

UNITED NATIONS
ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC
STATISTICAL INSTITUTE FOR ASIA AND THE PACIFIC (SIAP)

INTERNATIONAL MONETARY FUND (IMF) STATISTICS DEPARTMENT (STA)

Regional Course

CONSUMER PRICE INDEX COMPILATION METHODS

20-24 January 2025

Chiba-Japan

I. Introduction

CPIs measure changes over time in the general level of prices of goods and services that households acquire (use or pay for) for the purpose of consumption. In many countries, they were originally introduced to provide a measure of the changes in the living costs faced by workers, so that wage increases could be related to changing levels of prices. However, over the years, CPIs have widened their scope and now are widely used as a macroeconomic indicator of inflation, as a tool by governments and central banks for monetary policy and for monitoring price stability, and as deflators in the national accounts. With the globalization of trade and production and the liberalization of the markets, national governments, central banks, and international organizations place great importance on the quality and accuracy of national CPIs, and their international comparability.

CPIs are official statistics that are usually produced by NSOs, ministries of labor, or central banks. They are published as quickly as possible, generally within four weeks after the reference period.

This face-to-face course, developed jointly by SIAP and IMF, aims to build capacity to improve the compilation of consumer price indexes (CPI) that reflect international standards and best practice as described in the 2020 CPI Manual. Course topics will include overview of index calculation methods, developing weights, selecting samples, price collection, data dissemination, and more advanced topics such alternative data sources, digital economy, and owner-occupied housing. The program will include interactive discussions to share country experiences, practical exercises to apply concepts and methods discussed, and limited lecture.

II. Target Audience

This course is designed for government officials from National Statistics Offices, Central Banks and Ministry of Labours who are involved in the compilation of consumer price indexes (CPIs).

III. Target Countries

The course is designed for the ESCAP member countries in Asia and the Pacific region. Target countries: Armenia, China, India, Japan, Kazakhstan, Macao China, Mongolia, Nepal, Republic of Korea, Sri Lanka, Tajikistan, Timor-Leste.

IV. Learning Outcomes

By the end of the course, participants will be able to

- a) Identify key uses of CPI data and explain key consumer price index concepts and definitions and how these are applied in practice.
- b) Identify and explain differences between the different index calculation formulas.
- c) Define and explain the different levels of sampling in a CPI and how these sampling methods are applied in practice.
- d) Identify and explain the different methods for the treatment of missing prices and describe how these are applied in practice.
- e) Update CPI weights and link old and new indexes to form continuous time series of data.
- f) Identify and incorporate alternative data sources in the consumer price index.

V. Course Design and Content

Sessions will be covered in the course are listed below.

Day	Coverage
Day 1	<ul style="list-style-type: none">• Issues for Compiling Price Indexes• Developing weights
Day 2	<ul style="list-style-type: none">• Elementary Index Calculation• Upper-level Index Calculation
Day 3	<ul style="list-style-type: none">• Sampling Methods• Developing Detailed Specifications• Alternative Data Sources and the Digital Economy
Day 4	<ul style="list-style-type: none">• Temporarily Missing Prices• Permanently Missing Prices• Imputing Missing Prices• Direct and Indirect Quality Adjustment Methods
Day 5	<ul style="list-style-type: none">• Measuring Owner-Occupied Housing in the CPI• Web scrapping for the compilation of CPI

Sessions will be conducted in English and no translations will be provided to the participants.

Participants are required to bring their personal laptops.

VI. Evaluation

Pre-course test, post-course test and end of course evaluation will be conducted to assess the learning outcomes.

VII. Source Material

This course draws upon The Consumer Price Index Manual, 2020: Concepts and Methods.

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