PRODUCERS PRICE INDEX (PPI)

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Introduction

PPI can be described as the index which designed to measure either the average change in the price of goods and services as they leave the place of production or as they enter the production process.

- PPI is seen as a major indicator of domestically induced inflation, which most central banks want to control using instruments of monetary policy
- An important tool in design and conduct the monetary and fiscal policy of the government.
- Use to deflate nominal measures of goods and services produced to provide measures of volumes in National accounts.
- Well known and closely watched indicator of macroeconomic performances
- PPI and PPIs for specific products are used to adjust prices of inputs in long-term purchase and sale contract (price escalation)

Uses of PPI

PPIs are used for a variety of different purposes. There has always been substantial interest in, and demand for , price indices from the general public, private sector as well as government and international agencies. The PPI may be used for purpose of:

- As a short-term indicator of inflationary trends: The monthly PPI with detailed product and industry data allows short-term price inflation to be mentioned through different stages of production.
- Contract price adjustments: The purpose of using the PPI for indexing long-term contracts to take the inflationary risk out of the contract.
- A deflator in the compilation of national accounts: a fundamental use of the PPI is a deflator in the national accounts. Therefore, the concepts underlying the PPI are often conditioned by those underlying the national accounts

Steps Involved in compiling PPI

Ten fundamental steps can be defined for the design, construction, dissemination, and maintenance of a Producer Price Index. These steps are (IMF PPI Manual, 2004):

- Determining the objectives, scope and conceptual basis of the index
- Deciding on the index coverage and classification structure
- Deriving the weighting pattern
- Designing the sample
- Collecting and editing the prices
- Adjusting for changes in quality
- Calculating the index
- Disseminating the indices
- Maintaining samples of business and product specifications, and
- Reviewing and reweighting the index

Index used in PPI Calculation

Lowe price index is generally used for compilation. Let there be n products in the basket with prices pi and quantities qi. Let period b be the period to which the quantities refer and period 0 and t be the two periods whose prices are being compared. In practice it is invariably the case that b$\leq 0 \leq t$ when index is first published and this is assumed here. However b could be any period , including one between 0 and t. if the index is calculated some time after t, then the index is defined as,

$$P_{L0} = \frac{\sum_i p_{i,t} q_{i,b}}{\sum_i p_{i,0} q_{i,b}} = \sum_i \left(\frac{p_{i,t}}{p_{i,0}}\right) \frac{p_{i,0} q_{i,b}}{\sum p_{i,0} q_{i,b}} = \sum \left(\frac{p_{i,t}}{p_{i,0}}\right) s_{i,b}$$

In practice it is invariably the case that b ≤ 0 ≤ t

Where, b= weight reference period and 0= Price reference period

Imputations in the PPI

The PPI and CPI follow the same methods when imputing for missing prices. There are three methods that the IMF PPI and ILO CPI manual prescribe and give guidelines on, they are;

- ❖ Omit the item for which the price is missing so that a matched sample is maintained (like a compared with like) even though the sample is depleted (the matched sample approach is used when one observation in a sample for an elementary aggregate is temporarily unavailable)
- ❖ Carry forward the last observed price (is strictly applied to annual, bi-annual, quarterly and other infrequent/adhoc surveys but not in monthly)
- ❖ Imputation:
- ➢ Impute the missing price by the average price change for the prices that are available in the elementary aggregates (imputation by average price change is only considered once there is no data available to calculate average percentage for a specific indicator product.)
- ➢ Impute the missing price by the price change for a particular comparable product for a similar establishment

Linking of the PPI

The PPI high- level weights as well as certain elementary indices will be updated annually when new weights are introduced the price reference period for the new index can be the last period of the old index, the old and the new indices being linked together at this point. The old and the new indices constitute a linked index.

Method of linking

The method used to link the PPI is known as splicing and chaining. When weights are updated which reflect the latest production patterns, a new series is created. Consequently, two series exist, the old and the new. However, as with all prices statistics, a continuous series is required. To accomplish this, the splicing technique is applied, this means that to make the new indices comparable to the old, the indices are spliced at a year that is common to both series