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NATIONAL STATISTICS BUREAU

Towards Supporting Evidence-Based Decision Making

Re-Based Producer Price Index

(PPI) Report

Economic and Environmental Statistics

Division

National Statistics Bureau

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Chapter 1: Introduction

Background of the Producer Price Index (PPI)

Since 2011, the National Statistics Bureau (NSB) of Bhutan, under the Royal Government, has been tracking changes in production prices every quarter through the quarterly Producer Price Index (PPI). The PPI serves multiple critical roles, acting as an indicator of inflationary trends from the perspective of producers, a deflator for estimating Gross Domestic Product (GDP), and a tool for economic monitoring and comparison, among others. Given its wide-ranging applications, it is imperative that the NSB continues to compile a PPI that is both accurate and dependable.

Up until 2011, the PPI had been generated using weightings derived from the data collected that year. However, as time has progressed, production patterns and the industrial landscape have evolved, necessitating a rebasing of the index to reflect the current economic conditions. This rebasing process aligns with internationally accepted best practices, emphasizing the need to periodically review and update economic indices.

The rebased Producer Price Index (PPI) draws its foundation from the findings of the Economic Census of Bhutan (ECoB) conducted in 2017 by the NSB. This comprehensive data collection effort spanned two months, from April to May, and covered five Dzongkhags. The ECoB 2017 provided updated industrial statistics, with the reference year set as 2017, thereby superseding the baseline data collected in 2011. The weights used in developing the updated Producer Price Indices (PPI) are derived from this updated dataset. This report provides key highlights regarding the structure of the rebased PPI, the employed methodology, and the resulting outcomes.

Why the Producer Price Index (PPI)

The Producer Price Index (PPI) is designed to measure the average change in the prices of goods and services either as they depart from the place of production or as they enter the production process. While somewhat similar to the Consumer Price Index (CPI), which examines rising prices from the consumer's perspective, the PPI takes a producer-centric viewpoint. While the CPI focuses on final prices realized by consumers, the PPI goes one step back to assess changes in output prices faced by producers. In Bhutan, the NSB computes the PPI for goods as they exit the place of production (ex-factory), with a valuation based on basic prices.

For the compilation of the output PPI, specific data requirements must be met, including a well-defined set of products, a representative sample of establishments, information to calculate weights at the industry/establishment/product group level, and data from industries to monitor potential changes in product quality.

Chapter 2: Purpose & Uses of the Producer Price Index (PPI)

Purpose of PPI

The Producer Price Index (PPI) serves a fundamental role by providing valuable economic information to a wide range of stakeholders, including policymakers, analysts, and researchers. It aids in understanding and analyzing price trends within the production process. Some key purposes of the PPI include:

Inflation Measurement

As an indicator of inflationary pressures, the PPI offers early signals of potential inflation before these changes fully impact consumer prices. This allows policymakers to take timely actions to manage inflation.

Policy Formulation and Regulation

Government agencies and regulators use PPI data to assess the effects of policies on various industries and to design regulations that consider pricing dynamics in different sectors.

Use of PPI

The Producer Price Index (PPI) finds application across diverse sectors of the economy. Its primary function is to provide insights into price trends at the producer level, enabling businesses, policymakers, analysts, and researchers to make informed decisions. Key uses of the PPI include:

Short-Term Inflationary Trend

A quarterly PPI with detailed product and industry data allows for monitoring short-term price inflation across various production stages. Key users include the Central Bank of Bhutan (RMA), national agencies, and government bodies involved in macroeconomic forecasting.

National Accounts Deflator

The PPI plays a crucial role in deflating nominal values of output for the compilation of production volumes used in the preparation of national accounts.

International Organizations and Research

The PPI data is required by international organizations such as the IMF for economic monitoring and comparison, making it a valuable resource for research and global economic analysis.

Reliability

Collecting data for the PPI necessitates sampling from a representative set of establishments and a well-defined product list. The NSB has been diligently monitoring the prices of selected products on a quarterly basis.

Chapter 3: Methodology, Structure, Composition, and Weighting Pattern of the PPI

Steps Followed in PPI Compilation

Determining Objectives, Scope, Coverage and Classification Structure of the PPI

The Economic Census of Bhutan (ECoB) 2017, conducted nationwide, collected establishment-based data for all industrial activities. This data, classified using the International Standards of Industrial Classifications (ISIC), Revision 4, forms the basis for the PPI rebasing. The scope of the PPI extends to ISIC sections A, B, C, D&E, H, and J, encompassing various sectors.

Deriving the Weights and Sample

Output data from the ECoB 2017 was utilized to compute the weights for the PPI rebasing. The reference year for the ECoB was 2017, shaping the rebased PPI weights to reflect quantities produced in that year. A top-down approach was employed in deriving weights, starting with section, division, group, and class. Each sampled establishment was assigned an ISIC industry code, and weights for the products selected within an establishment accounted for the entire weights of the sampled establishment.

Chapter 4: Re-based Producer Price Index (PPI) Results

Difference between PPI using 2011 and 2017 Weights

A notable shift in the structure of industrial production is evident when comparing PPI results using 2011 and 2017 weights. The share of manufacturing and electricity decreased from 47.7 percent in 2010 to 33.6 percent in 2017 and from 35.4 percent in 2010 to 27.2 percent in 2017, indicating a slight change in the composition of industrial output. Conversely, the share of Forestry & Logging, Mining and Quarrying, Electricity, Transport and Storage, and Information and Communication section weights increased, albeit marginally.