Producer Price Index

Indicative time series

March 2013

1. Introduction

Statistics South Africa is making this PPI time series available to users to aid in the analysis of the indices published from January 2013. This series uses only the prices of products which appear in both the old and new PPI series, repackaged in the new format. The data is available at www.statssa.gov.za/timeseriesdata/timeseriesdata.asp.

2. Difference between the "PPI for Domestic Output" and the "Stages-of-Production PPI"

"The value aggregate from the national accounts framework that aligns with the basic price received by the producer of goods and services is the value of production (International Monetary Fund Producer Price Index Manual, 2004)". In other words, the value-added from the national accounts lays the basis of the weighting structure per industry in the Producer Price Index (PPI).

From 2008, the weights set for the PPI was derived from Large Sample Surveys and other industry sources as the basis of the relative importance of products per industry, and industry weights were derived as the value-added per industry from the National Accounts. These were summed to obtain the PPI for Domestic Output.

The 2013 PPI uses the same principle to derive weights; however the format of the PPI was changed from a PPI for Domestic Output to a stages-of-production PPI.

The relative importance of products is based on large sample surveys and industry sources. The official PPI from 2008 to 2012 is based on these specified source data sets from the period 2005. From 2013, the PPI weights will be updated annually with value-added, and when large sample survey or industry data is available, will be incorporated in the PPI. This ensures that the PPI weights as well as basket of goods are up-to-date with changing economic conditions.

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3. PPI indicative time series

The PPI indicative time series uses the 2005 source data for the relative importance of the products, but the higher level value-added weights are updated annually. In other words, for 2008, the 2006 value-added was used, for 2009; the 2007 value added was used, etc. This was done to show changes through time in the economy, as well to illustrate to users how the indices would have behaved if a stages-of-production concept was incorporated from 2008. The pricing information in the indicative time series is from those products that appear in both the 2005 and 2013 PPI series.

3.1 Calculation of the indices

The indices are calculated using a Jevons index to compute elementary aggregates (average price change of indicator products), and a Young index (arithmetic weighted average) aggregate to the higher level indices, these are consistent with the current methods used in the PPI.

The chaining (due to changes in weights annually) of the indices, is done in a manner where the published sub indices are aggregated to the higher level published indices for each January; thereafter the index is calculated as the pure arithmetic weighted average of the elementary indices. In January, a technique known as splicing is used to incorporate the new index; essentially this is overlapping of indices with new weights to obtain the correct levels of the indices.

Chain linking always leads to non-additivity in either rates of change or indices, dependent of which method is used. In the case of the indicative time series, since additivity in the indices are obtained, the rates of change will not be additive.

3.2 The results

The time series endeavours to have similar aggregate indices to that of the PPI from 2013. However, changes in the composition of products and weights (lower level relative importance), due to the updating of the basket based on more up-to-date information for the 2013 set, may make sub index comparability complex. The higher-level indices tend to follow similar patterns (direction of movement of the index and rates of change), but lower-level indices may illustrate a lower degree of correlation.