during the first half of the decade, which was reinforced by high growth for Spanish civil engineering activity over the same period. In a similar vein to Spain, there was also considerable growth in the Irish construction activity during the first half of the last decade, which resulted in a 2.8 % share of EU-27 construction activity by 2005, well above Ireland's share of EU-27 GDP (1.5 % in 2005).

France had the third largest construction activity in the EU-27 in 2005 (12.5 % of the total), followed by Italy (11.5 %), while German construction activity was relatively small, accounting for only 11.1 % of the EU-27 total (note that construction activity had been considerably higher in Germany during the 1990s after reunification).

The relative importance of building on the one hand and civil engineering on the other hand varied considerably between Member States. Building activity was relatively important in the United Kingdom and also, although to a lesser degree, in Italy and Ireland. In contrast, German and Spanish civil engineering accounted for a particularly high share of EU-27 activity, while the relative importance of civil engineering was also fairly high in Poland, Portugal and Greece.

Table 2 shows the annual change in construction activity over the period from 2000 to 2010. The highest overall growth rates for construction between 2000 and 2005 were recorded for several Member States that joined the EU in 2004 or 2007; this was particularly true for Bulgaria (up 119.3 %), the Baltic Member States (75 % to 100 %), Hungary (59.9 %), Malta (42.9 %), the Czech Republic (42.0 %), Slovakia (34.4%)

Table 2: Annual growth, index of production for total construction, 2000-2010 ⁽¹⁾
(% growth – comparison with the previous year)

	Weight in 2005 (% of EU-27)	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EU-27	100.0	4.0	0.5	1.1	1.8	0.8	1.9	3.6	2.0	-3.8	-8.5	-4.1
EA-17	71.3	4.1	0.6	0.4	0.9	0.0	2.2	3.7	1.3	-5.5	-7.9	-7.7
Belgium	2.0	:	-2.4	-2.6	-0.2	2.9	0.6	3.3	1.5	-0.4	-3.3	-2.1
Bulgaria	0.1	:	13.4	3.8	4.6	35.3	31.7	24.8	26.8	12.6	-14.2	-17.9
Czech Republic	0.8	0.8	10.3	2.9	9.5	8.6	5.2	6.4	6.8	-0.3	-0.6	-7.3
Denmark	1.7	1.7	-6.7	-1.2	2.1	-0.2	3.1	3.8	-4.2	-5.7	-10.8	-8.4
Germany	11.1	-3.5	-7.6	-4.3	-4.2	-5.3	-5.3	6.3	2.9	-0.7	0.1	0.2
Estonia	0.1	18.6	4.2	22.6	6.1	12.5	22.4	26.9	13.5	-13.3	-29.8	-12.4
Ireland	2.8	:	3.4	2.0	5.7	25.3	10.0	3.8	-13.5	-29.2	-36.9	-30.1
Greece	1.1	:	6.6	39.1	-5.7	-15.9	-38.7	3.6	14.3	7.7	-17.5	-31.6
Spain	18.8	10.7	3.0	0.6	7.2	2.3	10.9	2.2	-4.3	-16.3	-11.3	-20.2
France	12.5	6.0	1.2	-2.3	-0.8	-1.2	2.7	4.2	2.3	-3.7	-5.9	-3.4
Italy	11.5	6.2	6.2	5.1	2.8	1.6	1.3	3.9	6.4	-1.1	-11.5	-3.4
Cyprus	0.3	:	3.7	3.2	6.5	4.4	2.9	4.1	6.8	2.3	-10.6	-8.0
Latvia	0.1	7.2	6.2	12.1	13.1	13.1	15.5	13.3	13.6	-3.1	-34.9	-23.4
Lithuania	0.2	-18.1	7.4	21.7	27.8	6.8	9.9	21.7	22.2	4.0	-48.5	-7.7
Luxembourg	0.3	:	4.2	1.9	0.9	-1.1	-0.9	2.6	2.6	-1.8	0.8	0.1
Hungary	0.5	7.7	9.3	18.0	2.7	4.3	15.7	-0.7	-14.0	-5.2	-4.4	-10.4
Malta	0.0	:	-4.0	23.4	-5.7	8.0	18.5	4.4	7.2	6.6	-7.9	0.2
Netherlands	4.9	:	1.9	-3.1	-4.9	-2.6	3.2	2.3	5.6	3.2	-3.0	-11.0
Austria	2.2	-0.6	-0.6	0.5	12.3	5.0	4.9	5.9	3.9	-0.9	-1.6	-4.3
Poland	1.7	1.2	-10.9	-10.1	-7.2	-1.9	9.2	15.6	16.3	10.2	4.5	3.7
Portugal	1.8	:	4.7	-1.1	-8.6	-4.4	-4.5	-6.3	-4.0	-1.2	-6.6	-8.5
Romania	0.4	:	11.5	4.5	3.2	1.4	6.6	15.6	33.1	26.7	-15.2	-13.4
Slovenia	0.2	2.9	-10.5	7.5	9.6	0.7	2.0	15.7	18.5	15.5	-20.9	-16.9
Slovakia	0.2	0.2	0.7	4.1	5.7	5.9	14.5	15.4	5.5	11.5	-11.2	-4.3
Finland	1.3	8.0	-0.1	1.4	4.2	4.4	5.2	7.8	10.2	4.1	-13.2	11.9
Sweden	2.1	4.4	5.4	0.3	0.0	0.1	3.0	8.0	6.2	4.2	-3.5	5.9
United Kingdom	21.2	4.2	1.1	4.6	5.6	3.5	-0.5	1.4	2.3	-1.3	-11.6	7.3
Norway	-	-2.1	1.2	-0.1	2.1	7.4	8.9	6.0	5.8	1.1	-8.3	-0.1
Switzerland	-	2.7	-2.7	0.9	0.1	3.1	2.6	2.0	1.2	2.4	1.4	1.9
Montenegro	-	:	5.3	0.3	-8.5	-5.8	7.6	46.1	-1.7	20.7	-19.3	-0.6
Croatia	-	-8.9	3.7	13.0	22.3	1.6	-0.2	9.3	2.6	11.8	-6.9	-15.9
FYR of Macedonia	-	:	:	:	:	:	:	-12.3	7.5	25.5	13.7	15.2
Turkey	-	:	:	:	:	:	:	18.4	5.5	-7.6	-16.3	17.5

⁽¹⁾ Estimates; working day adjusted series.

Source: Eurostat (online data code: [sts_copr_a](#))

and Romania (30.0 %). Among the EU-15 Member States, there were also high growth rates in Ireland (53.7 %) and Spain (26.0 %).

At the other end of the spectrum, there was a considerable contraction in construction activity between 2000 and 2005 in Greece (-28.0 %), Germany (-24.0 %), Poland (-20.3 %) and Portugal (-13.6 %), while modest reductions were evident in the Netherlands, Denmark, Belgium and France.

The crisis hit Irish, Spanish and Danish construction sectors as early as 2006; biggest post-crisis declines in activity in Ireland, Lithuania and Latvia

In most Member States, construction activity peaked between 2006 and 2008, after which there was a downturn (often considerable) in activity. A peak was reached as early as 2006 in Denmark, Ireland and Spain, while relative highs were recorded in 2007 for Belgium, the Czech Republic, Germany, Estonia, France, Italy, Latvia, Luxembourg, Austria and the United Kingdom; most of the remaining Member States saw activity peak in 2008. There was no peak in activity in the second half of the decade in Portugal or Hungary (where construction output fell consistently), nor in Poland (where output continued to expand).

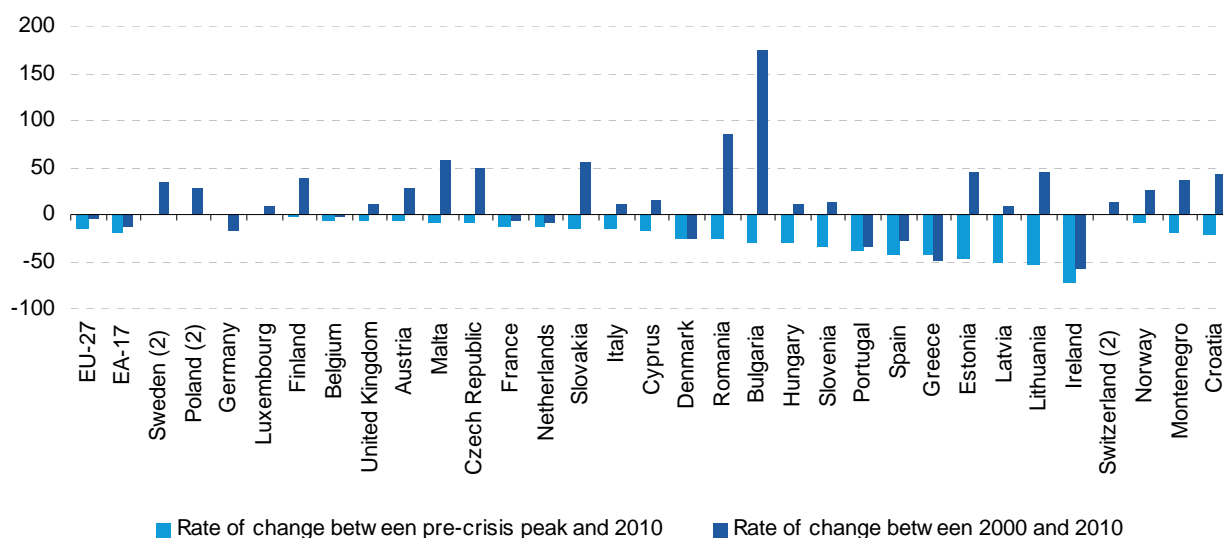
Figure 2 provides a summary of two different rates of change: it shows the overall rate of change in construction output between pre-crisis highs and 2010 (left bars), as well as the overall rate of change between 2000 and 2010 (right bars). The EU Member States are sorted on the first of these

criteria, in other words, according to the magnitude of losses since the onset of the financial and economic crisis. The crisis hit construction activity in almost all of the Member States with the largest decline in activity recorded in Ireland, where construction output fell by 73.0 % from its pre-crisis high to 2010. Very large reductions in activity were also recorded in the Baltic Member States, Greece and Spain (losses of between 43 % and 53 %), as well as in Portugal, Slovenia and Hungary (between 30 % and 40 %); note that most of these countries were characterised as having had relatively high growth prior to the crisis.

Construction output continued to grow in Poland, while in Sweden the growth in 2010 was sufficiently strong that it more than cancelled the decline in 2009. The level of construction activity was almost unchanged in 2010 (compared with its pre-crisis peaks) in Germany (-0.4 %) and Luxembourg (-1.0 %).

These rates may be considered in relation to longer-term developments to place them into context. For example, while there was almost no change in the level of German construction activity between the onset of the crisis and 2010, the level of construction activity in Germany remained subdued and was lower in 2010 than it had been in 2000. In contrast, although there were considerable reductions in construction activity in Bulgaria, Romania and the Baltic Member States, this followed particularly high growth rates prior to the crisis, such that output in 2010 in Bulgaria was still more than twice its average level of 2000 (despite a contraction of almost 30 % between the onset of the crisis and 2010) – see Figure 3 for more details.

Figure 2: Growth rates of the index of production for total construction ⁽¹⁾
(overall % growth – comparison of annual index for 2010 with pre-crisis peak and with 2000)



⁽¹⁾ The pre-crisis peak varies according to the geographic entity under consideration; estimates; working day adjusted series.

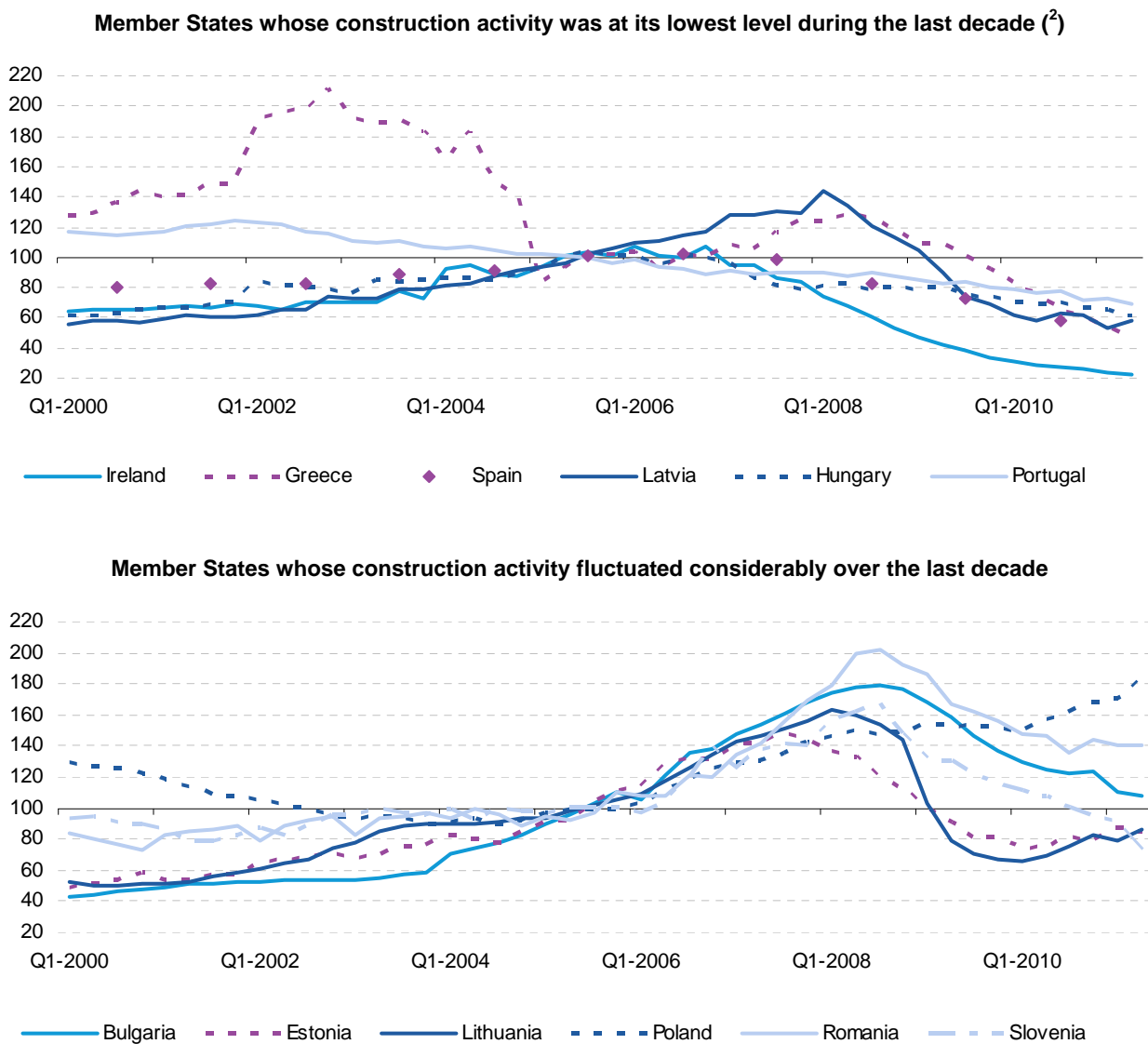
⁽²⁾ No discernable peak observed prior to or during the financial and economic crisis; the index of production continued to expand.

Source: Eurostat (online data code: [sts_copr_a](#))

Figure 3 provides a set of graphs that group the developments within the Member States. The first of the five graphs shows the considerable downturn in construction activity for six Member States, where construction was reduced both in comparison with pre-crisis peaks and in comparison with a decade before. The second shows a group of Member States whose construction activity fluctuated considerably, but which grew overall between 2000 and 2011. Note that despite a reduction in activity during the first half of the decade, there was continuous growth in Polish construction activity during the second half of the decade.

The third graph groups together those Member States that had little or no growth in construction activity in the first half of the last decade and whose level of construction remained, in 2011, below its average level for 2000. The final two graphs show developments for those Member States that generally recorded an increase in their construction activity between 2000 and 2011: for the fourth graph the countries are characterised by a slowdown in activity since the middle of the last decade, while for the final graph there was relatively steady growth, except for the period directly corresponding with the financial and economic crisis.

Figure 3: Index of production for total construction, 2000-2011 ⁽¹⁾
(2005=100)

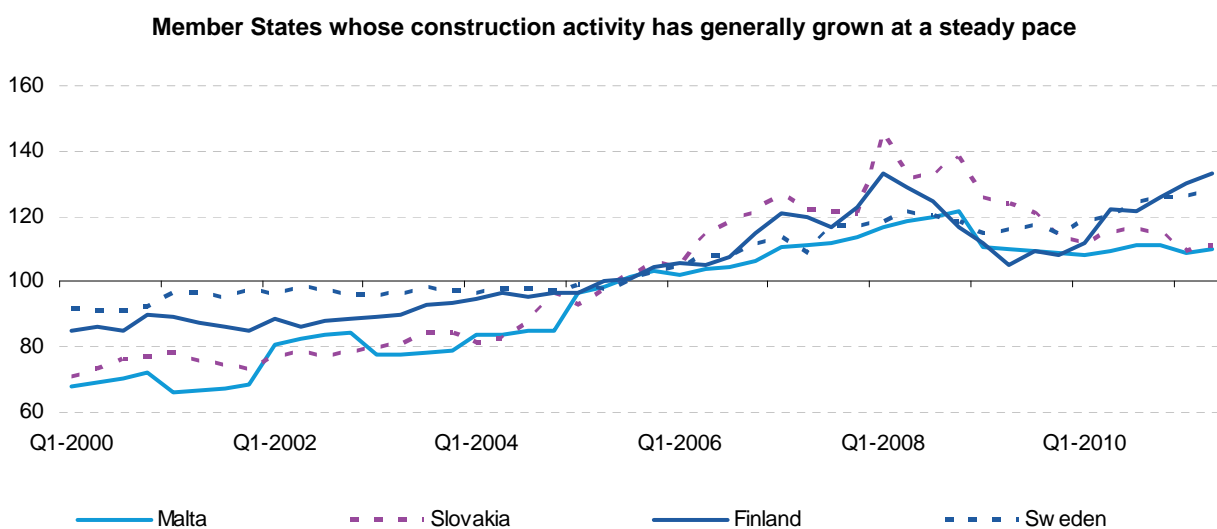
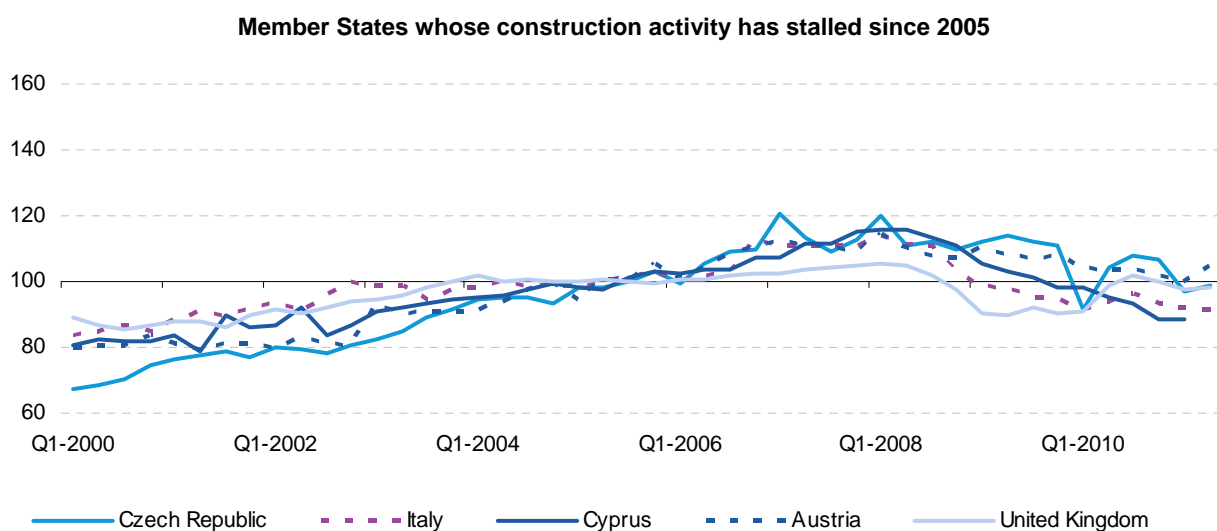
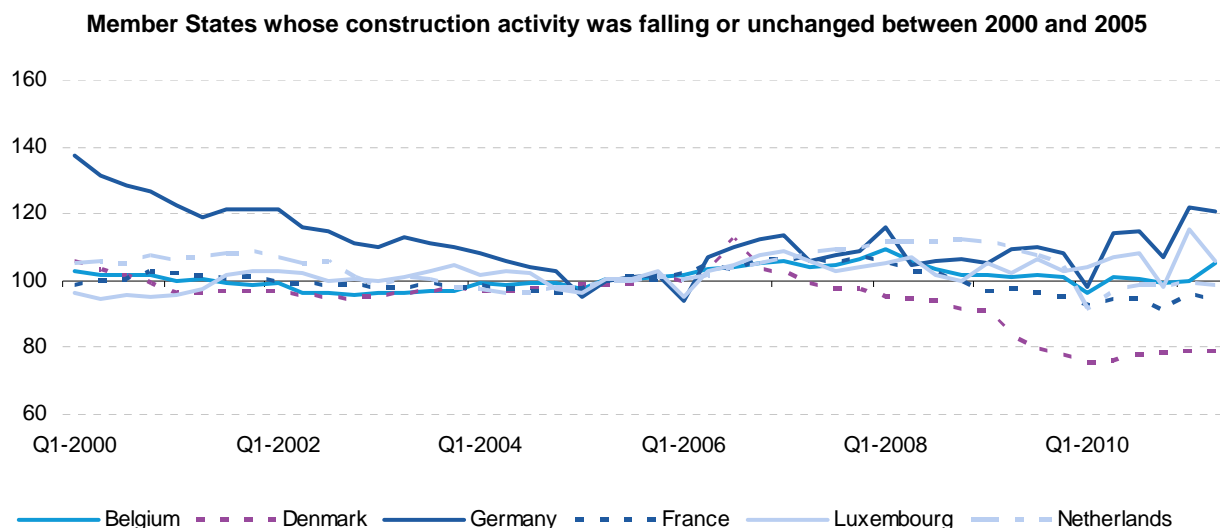


⁽¹⁾ Estimates; trend cycle; note the changing scale for the y-axis; the grouping of countries in the five different figures is based upon the overall performance of their respective construction activities, identifying developments that certain Member States have in common (as detailed in the subtitles above each of the figures).

⁽²⁾ Spain, annual data.

Source: Eurostat (online data code: [sts_copr_q](#))

Figure 3 continued: Index of production for total construction, 2000-2011 (1)
(2005=100)



(1) Estimates; trend cycle; note the changing scale for the y-axis; the grouping of countries in the five different figures is based upon the overall performance of their respective construction activities, identifying developments that certain Member States have in common (as detailed in the subtitles above each of the figures).

(2) Spain, annual data.

Source: Eurostat (online data code: [sts_copr_q](#))

METHODOLOGICAL NOTES

Context

Eurostat has responded to the need for reliable and objective statistics for economic and political decision-making by selecting a number of indicators as Principal European Economic Indicators (PEEIs); the index of production for construction is one of these. This data is used by the European institutions, the European Central Bank (ECB), national governments and central banks, financial markets and businesses for monitoring and analysing economic developments.

The production index for construction is a business cycle indicator, which measures monthly changes in the price adjusted output of construction.

Data sources and availability

The source for the majority of the data in this publication is Eurostat's short-term business statistics (STS). Its legal basis is [Council Regulation No 1165/98 of 19 May 1998](#) ⁽¹⁾ concerning short-term statistics and its subsequent amendments. STS provide information on a wide range of economic activities within the business economy. STS indicators concern measures of output, labour input and prices, as well as indicators related to expectations of activity in the future such as new orders or building permits.

The index of production for construction is published with a monthly frequency by Eurostat for the EU-27, euro area, and the majority (20) of the Member States. Some countries only provide quarterly data. Information is also available for some non-member countries.

The main geographical aggregates of the EU-27 and the euro area (EA-17) are based on aggregates that are consistently composed of the 27 and 17 countries that (at the time of writing) participate in these respective areas. The European aggregates are normally published one month and 17 days after the end of the reference period.

Data are presented in working day adjusted, seasonally adjusted and trend forms, as growth rates and indices. The indices published by Eurostat are expressed with reference to 2005=100 as the base year; weights to combine national data into European aggregates are also based on data for 2005.

⁽¹⁾ Official Journal No L 162, of 5 June 1998.

The weights for the construction total are presented in Table 2 – however, more detailed information is available at:

http://circa.europa.eu/Public/irc/dsis/ebt/library?l=/sts_weights_public&vm=detailed&sb=Title.

Since 2009 the index of production for construction has been published by Eurostat according to NACE Rev. 2. The overall coverage is NACE Section F. The index of production is also published at a more detailed level by Eurostat, covering building and civil engineering, based on the classification of types of construction (CC).

This publication also contains information derived from national accounts. The gross domestic product (GDP) series are available in Eurostat's quarterly national accounts database; the data is presented in a seasonally adjusted and working data adjusted form of the index. The information is in volume terms (in other words, price adjusted output).

Definitions

The aim of the index of production for construction (as with the index of industrial production) is to measure changes in price-adjusted output on a monthly basis. In theory, the indicator should reflect volume developments in value added. However, this information is not directly observable, as the value added data needed to compile an index are not available on a monthly basis. Therefore, the index is approximated by other measures which are considered as suitable proxies for value added, such as deflated gross production or productivity adjusted inputs of labour and raw materials.

Abbreviations and symbols

GDP	gross domestic product
EA-17	euro area of 17 Member States
EU-27	European Union of 27 Member States
NACE	statistical classification of economic activities in the European Community
STS	short-term statistics
:	not available
-	not relevant

For more information:

A news release for the index of production for construction is released just after the middle of each month. Furthermore the index of production for construction is presented, along with the other short-term business statistics, in the Quarterly panorama of European business.

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Further information

Eurostat Website: <http://ec.europa.eu/eurostat>

Data on short-term business statistics

http://epp.eurostat.ec.europa.eu/portal/page/portal/short_term_business_statistics/data/database

Further information about short-term business statistics

http://epp.eurostat.ec.europa.eu/portal/page/portal/short_term_business_statistics/introduction

Metadata

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