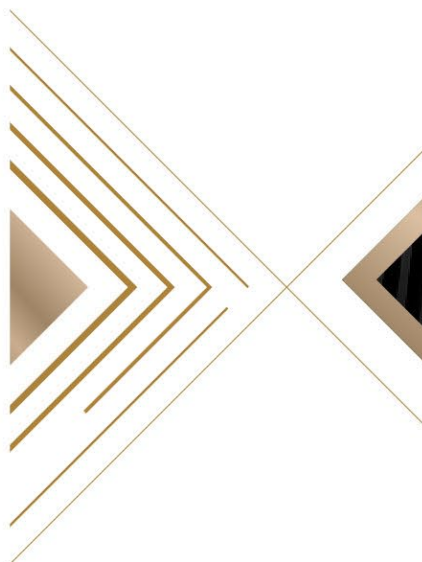




المركز الاتحادي  
للتنافسية والإحصاء  
FEDERAL COMPETITIVENESS  
AND STATISTICS CENTRE



# Methodology for Industrial Producer Price Index Statistics



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## Introduction:

Price statistics are considered important economic statistics related to the daily lives of individuals and provide the necessary information to determine the general trend of prices and the installation of indexes thereof. Producer price indexes are an important indicator used in economic and planning studies. In addition, they reflect the changes that occur in the structure of productivity sectors in society. It is a statistical method for measuring changes in the prices of locally produced goods from one period to another. This change is considered a measure used by countries to determine the general situation of industrial production prices and the cost of living.

## Objectives of the study:

In general, the price survey aims to provide the following data:

- Providing data on producer index numbers at the state level and for the emirates of Abu Dhabi and Dubai.
- Providing a time sequence of index numbers to serve decision-makers and policymakers.
- Knowing the extent of price inflation, whether it is local or exported.

Price data is collected from about 285 main sources distributed in the Emirates of Abu Dhabi and Dubai, where the disaggregation of data is considered according to the International Industrial Classification - Fourth Edition issued by the United Nations ISIC4. The number of groups included in the calculation of the producer price index for the manufacturing industry comes to 23 groups.

The year 2014 was adopted as the base year when calculating the indexes at the state level, and the producer price index was installed for each of Abu Dhabi and Dubai.

**Product Price Index:** The Industrial Producer Price Index is a statistical economic indicator that measures the change in industrial production prices (manufacturing industries) between two time periods. The period upon which prices dependent is called the base period - and is the period against which we compare prices.

### Data sources:

The prices of about 284 products are collected from 285 establishments representing economic activity at the level of the second limit. The sample of the establishments is distributed across Abu Dhabi, Al Ain and Dubai.

### Concepts and Classifications:

**Inflation:** the continuous and appreciable rise in the general level of prices in a country. Inflation is calculated according to the following equation:

$$\text{Inflation rate} = 100 \times \frac{P_i}{P_{i-1}} = 100$$

As:  $P_i$  represents the general level of prices in the comparison year.

$P_{i-1}$  represents the general price level for the previous year.

**Price index:** is a statistical method for measuring changes in commodity prices between two time periods.

**Laspeyres equation:** this is a mathematical equation developed by the statistician (Laspeyre) to calculate the price indexes, by dividing the prices of the comparison year by the prices of the base year and weighting the quantities of the base year.

**Product price:** The product price relates to "factory door prices" before paying any kind of production tax. Producer prices include domestic production prices and export prices.

**Base period:** The period against which the current period is compared.

**Weights:** These refer to the relative importance of goods within the product basket or within the economy in general and are used in index calculations.

**Base period prices:** are the prices of commodities during a period, against which current prices are compared.

**Percentage of change in the index:** the amount of change in the index. It is calculated by dividing the index for a period by the index for the comparison period, multiplied by a hundred, then subtracting a hundred.

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The price indexes in the country are calculated using the modified Laspeyre method with the following mathematical formula:

index =

$$\sum \left[ W_i^{t-1} \times \frac{P_i^t}{P_i^{t-1}} \right]$$

As:

$P_i^t$  = The price of the commodity in the current period.

$P_i^{t-1}$  = The price of the commodity in the previous period.

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### Measuring Unit:

Percentage

### Technical Notes

The weights used in calculating the product price index have been standardized for the year 2014 at the state level, and the weights were derived through the values of industrial production for the manufacturing industry for the year 2014 through the data of the emirates of Abu Dhabi and Dubai.

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producer price index covers the emirates of Abu Dhabi and Dubai in this period and the production values for the northern emirates at the level of the general index.

### Price Frame:

To facilitate the process of collecting and displaying prices with the aim of installing the PPI, these commodities are classified according to the international industrial classification ISIC4. The total number of groups whose prices are collected from the field for the purpose of installing the product price index came up to 23 main groups, which were monitored from about 285 sources distributed over the two emirates, Abu Dhabi, and Dubai.

### Disaggregation of Goods

Activity	ISIC	2014 UAE production (Million dirhams)	2014 relative importance	% Covered by PPIs (Abu Dhabi and Dubai)
Manufacturing	C	400,752.65		79.5%
Manufacture of food products	10	25,943.96	6.5%	79.3%
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Manufacture of leather and related products	15	150.16	0.0%	50.3%
Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of thatch and plaiting materials	16	4,450.49	1.1%	63.1%
Manufacture of paper and paper products	17	3,547.53	0.9%	68.6%
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### Index usages:

- Knowing the prevailing trends in the prices of industrial producers within the Emirate of Abu Dhabi, Dubai and the country to help decision-makers, policymakers and researchers to plan and take decisions in support of the industrial sector
- An economic indicator that monitors the change in the prices of industrial producers, as the government uses this figure to address and formulate economic policies and plans.
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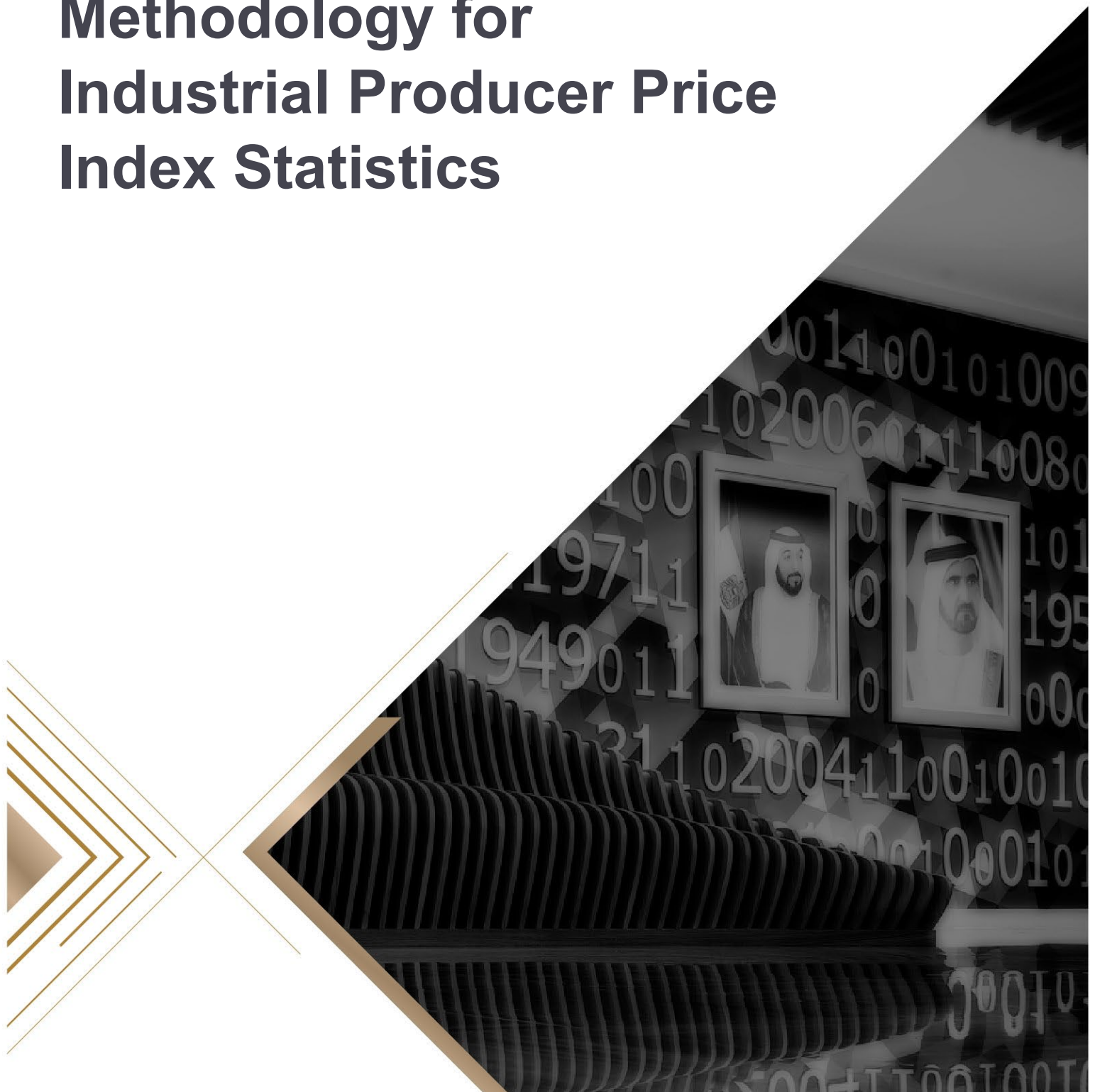
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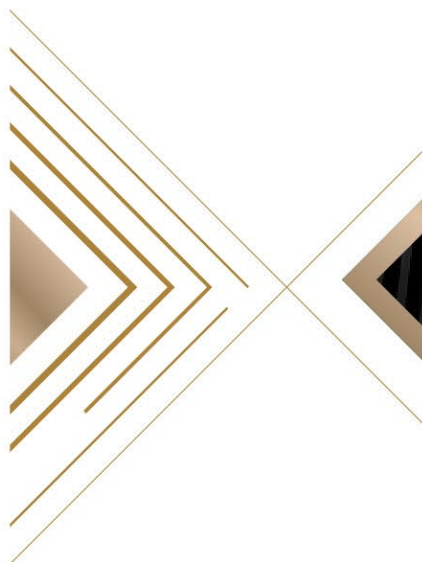
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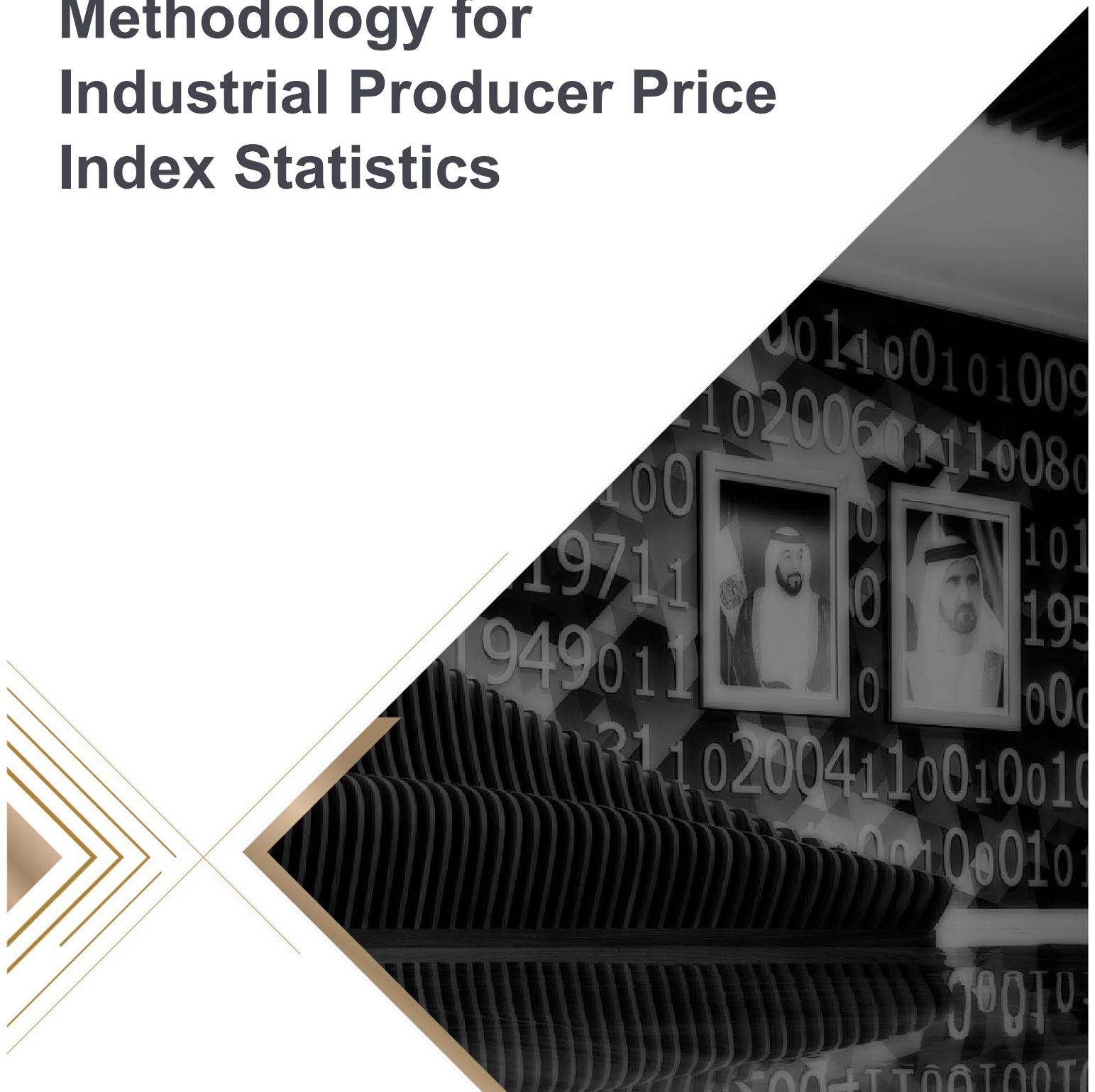
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- Providing a time sequence of index numbers to serve decision-makers and policymakers.
- Knowing the extent of price inflation, whether it is local or exported.

Price data is collected from about 285 main sources distributed in the Emirates of Abu Dhabi and Dubai, where the disaggregation of data is considered according to the International Industrial Classification - Fourth Edition issued by the United Nations ISIC4. The number of groups included in the calculation of the producer price index for the manufacturing industry comes to 23 groups.

The year 2014 was adopted as the base year when calculating the indexes at the state level, and the producer price index was installed for each of Abu Dhabi and Dubai.

**Product Price Index:** The Industrial Producer Price Index is a statistical economic indicator that measures the change in industrial production prices (manufacturing industries) between two time periods. The period upon which prices dependent is called the base period - and is the period against which we compare prices.

### Data sources:

The prices of about 284 products are collected from 285 establishments representing economic activity at the level of the second limit. The sample of the establishments is distributed across Abu Dhabi, Al Ain and Dubai.

### Concepts and Classifications:

**Inflation:** the continuous and appreciable rise in the general level of prices in a country. Inflation is calculated according to the following equation:

$$\text{Inflation rate} = 100 \times \frac{P_i}{P_{i-1}} = 100$$

As:  $P_i$  represents the general level of prices in the comparison year.

$P_{i-1}$  represents the general price level for the previous year.

**Price index:** is a statistical method for measuring changes in commodity prices between two time periods.

**Laspeyres equation:** this is a mathematical equation developed by the statistician (Laspeyre) to calculate the price indexes, by dividing the prices of the comparison year by the prices of the base year and weighting the quantities of the base year.

**Product price:** The product price relates to "factory door prices" before paying any kind of production tax. Producer prices include domestic production prices and export prices.

**Base period:** The period against which the current period is compared.

**Weights:** These refer to the relative importance of goods within the product basket or within the economy in general and are used in index calculations.

**Base period prices:** are the prices of commodities during a period, against which current prices are compared.

**Percentage of change in the index:** the amount of change in the index. It is calculated by dividing the index for a period by the index for the comparison period, multiplied by a hundred, then subtracting a hundred.

### Methodology for Number Calculation:

The price indexes in the country are calculated using the modified Laspeyre method with the following mathematical formula:

index =

$$\sum \left[ W_i^{t-1} \times \frac{P_i^t}{P_i^{t-1}} \right]$$

As:

$P_i^t$  = The price of the commodity in the current period.

$P_i^{t-1}$  = The price of the commodity in the previous period.

$W_i^{t-1}$  = Weight at previous prices.

### Measuring Unit:

Percentage

### Technical Notes

The weights used in calculating the product price index have been standardized for the year 2014 at the state level, and the weights were derived through the values of industrial production for the manufacturing industry for the year 2014 through the data of the emirates of Abu Dhabi and Dubai.

### Inclusion and Coverage:

The Industrial Producer Price Index covers all activities of the manufacturing sector in the emirates of Abu Dhabi and Dubai and represents all manufacturing activities at the second level according to the International Standard Industrial Classification of All Economic Activities (ISIC4/2digit). The number of activities chosen to represent the manufacturing sector come up to 23 industrial activities. It is worth noting that the Center will develop the industrial producer price index to include extractive activities, water, and electricity and to include all emirates of the country if the industrial survey is carried out in the northern emirates, to calculate the weights of the basket of producers from the revenue data that will be available at the emirate level. However, the industrial

producer price index covers the emirates of Abu Dhabi and Dubai in this period and the production values for the northern emirates at the level of the general index.

### Price Frame:

To facilitate the process of collecting and displaying prices with the aim of installing the PPI, these commodities are classified according to the international industrial classification ISIC4. The total number of groups whose prices are collected from the field for the purpose of installing the product price index came up to 23 main groups, which were monitored from about 285 sources distributed over the two emirates, Abu Dhabi, and Dubai.

### Disaggregation of Goods

Activity	ISIC	2014 UAE production (Million dirhams)	2014 relative importance	% Covered by PPIs (Abu Dhabi and Dubai)
Manufacturing	C	400,752.65		79.5%
Manufacture of food products	10	25,943.96	6.5%	79.3%
Manufacture of beverages	11	5,252.05	1.3%	79.0%
Manufacture of tobacco products	12	1,489.47	0.4%	82.3%
Manufacture of textiles	13	2,269.37	0.6%	61.6%
Manufacture of wearing apparel	14	7,270.60	1.8%	63.7%
Manufacture of leather and related products	15	150.16	0.0%	50.3%
Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of thatch and plaiting materials	16	4,450.49	1.1%	63.1%
Manufacture of paper and paper products	17	3,547.53	0.9%	68.6%
Printing and reproduction of recorded media	18	5,727.38	1.4%	77.1%
Manufacture of coke and refined petroleum products	19	96,881.13	24.2%	96.1%
Manufacture of chemicals and chemical products	20	52,245.77	13.0%	96.1%
Manufacture of pharmaceuticals, medicinal chemical and botanical products	21	3,849.51	1.0%	11.4%
Manufacture of rubber and plastic products	22	11,945.21	3.0%	61.8%

Manufacture of other non-metallic mineral products	23	37,692.57	9.4%	46.1%
Manufacture of basic metals	24	44,989.83	11.2%	92.4%
Manufacture of fabricated metal products, except machinery and equipment	25	39,611.37	9.9%	56.0%
Manufacture of computer, electronic and optical products	26	490.24	0.1%	94.6%
Manufacture of electrical equipment	27	12,476.00	3.1%	93.1%
Manufacture of machinery and equipment n.e.c.	28	9,260.83	2.3%	63.7%
Manufacture of motor vehicles, trailers and semi-trailers	29	1,826.08	0.5%	83.4%
Manufacture of other transport equipment	30	7,875.32	2.0%	*28.4%
Manufacture of furniture	31	7,716.98	1.9%	46.5%
Other manufacturing	32	2,209.61	0.6%	94.0%
Repair and installation of machinery and equipment	33	15,581.17	3.9%	91.4%

### Index usages:

- Knowing the prevailing trends in the prices of industrial producers within the Emirate of Abu Dhabi, Dubai and the country to help decision-makers, policymakers and researchers to plan and take decisions in support of the industrial sector
- An economic indicator that monitors the change in the prices of industrial producers, as the government uses this figure to address and formulate economic policies and plans.
- It is considered a major inhibitor of the series of economic indicators over time, and it is used in the treatment of time sequences of economic data based on price changes represented by inflation, to reflect its true nature, at constant prices within the national account estimates.
- A tool for monitoring emergency escalation in buying and selling contracts, especially in future contracts in which the payment (point) date is set, and it is often desirable to include clauses in which the price has escalated to deal with and monitor their impact on input prices.
- It is used by international economic organizations, such as the International Monetary Fund, as an evaluation and comparison tool.



**Production period:**  
Quarterly.