Chain Linking and Annual Update of Weights for Producer Price Indices for Services in Italy

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2. SPPIs annual updating process
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Main features of the Italian SPPIs

- Annually chain-linked Laspeyres type (year $y$)
- Chaining method: quarterly overlap
- Base period: fourth quarter of year ($y-1$)
- Weights reference period: year ($y-1$)
- Reference period: year 2010
- Annual updating
- Basket, sample of units, weights
- Calculation
- Weighted means of level indices
- Quarterly indices
- Data collection, calculation, dissemination
- Industry based
- Enterprise price indices
SPPIs annual updating process

SPPI ANNUAL UPDATING year $y$

Basket of services
Sample of units
Weights

TIME LINE

|------------|------------|------------|------------|------------|------------|--------|-------|--------|--------|-------|--------|

Items selection
Nace sub-sectors weights calculation

Services identification
Sample selection
Units involvement
Units weights calculation

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The list of services in the basket changes (new services in, and old services out), due to new knowledge or to technical changes.

Sources: sector studies, enterprises, knowledge in the field, etc.
SPPIs annual updating process

**SPPI ANNUAL UPDATING year y**

- Basket of services
- Sample of units
- Weights

**Survey beginning for year y**

- Enterprises in the sample receive Istat official communication for the survey

**Units involvement**

**Sample selection**

Units (enterprises) are selected in order to define the new sample

*Sources: Istat enterprises data base; sector’s analysis*

**TIME LINE**

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SPPIs annual updating process

SPPI ANNUAL UPDATING year y

Basket of services
Sample of units
Weights

Survey beginning for year y
Nace 3 digit weights (year y-3 or y-2) are updated to the fourth quarter of year (y-1), by using price changes
Sources: Istat enterprises data base and external sources

Nace sub-sectors weights calculation

Units weights calculation

BtoB enterprise turnover and services BtoB turnover collected by the survey (year y-1)
Sources: survey

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Chain linking vs fixed base approach: an example

<table>
<thead>
<tr>
<th>Index</th>
<th>Base period</th>
<th>Reference period</th>
<th>Weights reference period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chain-linked index</td>
<td>quarter 4, year (y-1)</td>
<td>2006=100</td>
<td>year (y-1)</td>
</tr>
<tr>
<td>Fixed base index</td>
<td>average of year 2006</td>
<td>2006=100</td>
<td>2006</td>
</tr>
<tr>
<td>Mixed index</td>
<td>average of year 2006</td>
<td>2006=100</td>
<td>year (y-1)</td>
</tr>
</tbody>
</table>

- same sample of units
- chain-linked index: base period + weights reference period change yearly
- fixed base index: base period + weights reference period agree with the reference period
- mixed index: base period coincides with the reference one and weights reference period changes yearly
Chain linking vs fixed base approach: an example
Thank you!

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