Statistics in focus

INDUSTRY, TRADE AND SERVICES

128/2007

Author

Szymon BIELECKI

Contents

Manuscript completed on: 10.12.2007
Data extracted on: 26.11.2007
ISSN 1977-0316
Catalogue number: KS-SF-07-128-EN-N

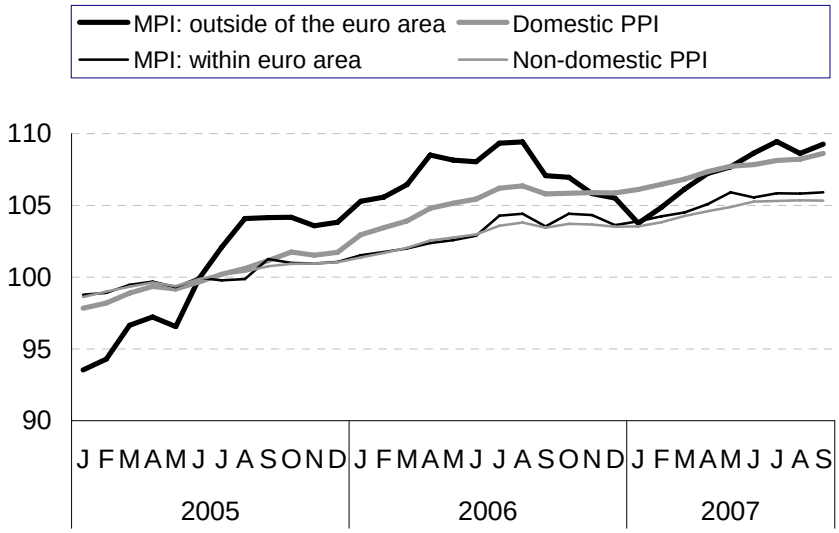
Industrial import prices – a new Principal European Economic Indicator

In conducting the monetary policy of the European Monetary Union the European Central Bank (ECB) is very much interested in predicting the future medium-term development of price indices. The ECB observes carefully consumer prices, which are the reference indicator for its monetary policy goals, but also prices in other euro area markets, such as producer or wholesale markets.

With the new PEEI for import prices the ECB and other users have a new and very important tool. The measurement of changes in import prices provides information on the short and medium-term economic activity linked to external trade, and is a means of distinguishing real growth of imports from price changes. Import price indices, compiled with the crucial distinction between imports coming from inside and outside of the euro area, will make it possible to analyse the probable impact of imported price changes on the inputs used in domestic production and also directly on consumption. As such changes in import prices can give information on future changes in consumer prices. The new indicator will contribute to setting framework conditions for taking correct economic and monetary decisions.

The requirement in the STS Regulation to provide information on import prices (MPI) is limited to euro area Member States, although in practice some other countries, notably Denmark, Sweden, Norway and Switzerland, provide Eurostat with this information. In order to contribute towards the compilation of an import price index for an aggregate of the euro area countries, several countries have chosen to participate in what is referred to as the European sample scheme (ESS), whereby data collection is limited (thereby reducing the associated costs and burden) in each participating country to those codes of the Classification of Products by Activity (CPA) that are particularly important for that country. More information is provided in the methodological notes on page 7.

Figure 1: Selected price indices, total industry, euro area (2005=100)



Source: Eurostat (STS)

Focus on import price index

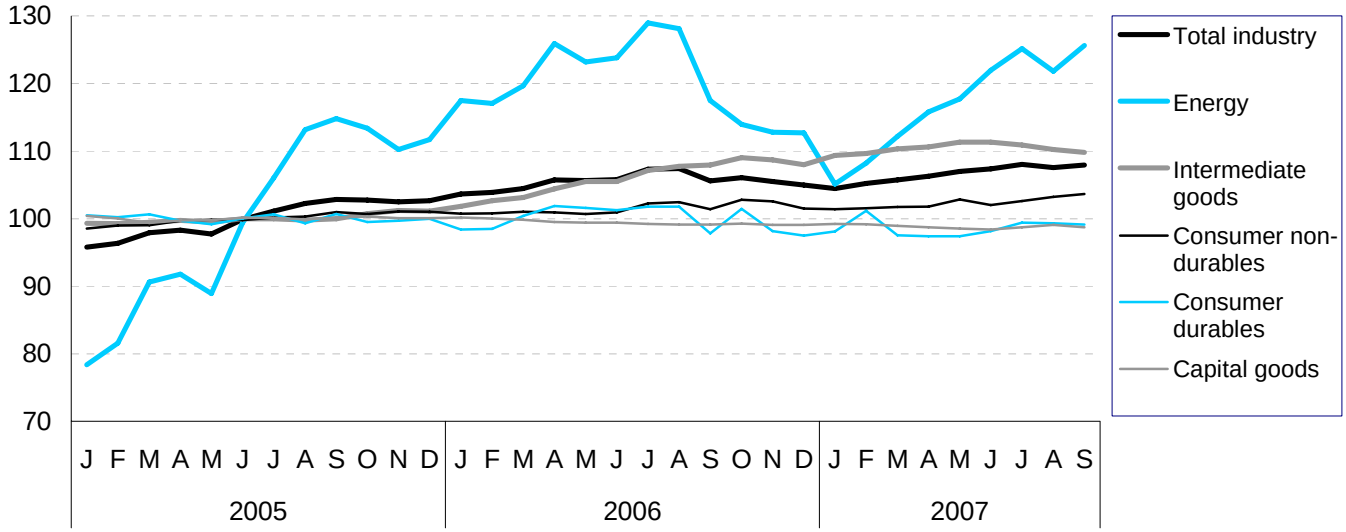
This publication focuses on a time series of data starting from January 2005. Figure 1 shows that since the beginning of the series the import price index for goods imported from outside of the euro area was relatively unstable, compared for example with imports of goods from other euro area countries, or with producer price indices.

As can be seen from Figure 2 the total import price index (covering imports from outside the euro area as well as from within it) was particularly volatile for the energy main industrial grouping which rose strongly from the beginning of the series (January 2005) through to July 2006, before falling sharply back to a low in January 2007, and rebounding since then close to its mid-2006 high.

Import prices of intermediate goods and consumer non-durables recorded more even growth, while the overall trend for import prices for consumer durables and capital goods was flat, with some volatility within a narrow range for consumer durables.

A comparison of the recent rates of change of the import price index for the euro area countries shows that the movements are often in the same direction for all of the countries (for which data are available). Nevertheless the rates of change for Slovenia and Finland are often furthest from the euro area average.

Figure 2: Import price index, euro area (2005=100)



Source: Eurostat (STS)

Table 1: Import price index, total industry (Sections C to E) price changes compared to the previous month (%)

	2006			2007								
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Euro area	0.2	-0.4	-0.4	-0.6	0.6	0.7	0.5	0.7	0.3	0.5	-0.4	0.3
DE	-0.3	-0.5	-0.4	-0.9	0.6	0.7	0.9	0.5	0.6	0.3	-0.7	0.5
EL	-0.2	-0.3	-0.5	-0.7	1.1	1.2	1.2	0.6	0.5	1.1	-0.5	:
ES	-0.2	-0.4	-0.3	-1.1	0.8	0.5	1.0	0.5	0.8	0.4	-0.1	0.5
NL (1)	0.3	-0.1	-0.1	-0.4	0.6	1.3	0.7	0.8	0.6	0.6	-0.8	1.1
SI (2)	0.9	-0.3	-0.1	0.8	0.0	0.3	0.7	0.7	0.5	-1.9	0.5	-1.4
FI	0.3	-0.4	0.6	-2.1	0.9	1.4	1.6	1.0	0.1	-0.2	-2.3	0.5
DK	-0.1	0.0	0.0	-0.2	0.6	0.3	0.9	0.2	0.5	0.2	-0.2	0.5
SE	0.0	0.4	-0.8	-2.4	1.8	2.3	1.7	-0.9	1.1	1.5	-2.7	2.1

(1) May 2007 to August 2007, provisional; September 2007, estimate.
(2) Estimates.

Source: Eurostat (STS)

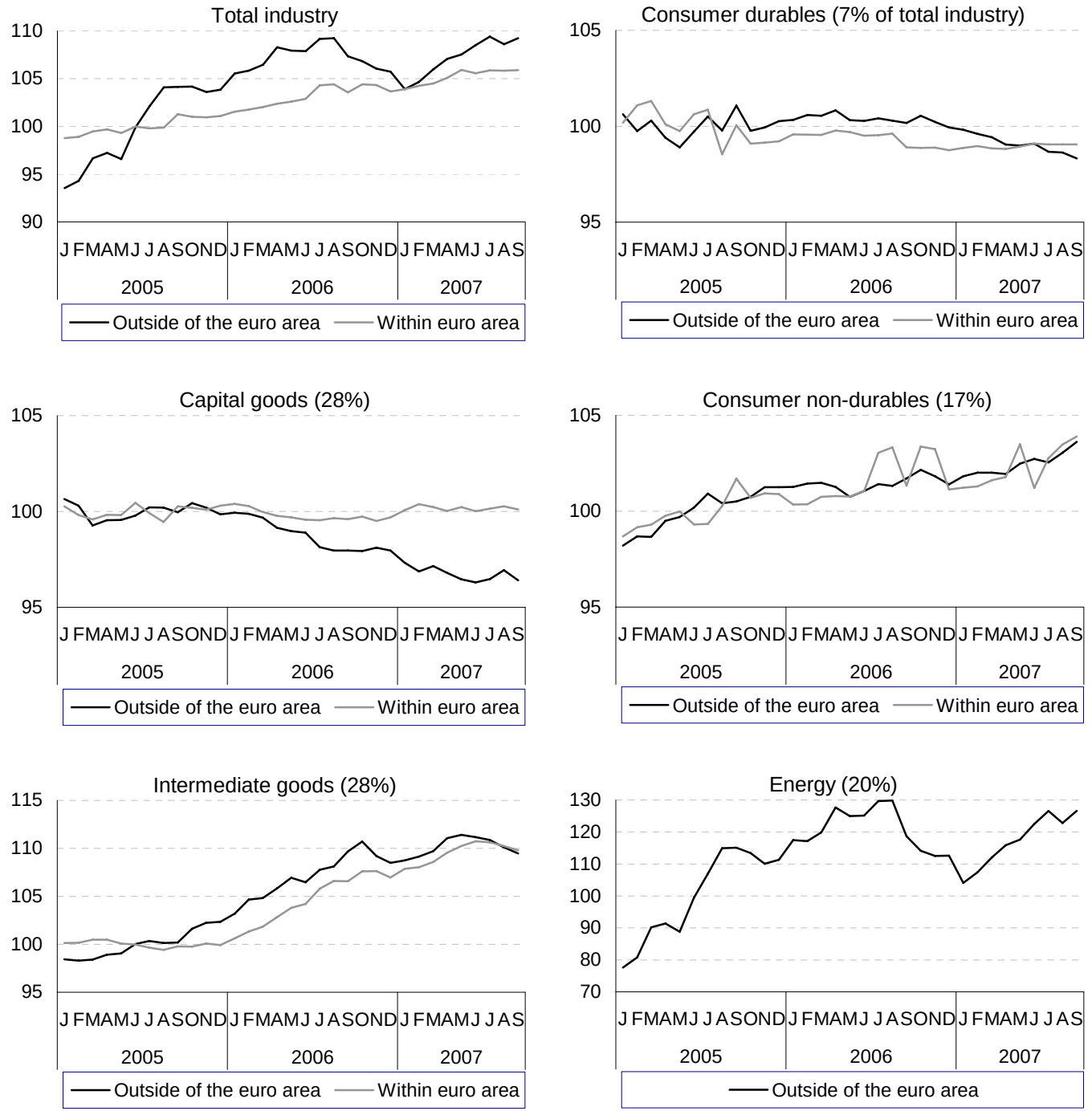
Analysis by origin of imports

Figure 3 shows the development since January 2005 of the import price index for total industry and for each of the main industrial groupings. The distinction between imports from within and outside of the euro area is made.

For capital goods imports from outside of the euro area diverge quite significantly from the intra euro area prices. For intermediate and consumer goods the price indices for imports from both within and outside of the euro area develop generally in a similar fashion.

Energy is covered only by the external subindex. With its striking similarity in shape to its counterpart for total industry it proves to be the driving factor for the total import price index.

Figure 3: Import price index, euro area (2005=100)
Note: different scales are used in each graph.



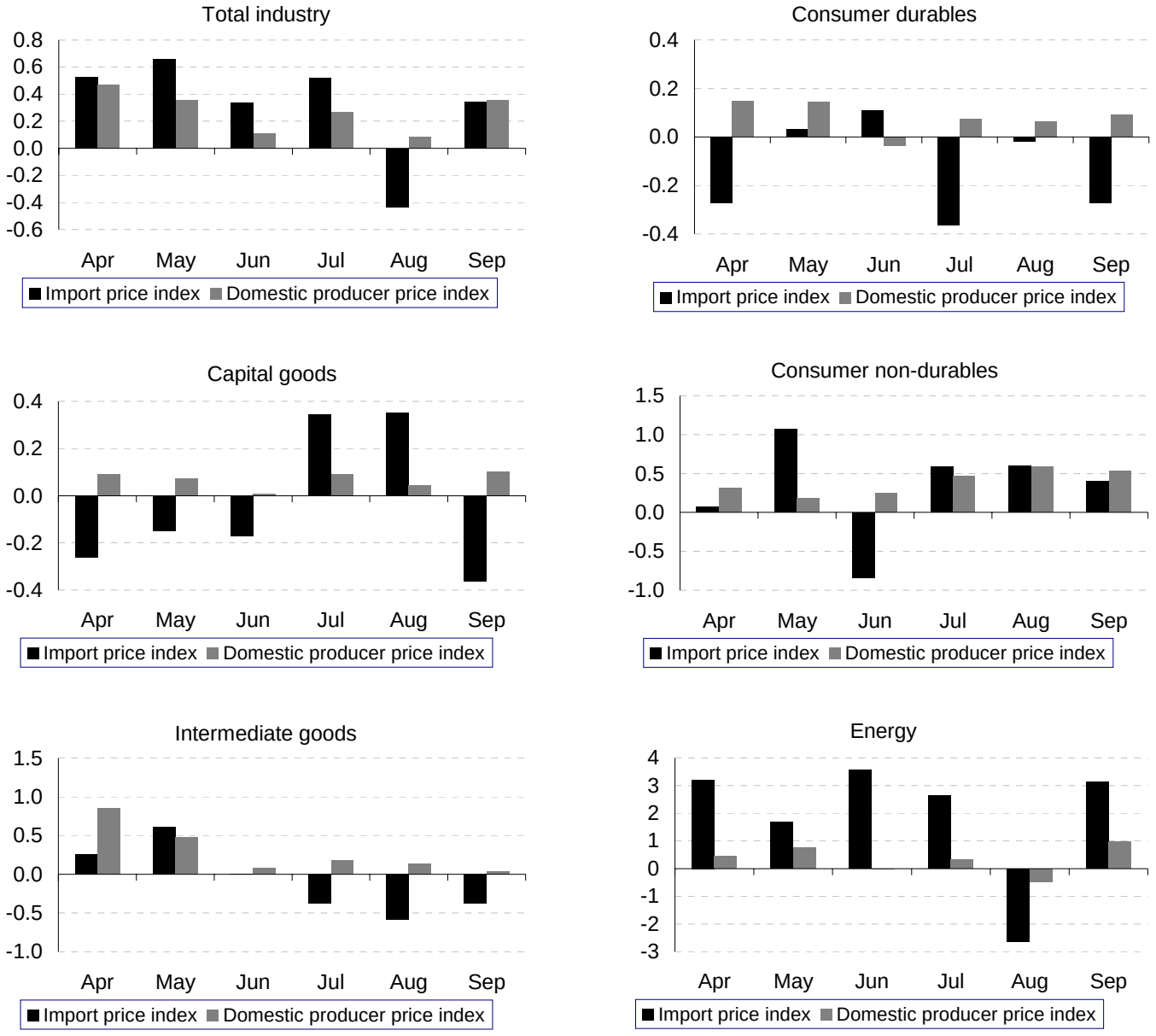
Source: Eurostat (STS)

Comparison with producer price indices

Figure 4 compares the total import price index (covering imports from outside the euro area as well as from within it) with the domestic producer price index, and as such gives a complete overview of price developments for products available within a market, regardless of whether they have been imported or not.

For total industry it can be seen that increases in the import price index have outstripped increases in domestic producer prices in four out of six previous months. However, an analysis for each of the main industrial groupings finds this pattern repeated (and even amplified) only for energy, again underlining the important contribution of energy to the import price index for total industry.

Figure 4: Import and domestic producer price indices
prices changes compared to the previous month, euro area, 2007 (%)
Note: different scales are used in each graph.



Source: Eurostat (STS)

The difference in the importance of particular CPA Divisions in the import price index and of NACE Divisions in the producer price index is illustrated in the 'weight in total industry' columns in Table 2. The biggest differences, in relative terms, concern Divisions 11 (extraction of petroleum and gas), 22 (publishing, printing and reproduction of recorded media) and 40 (electricity generation and electricity, gas and hot water supply), the first of which is much more important for the import price index, while the two other Divisions are much more important for the producer price index.

Over the period shown in Table 2 Division 23 (fuel processing) recorded one of the two highest price increases for both the import price index and the domestic producer price index. For both of these indices the strongest average reduction in prices was recorded for Division 30 (office machinery and computers) where prices fell by about 5 % during the six months shown both for the import price index and for the domestic producer price index.

Table 2: Import and domestic producer price indices
price changes compared to the previous month, euro area, 2007 (%)

		Import price index							Domestic producer price index						
		Weight in total industry	Mar	Apr	May	Jun	Jul	Aug	*Weight in total industry*	Mar	Apr	May	Jun	Jul	Aug
Total industry	C to E	*100*	0.7	0.5	0.7	0.3	0.5	-0.4	*100*	0.3	0.5	0.3	0.1	0.3	0.1
Mining/extraction of coal/lignite/peat	10	*0.5*	-0.6	-1.9	1.2	3.0	-0.7	3.1	*0.2*	1.1	-0.1	-0.8	0.0	1.5	0.3
Extraction of petroleum & gas	11	*9.3*	4.5	3.2	1.6	5.0	4.6	-4.1	*0.6*	0.7	0.7	-2.9	-4.2	9.5	-3.3
Mining of uranium & thorium ores	12	*0.0*	:	:	:	:	:	:	*0.0*	:	:	:	:	:	:
Mining/quarrying non-energy materials	13+14	*1.3*	-3.1	7.2	2.4	-0.7	1.5	-5.4	*0.6*	0.2	0.5	0.1	-0.1	0.6	0.0
Food & beverages	15	*6.1*	0.6	0.6	0.8	1.1	1.1	1.5	*14.4*	0.2	0.5	0.4	0.4	0.9	1.1
Tobacco products	16	*0.4*	1.1	0.1	0.2	-0.5	-0.1	2.1	*1.2*	0.0	0.1	0.1	0.1	0.0	1.8
Ttextiles	17	*2.1*	-0.3	0.1	0.2	0.1	-0.2	0.1	*2.0*	0.1	0.1	0.1	0.1	0.1	0.1
Clothing; fur	18	*2.8*	0.0	-0.5	-0.2	0.0	-0.3	0.4	*1.7*	0.0	-0.1	-0.1	0.0	0.1	0.1
Leather and leather products	19	*1.3*	0.1	-0.4	0.6	-0.1	-0.1	0.4	*0.7*	0.0	0.3	-0.4	-0.2	0.2	0.0
Wood & wood products	20	*1.0*	1.3	1.4	0.4	0.2	0.4	0.3	*2.0*	0.4	0.2	0.4	0.3	0.1	0.0
Pulp, paper & paper products	21	*2.1*	0.1	0.4	0.2	0.4	0.2	0.2	*2.4*	0.3	0.3	0.5	0.5	0.3	0.3
Publishing, printing, reproduction of recorded media	22	*0.1*	:	:	:	:	:	:	*4.6*	0.1	0.1	0.0	0.3	-0.1	0.3
Fuel processing	23	*3.5*	4.3	5.8	2.9	2.6	1.2	-2.8	*7.6*	3.1	4.2	1.8	1.0	1.3	-1.5
Chemicals & chemical products	24	*14.9*	0.1	-1.5	1.6	-0.9	0.3	0.0	*8.2*	0.2	0.7	0.3	0.2	0.1	0.0
Rubber & plastic products	25	*2.8*	-0.2	-0.2	0.3	-0.1	0.0	0.1	*3.4*	0.1	0.3	0.2	0.1	0.1	0.1
Non-metallic mineral products	26	*1.3*	0.2	0.9	0.3	0.2	-0.4	0.1	*3.9*	0.2	0.4	0.2	0.1	0.1	0.2
Basic metals	27	*6.8*	3.6	5.0	1.6	-1.0	-1.6	-3.1	*3.5*	1.4	2.7	1.0	-0.2	-0.1	-0.6
Fabricated metal products	28	*2.4*	0.4	0.4	0.4	0.0	0.1	-0.2	*7.1*	0.3	0.5	0.4	-0.1	0.0	0.1
Machinery & equipment n.e.c.	29	*7.7*	0.0	0.1	0.1	0.1	0.1	0.1	*6.6*	0.2	0.2	0.1	0.0	0.2	0.0
Office machinery & computers	30	*5.3*	-1.1	-1.8	-1.2	-1.1	-0.3	0.9	*0.8*	-1.2	-0.9	-1.0	-0.5	-2.0	-0.7
Elec. machinery & apparatus	31	*3.6*	0.1	-0.2	0.0	-0.1	0.3	0.2	*3.7*	-0.2	0.7	0.5	0.3	0.3	0.0
Radio, television & communication equipment & apparatus	32	*6.2*	-0.8	-0.8	-0.6	-0.3	-0.7	-0.3	*2.6*	0.1	-0.4	-0.1	-0.1	-0.5	0.1
Instruments, watches & clocks	33	*3.1*	-0.4	-0.2	0.0	0.0	-0.3	0.1	*1.5*	-0.1	-0.1	-0.4	0.4	0.0	-0.3
Motor vehicles & (semi-)trailers	34	*11.8*	0.2	0.1	0.1	-0.1	0.9	0.2	*7.2*	0.1	-0.1	0.1	0.1	0.1	0.1
Other transport equipment	35	*0.6*	-0.1	0.3	0.0	0.1	0.0	0.1	*1.4*	0.2	0.1	0.0	0.0	0.1	0.2
Furniture; manufacturing n.e.c.	36	*2.6*	0.1	0.2	0.1	0.1	-0.3	0.3	*2.7*	0.1	0.1	0.1	0.0	0.2	0.1
Recycling	37	*0.0*	:	:	:	:	:	:	*0.3*	:	:	:	:	:	:
Electricity, gas & hot water supply	40	*0.4*	:	:	:	:	:	:	*8.4*	-0.6	-1.7	0.1	-0.5	-0.7	0.1
Water supply	41	*0.0*	:	:	:	:	:	:	*0.7*	0.1	0.1	0.1	0.0	0.3	0.0

Source: Eurostat (STS)

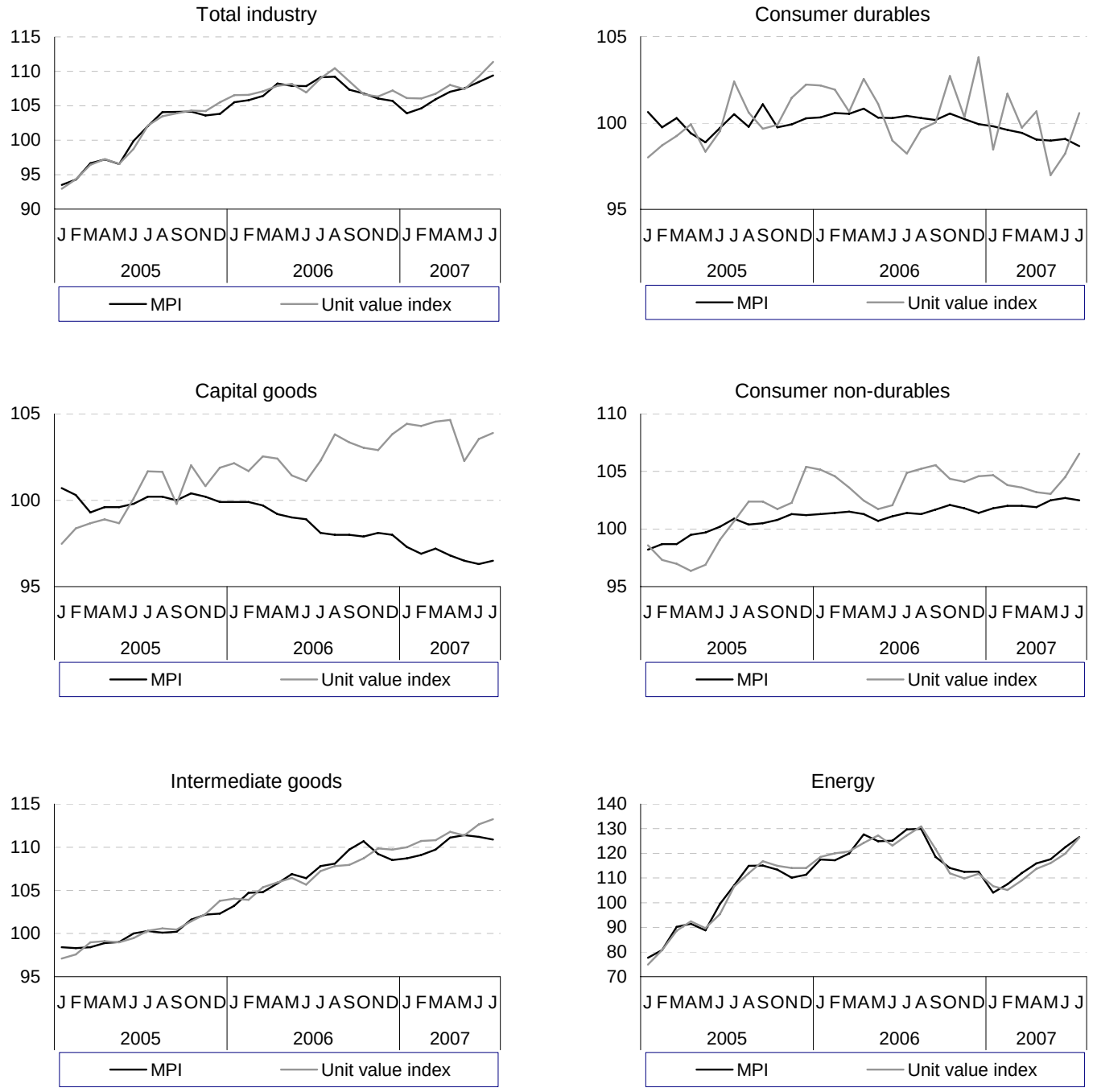
Comparison with unit value indices

A price index is compiled from price observations of individual products that have been selected as being representative (of a range of products). In contrast, a unit value can be compiled by dividing the value of a particular indicator by its quantity. For imports, both a price index and a unit value index can be compiled.

The development of these two indices is shown for the main industrial groupings in Figure 5.

On one hand the unit value index has the advantage of providing complete coverage of all traded goods (rather than just selected products from selected importers), but on the other hand has drawbacks in that it does not reflect changes in the quality of the traded goods, the composition of trade flows, the appearance of new products and the disappearance of others, and changes in the geographical distribution of flows.

Figure 5: Imports from outside of the euro area: price and unit value indices, euro area (2005=100)
Note: different scales are used in each graph.



Source: Eurostat (STS)

➢ ESSENTIAL INFORMATION – METHODOLOGICAL NOTES

LEGAL BASIS

The principal legal basis for the STS indices is Council Regulation No 1165/98 of 19 May 1998 ([1]) concerning short-term statistics (STS-R). The variable 'import prices' was introduced by Regulation (EC) No 1158/2005 of the European Parliament and of the Council of 6 July 2005 ([2]) amending Council Regulation (EC) No 1165/98.

GEOGRAPHICAL COVERAGE

The reporting entity of the euro area is an aggregate that is consistently composed of the 13 countries that (at the time of writing) participate in the euro area: Belgium, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Slovenia and Finland.

This publication also presents a limited set of data for a few euro area countries which do not participate in the European sample scheme for import prices (see below). When data are confidential or not available these have been removed from tables, but confidential data are used in the calculation of the euro area aggregates.

INFORMATION BROKEN DOWN BY MARKET

The distinction between markets (domestic, non-domestic, euro area, non-euro area) require separate indices to be compiled according to the origin/destination of the product, which is determined by the residency of the third party that has supplied/ordered/purchased the product. Again these markets are defined using a consistent composition of the euro area based on 13 countries.

DEFINITION OF INDICATORS ([3])

Import price index (MPI)

Import price indices aim to measure the transaction price development of imported goods purchased from non-domestic areas by domestic residents. All the related services are initially excluded from the scope. The price indices should track the price movements of comparable items over time. It is essential that all price-determining characteristics of the products are taken into account, including quantity of units sold, transport provided, rebates, service conditions, guarantee conditions origin and destination. The specification must be such that in subsequent reference periods, the observation unit is able uniquely to identify the product and to provide the appropriate price per unit. The product coverage is limited to Sections C, D and E of the Classification of Products by Activity (CPA) ([4]) - related services are excluded.

The price is the c.i.f. (cost, insurance, and freight) price at the border excluding all duties and taxes on the goods and services to be shouldered by the observation unit. The price should be an actual transaction price, and not a list price, therefore discounts should be deducted from the price. The price index compilation should take into account and adjust for quality changes in products. Imports are recorded when the ownership of the goods is transferred (i.e. when the parties record transaction in their books or account).

Producer price index (PPI)

The producer (or output) price index for an economic activity measures the average price development of all goods and related services resulting from an activity. It is essential that all price-determining characteristics are taken into account, including quantity of units sold, transport provided, rebates, service conditions, guarantee conditions and destination. The appropriate price is the basic price that excludes VAT and similar deductible taxes directly linked to turnover as well as all duties and taxes on the goods and services invoiced by the unit, whereas subsidies on products received by the producer, if there are any, should be added. The specification must be such that in subsequent reference periods, the observation unit is able uniquely to identify the product and to provide the appropriate price per unit. The producer price index should take into account quality changes in products or services.

The appropriate price measure is the transaction price reflecting the revenue received by the producer for products actually sold to customers.

Unit value indices (from external trade)

These indices are calculated by Eurostat using a common methodology and procedures: monthly raw data are processed at the most detailed level in order to calculate elementary unit values defined by trade value/quantity. These unit-values are divided by the average unit value of the previous year to obtain elementary unit value indices, from which outliers are detected and removed. Elementary unit value indices are then aggregated over countries and commodities, by using the Laspeyres, Paasche and Fisher formulae. Finally, the Fisher unit value indices are chained back to the reference year (2000=100) and are used to approximate the import and export price movements.

BASE YEARS

Because the import price index is only available from 2005 all of the indices in this publication have been presented with 2005=100. For PPI and the unit value indices this has involved rescaling them from their regular base year of 2000=100.

EUROPEAN SAMPLE SCHEME (ESS)

The ESS aims to ensure that Eurostat can produce a credible estimate of the index for an aggregate of the euro area countries for the full range of CPA products foreseen in the STS Regulation, whilst limiting the data collection in countries. For the import price index, countries are free to choose whether to meet the full requirements of the STS Regulation (as amended in 2005) for the import price index, or only to provide information for a limited range of CPA headings as part of the ESS. In practice, the following countries participate in the ESS for import prices: Belgium, France, Ireland, Luxembourg, Austria, Portugal, Finland and Slovenia. For each of these countries a list of CPA headings has been determined for which these countries should provide the import price index, and the headings generally represent the most important CPA headings in each country. They are used by Eurostat to aggregate euro area import price indices. However it is not possible to aggregate for these countries import price indices for higher CPA headings and for the total industry.

FURTHER INFORMATION

szymon.bielecki@ec.europa.eu

([1]) Official Journal No L 162, of 5 June 1998.
([2]) Official Journal No L 191, of 22 July 2005.
([3]) As stipulated in Commission Regulation (EC) No 1503/2006 of 28 September 2006, Official Journal No L 281, of 12 October 2006.
([4]) Official Journal No L 35, of 6 February 2002.

Further information:

Data: EUROSTAT Website/Home page/Industry trade and services/Data

- **Industry, trade and services**
  - **Industry, trade and services - horizontal view**
    - **Industry (NACE Rev.1 C-F)**
      - **Industry - Monthly growth rates**
      - **Industry - Quarterly growth rates**
      - **Industry - Import price indices (2005=100)**
        - **Industry - Monthly indices of Import prices**
        - **Industry - Quarterly indices of Import prices**
        - **Industry - Annual indices of Import prices**

Journalists can contact the media support service:

Bech Building Office A4/125
L - 2920 Luxembourg

Tel. (352) 4301 33408
Fax (352) 4301 35349

E-mail: eurostat-mediasupport@ec.europa.eu

European Statistical Data Support:

Eurostat set up with the members of the 'European statistical system' a network of support centres, which will exist in nearly all Member States as well as in some EFTA countries.

Their mission is to provide help and guidance to Internet users of European statistical data.

Contact details for this support network can be found on our Internet site: http://ec.europa.eu/eurostat/

A list of worldwide sales outlets is available at the:

Office for Official Publications of the European Communities.

2, rue Mercier
L - 2985 Luxembourg

URL: http://publications.europa.eu
E-mail: info@publications.europa.eu
