Meeting of the Group of Experts on Consumer Price Indices

“Treatment of Missing Observations and their Replacements”

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- History
- Vision and Mission
- Structure
- Economic Statistics Division
- RPI Section

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RPI Methodology

• History
• Why RPI and not CPI?
• Index Calculation
• Base years
• Conversion Factors...linking the series
• Basket of Goods and Services
• Expenditure weights
• Price reference period
• Classification system
• Coverage
• Uses of RPI...Tobago RPI
Use of RPI – Tobago RPI

• Use of the national RPI to derive the Tobago RPI
• Trinidad and Tobago is a twin island republic in the Caribbean
• Tobago is governed by the Tobago House of Assembly
• Tobago has been clamoring for a “separate” Index of Retail Prices and Inflation Rate for years
• Use the area index and area weights from the calculation sheet of the national RPI to produce the “separate” index for Tobago.
• The Tobago RPI is not yet available for release
Methodological issues in CPI compilation

- The treatment of missing observations and their replacements
Price Collection

• Sampling, Item Selection & Specification
• Business Survey Field Staff
• Monthly, Fortnightly, Quarterly and Semi-Annually Pricing Sheets
• Treatment of missing observations and selection of appropriate replacements by field staff, data entry officers and RPI compiler
• Imputation issues
Treatment of Temporary Missing Varieties

• “Out of Stock” Items
• Explicit imputations are made for the prices of item varieties, which are temporarily unavailable at a given retail outlet during the current period of price collection. These explicit imputations are made for each period that the variety is missing.
• The method of imputation is to assume that the missing price for the current period would have moved by the same proportionate change in the geometric mean of those prices, which were recorded for the varieties representing the item concerned. Any imputed prices of the previous period are taken into account in the calculation of this proportionate change.
Treatment of Temporary Missing Varieties

- Where there are no available varieties to represent an item within a current period, no prices are recorded and therefore no price relative exists. A price relative has to be imputed and the method of imputation is to assume that the missing price relative for the current period would have moved by the same proportionate change in the weighted arithmetic average of those price relatives, which were recorded for the remaining items within the sub-group. Any imputed price relatives of the previous period are taken into account in the calculation of this proportionate change.
Treatment of Temporary Missing Varieties

• For a few items (e.g. fish or fruits), the varieties may themselves have assigned explicit weights (internal weights). Where a particular variety of that item is missing, the method of imputation for the missing price is to assume that the price for the current period would have moved by the same proportionate change in the weighted arithmetic average of those prices, which were recorded for the available varieties.
Treatment of Temporary Missing Varieties

• Seasonal item varieties
• An imputed price or price relative is computed for each period that a price or price relative is missing. Thus for seasonal varieties or seasonal items, a price or price relative respectively is imputed for each period for which they cannot be recorded. This is necessary to satisfy the previously stated requirement that explicit imputations be made and also to ensure that when the seasonal variety returns to the market, an imputed price is available for the previous month, thereby allowing the short-term price relative to be calculated. This method may result in price or price relative peaks and troughs at the beginning and end of the season. But these peaks and troughs are likely to occur at the same period each year so that the annual rate of change is unaffected.
Thank You