

INTRODUCTION OF OUTPUT PRODUCER PRICE INDICES IN MEI PUBLICATION

The May 2009 edition of the Main Economic Indicators (MEI) publication and associated electronic products introduce the newly established OECD Hierarchy of Producer Price Indices (PPIs). The aim is to improve the quality and the international comparability of producer prices published by the OECD. The process involved a review of the existing hierarchy, the investigation of the different PPI statistics practices among OECD member countries, the definition of 'target indicators' and the collection of data and metadata from countries. As a result of this process, PPIs are collected and published from May 2009 for output price indices only. A distinction is made between prices for domestic and total markets. For each of these prices, three sets of PPI data are presented: PPI by Activity, PPI by Type of goods, and PPI by Stage of processing.

The number of published series in MEI electronic products increased from 176 PPI series and 19 Wholesale Prices Index (WPI) series to 491 Output Producer Prices series. For the moment, only one target indicator¹ has been defined: PPI Domestic Manufacturing. From May 2009, the target variable as presented in the MEI publication for 25 of the 30 OECD member countries, the Euro Area and the European Union. Three area totals (OECD-Total, OECD-Europe and Major Seven) are also shown with time series starting in 1982.

Background

Before the revision process, 176 PPI series were published in the MEI. These data were heterogeneous in terms of concepts (input prices as well as output prices), coverage (types of goods or products, domestic or exports/imports markets) and collection aggregation methods (index number formulas, treatment of missing prices)².

The number of published series varied a lot from country to country. For some countries, eight or nine PPI indicators were published (e.g. Japan, UK, Canada, Sweden, Belgium), when for some other countries only one or two indicators were published (e.g. Hungary, Iceland, Mexico, Switzerland). This led to the presence of many PPI classifications, for example by ISIC activity, by commodity or by stage of processing, depending on the country. Even so, the type of classification was not always clearly identified and homogeneous across countries.

In addition, Wholesale Prices series³ were published alongside PPI series, again with unequal coverage across countries. For instance, a detailed set of WPI was published for Austria, Turkey, an aggregate for total industry was published for Brazil, Denmark, Germany, India, Indonesia and Switzerland, and a few other WPIs were published for India, Indonesia and Japan. As a result of this heterogeneity, the comparability of PPI series was not ensured. As a consequence, the MEI publication presented only two comparable series for PPIs: total industry and manufactured products. Also, zone aggregates presented in Part I of the MEI publication were limited to the PPI for manufactured products without a distinction between prices for domestic and total sales.

Review of the existing hierarchy and preparation of a new hierarchy

In this context, the review of the PPI hierarchy aimed at:

- 1) Improving the international comparability of PPIs;
- 2) Investigating the feasibility to extend the set of target indicators; and,
- 3) Investigating the feasibility to enlarge OECD zone calculations.

¹ The target indicators are defined according to the relevance of the indicators and the opportunity of the international comparability. The target indicators are published for nearly all the countries in the individual country pages in Part II of the MEI publication. They are considered as reference indicators and are available for most possible countries. For these target indicators, the OECD compute two OECD areas (Total and Europe) and one G7 area, which are published in the Part I of the MEI publication. The European Union and Euro area are collected from Eurostat and also published in the Part I.

² See table 3 for a presentation of the old PPI Hierarchy.

³ Wholesale Price Indices (WPI) reflect changes in the prices paid at various stages of distribution and can include prices of raw materials for intermediate and final consumption, prices of intermediate or unfinished goods, and prices of finished goods through the distribution chain up to the point of retail. Prices for WPIs are generally valued at purchaser's price.

Three criteria were applied:

- **Focus on Output Prices:** Output Prices reflect changes in ex-factory gate prices valued at basic prices⁴. Input Prices reflect changes in prices paid by the producer for raw materials and intermediate goods and are valued at purchaser's prices. Thus, Output and Input Prices reflect different concepts and do not necessarily move in parallel empirically. Most users identify PPIs with Output Prices and this governed the present choice. Also, Input Prices are measured very differently across countries. Consequently, only Output Prices are now published.
- **Well-defined scope:** A significant number of countries as well as Eurostat publish separate indices for domestic, non-domestic and total markets. This distinction is more readily available for European countries than for non-European countries, especially for export price indices. PPI series for both total and domestic markets are therefore published when available.
- **Closeness to country practices:** One of the main aims of the review was to take into account the many practices to make maximum use of existing data. The following three types of PPIs cover most practices in OECD countries and allow one to take into account future developments of PPI statistics.
 - i. **PPI by Economic activity:** PPIs are determined in reference to the higher level of ISIC Rev. 3.1 (section C to E) which "classifies producer units according to their kind of activity, mainly on the basis of the principal class of goods produced or services rendered; that is, ISIC classifies principally by an output-type criterion" (PPI Manual, page 82). Four indicators were identified for publication: 1) PPI for Industrial activities, 2) PPI for Mining and quarrying activities, 3) PPI for Manufacturing, and 4) PPI for Food products and beverages and tobacco⁵.
 - ii. **PPI by type of commodities/goods:** PPIs are presented by type of goods, which are organized by similarity of end use or material composition, disregarding industry of origin. For European countries, we refer to the definition of Main Industrial Groupings (MIGS)⁶. Six indicators were identified for publication: 1) PPI Investment goods, 2) PPI Intermediate goods, 3) PPI Consumer goods, 4) PPI Durable consumer goods, 5) PPI Non-durable consumer goods, and 6) PPI Energy.
 - iii. **PPI by Stage of processing:** PPIs are also presented by class of buyer and degree of fabrication. This structure classifies goods according to their position in the chain of production. This type of classification is mainly used by non-European countries and allows analysts to track price inflation through the economy: changes in prices in the primary stage could feed through into the later stages, so the method gives an indication on the future of inflation further down the production chain. However, each commodity is allocated to only one stage in the production chain even though it could occur in several stages. Three indicators were identified for publication: 1) PPI Raw materials, 2) PPI Intermediate goods, and 3) PPI Finished goods.

To summarize, the new PPI Hierarchy exclusively publishes Output Prices. In principle, 13 indicators per country can be published for both Domestic and Total markets, each classified by three sets of PPI data: PPI by Activity, PPI by Type of goods and PPI by Stage of processing. Wholesale Prices were only kept for non-member countries. For OECD countries, WPI were replaced by PPIs.

Table 1 – New PPI hierarchy and associated MEI codes

<i>Output prices</i>	<i>Total Market</i>	<i>Domestic Market</i>
<i>1 – PPI by Economic activities</i>		
Industrial Activities	PIEATI01	PIEATI02
Mining and quarrying activities	PIEAMI01	PIEAMI02
Manufacturing	PIEAMP01	PIEAMP02
Manufacture of food, beverages and tobacco products	PIEAFD01	PIEAFD02

⁴ Basic Prices reflect the amount received by the producer exclusive of any taxes on products and transport and trade margins.

⁵ See table 4, for the definition of the indicators in reference to the international classifications.

⁶ Commission Regulations (EC) N° 586/2001 and N° 656/2007.

<i>Output prices</i>	<i>Total Market</i>	<i>Domestic Market</i>
<i>2- PPI by type of goods</i>		
Investments goods	PITGVG01	PITGVG02
Intermediate goods	PITGIG01	PITGIG02
Consumer goods	PITGCG01	PITGCG02
Durable consumer goods	PITGCD01	PITGCD02
Non durable consumer goods	PITGND01	PITGND02
Energy	PIEAEN01	PIEAEN02
<i>3 – PPI by Stage of processing</i>		
Primary products	PISPPR01	PISPPR02
Intermediate goods	PISPIG01	PISPIG02
Finished goods	PISPF01	PISPF02

Target indicators: PPI manufacturing activities for the domestic market

One of the purposes of the MEI publication is to provide users with comparable statistical information. However, as shown in table 2, not all countries provide all 13 PPIs with a distinction between Domestic and Total markets. Indeed, there is a clear pattern of differences of practices between European and non-European countries. For European countries, PPIs statistics depend on the STS regulation. This requires EU member States to deliver producer price indices for the industry sector according to the NACE Rev. 2 classification⁷ and by Main Industrial Groupings (MIGS).

A set of PPIs by economic activities is also available from non-European countries but according to national classifications that are typically in accordance with ISIC Rev.3.1. Note that most non-European countries have not moved to ISIC Rev. 4 as yet. Furthermore, non-European countries give priority to PPIs by stage of processing or production rather than to PPIs by type of goods.

Table 2 – Availability of PPI series

<i>Output prices</i>	<i>Total Market</i>		<i>Domestic Market</i>	
	Available series	Except for	Available series	Except for
<i>1 – PPI by Economic Activity</i>				
Industrial activities	20 OECD MC, EUU, EMU	AUS, CAN, ISL, JPN, KOR, MEX, PRT, ESP, TUR, USA	24 OECD MC, EUU, EMU	AUS, CAN, ISL, NZL, CHE, USA
Mining and quarrying activities	21 OECD MC, EUU, EMU	AUS, CAN, ESP, ISL, JPN, KOR, MEX, PRT, TUR	24 OECD MC, EUU, EMU	AUS, CAN, CHE, ISL, NZL, USA
Manufacturing	23 OECD MC, EUU, EMU	ISL, JPN, KOR, MEX, PRT, ESP, TUR	25 OECD MC, EUU, EMU, OTO, OEU, OTL, OEL, G7M	AUS, CAN, NZL, CHE, USA
Manufacture of food, beverages and tobacco products	22 OECD MC, EUU, EMU	ISL, JPN, KOR, LUX, MEX, PRT, ESP, TUR	24 OECD MC, EUU, EMU	AUS, CAN, NZL, ESP, CHE, USA

⁷ Council Regulation 1165/98. For European Countries, the move from Nace Rev. 1 classification to Nace rev. 2 classification was done in March 2009.

<i>Output prices</i>	<i>Total Market</i>		<i>Domestic Market</i>	
	<i>Available series</i>	<i>Except for</i>	<i>Available series</i>	<i>Except for</i>
<i>2- PPI by type of goods</i>				
Investment goods	21 OECD MC, EUU, EMU	AUS, CAN, ISL, KOR, MEX, NZL, PRT, ESP, TUR	20 OECD MC, EUU, EMU	AUS, CAN, ISL, IRL, KOR, MEX, NZL, CHE, TUR, USA
Intermediate goods	20 OECD MC, EUU, EMU	AUS, CAN, ISL, JPN, KOR, MEX, NZL, PRT, ESP, TUR	20 OECD MC, EUU, EMU	AUS, CAN, ISL, JPN, KOR, MEX, NZL, CHE, TUR, USA
Consumer goods	20 OECD MC, EUU, EMU	AUS, CAN, ISL, KOR, MEX, NZL, PRT, ESP, CHE, TUR	20 OECD MC, EUU, EMU	AUS, CAN, ISL, KOR, MEX, NZL, POL, CHE, TUR, USA
Durable Consumer goods	20 OECD MC, EUU, EMU	AUS, CAN, ISL, KOR, LUX, MEX, NZL, PRT, ESP, TUR	20 OECD MC, EUU, EMU	AUS, CAN, ISL, KOR, LUX, MEX, NZL, CHE, TUR, USA
Non Durable Consumer goods	21 OECD MC, EUU, EMU	AUS, CAN, ISL, KOR, MEX, NZL, PRT, ESP, TUR	21 OECD MC, EUU, EMU	AUS, CAN, ISL, KOR, MEX, NZL, CHE, TUR, USA
Energy	19 OECD MC, EUU, EMU	AUS, CAN, FIN, ISL, IRL, JPN, KOR, MEX, PRT, ESP, TUR	19 OECD MC, EUU, EMU	AUS, CAN, FIN, ISL, IRL, JPN, MEX, NZL, CHE, TUR, USA
<i>3 – PPI by Stage of processing</i>				
Primary products	AUS, JPN, KOR, USA	26 OECD MC	AUS, JPN, KOR	27 OECD MC
Intermediate goods	AUS, JPN, KOR, USA	26 OECD MC	AUS, JPN, KOR	27 OECD MC
Finished goods	AUS, JPN, KOR, USA	26 OECD MC	AUS, JPN, KOR, MEX	26 OECD MC

Table legend:

OECD MC - OECD member countries; EUU- European Union; EMU: Euro Zone; OTO - OECD Total; OEU - OECD Europe; G7M - Major Seven; OTL - OECD Total less high inflation countries; OEL - OECD Europe less high inflation countries.

Considering the availability of PPIs among countries, the relevant target indicators were defined following two additional criteria: the length of the series and the economic significance of the indicators. As a result, the series PPI for Domestic Manufacturing was chosen as the only target indicator. It measures the average price development of all goods and related services from the manufacturing industries sold on the domestic market. Data are available for 25 of the 30 OECD member countries, the Euro Area and the European Union. Five areas (OECD-Total, OECD-Europe, Major Seven, OECD Total excluding high inflation countries, OECD, OECD Europe excluding high inflation countries) are computed by the OECD with data going back to 1982.

Expected benefits from the change and future work

As a result of the hierarchy revision, some of the previous ambiguity has been eliminated. PPI series in the MEI database have become more precise, more consistent and more comparable across countries. However, it may be possible to extend the set of target indicators and to apply OECD zone calculations to further variables. The OECD is continually improving the availability of relevant indicator series and will encourage member countries to expand the availability of PPI data.

Table 3 – 1st, 2^d and 3^d levels in new and old PPI hierarchies

<i>New Hierarchy</i>			<i>Old Hierarchy</i>	
<i>1st Level</i>	<i>2d Level</i>	<i>3d Level</i>	<i>1st Level</i>	<i>2d Level</i>
ECONOMIC ACTIVITIES	Industrial Activities Mining and Quarrying Activities Manufacturing Manufacture of food, beverages and tobacco products	T/D T/D T/D T/D	INDUSTRY AGGREGATES	Industrial Products Manufactured products Mining
TYPE OF GOODS	Investment goods Intermediate goods Consumer goods Durable Consumer goods Non Durable Consumer goods Energy	T/D T/D T/D T/D T/D T/D	TYPE OF GOODS	Investment goods Intermediate goods Consumer goods Finished goods
STAGE OF PROCESSING	Primary products Intermediate goods Finished goods	T/D T/D T/D		
			INPUT TO PRODUCTION	
			AGRICULTURE, FORESTRY & FISH PRODUCTS	
			ORES AND MINERALS, ELECTRICITY, GAS AND WATER	
			FOOD PRODUCTS, BEVERAGES AND TOBACCO, TEXTILES, APPAREL AND LEATHER PRODUCTS	
			OTHER TRANSPORTABLE GOODS, EXCL. METAL PRODUCTS, MACHINERY AND EQUIPMENT	
			METAL PRODUCTS, MACHINERY & EQUIPMENT	
			CONSTRUCTION WORK, CONSTRUCTION AND LAND	
			CORPORATE SERVICES PRICES	

Table 4 – Definitions of PPI Indicators by Economic Activity

	ISIC Rev. 3. 1	NACE Rev. 2
PPI Industrial activities	C - Mining and quarrying D - Manufacturing E - Electricity, gas and water supply	B - Mining and quarrying C - Manufacturing D - Electricity, gas, steam & air conditioning supply
PPI Mining and quarrying activities	C - Mining and quarrying	B - Mining and quarrying
PPI Manufacturing	D - Manufacturing	C - Manufacturing
PPI Manufacture of food, beverages and tobacco products	D 15 - Manufacture of food products and beverages D 16 - Manufacture of tobacco products	C 10 - Manufacture of food products C 11 - Manufacture of beverages C 12 - Manufacture of tobacco products