The Danish CPI with scanner data - a switch for the COICOP group 1 and 2
The use of unit prices

• In general unit prices are applicable in the CPI and give and insight into actual consumption

• But:
  - Data should be monitored for flaws in the different variables and between month
Scanner data

Timeline:

2010-2012:
- It is decided to investigate the possibility of implementing SD in the Danish CPI
- Contact to the chains is taken
- Programs to the validation of data and chaining to COICOP is developed

2013:
- The development of a system for the automatic update of the basket is initiated
- The development of a system for integration of SD with regular prices is initiated

2014-15:
- The system for the automatic update of the basket is finished
- The system for integration of SD with regular prices is finished
- A backdata-calculation of the CPI with scanner data is done for the years 2011-2015
- It is checked whether it’s possible to calculate other indices types (netpriceindex, HICP, HICP-CT)
- The switch to ECOICOP is done
IT: Reception and linking to ECOICOP

• First step: simple checksystems (missing records, proper dates)
• Second step: Scanner data is linked to the ECOICOP-classification based on the supermarkets classification and a search-word-process
• Third step: Wrongfully placed barcodes (with a large turnover) are moved to the right ECOICOP-group
IT: selection of basket

1. Reception of data
2. Data are validated
3. Data is ready for processing
4. The representative basket for month t-1 is drawn
5. Every good in the basket is checked - is it still sold?
   - yes
   - No:
     - New replacement goods are fetched
Scanner data, results

Total CPI:
Growth rates, total CPI:

<table>
<thead>
<tr>
<th></th>
<th>Official CPI</th>
<th>Scanner data CPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>2,4</td>
<td>2,4</td>
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<tr>
<td>2013</td>
<td>0,8</td>
<td>0,8</td>
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<tr>
<td>2014</td>
<td>0,6</td>
<td>0,6</td>
</tr>
<tr>
<td>2015 (jan-may)</td>
<td>0,4</td>
<td>0,4</td>
</tr>
</tbody>
</table>
SD results

Food and non-alcoholic beverages:
Alcoholic beverages and tobacco
Low-fat milk, no significant differences:
SD results

Whipped cream, scanner data is better:
White cabbage, different source:
Seasonal patterns may change
Impact on total CPI

Consumer price index

- Official yearly changes
- SD yearly changes
Challenges

- Informal contracts with chains may imply the risk that we don’t receive the data. We have made informal contracts with the supermarkets chains.
- Flaws in the delivery of data.
- Match between goods leaving the sample and the ones entering.
- Dataflaws in scanner data.
- Short production time.