Clothing : the use of class mean imputation in the Swiss CPI – analysis and impact on the results
The quality adjustment method for clothing before 2011......

- The price collectors have to search for similar products allowing a direct comparaison (similar fabric, same price range).
- If not available, the item is removed from the sample and a new price serie is introduced.

no quality adjustment method
+ difficulties faced by the price collectors
+ insufficient number of prices
= urgent need to review!
Insufficient number of prices
Neyman’s optimal allocation
The quality adjustment method for clothing after 2011......

- Introduction of class mean imputation
- Assumption: the price movement of not comparable articles is the same as the price movement of matched and comparable items.
- Necessary changes:
  - Adjustment of the basket of goods and services
  - Adjustment of the price collection rules / of the tasks of price collectors
  - Adjustment of the IT platform
Simulation before the introduction...

At the level of clothing and footwear

- Clothing and footwear - simulated
- Clothing and footwear - published
Conclusion of the first simulation....

Risk of a downward bias ?

Introduction of a mixed method of quality adjustment:
  Direct comparison when quality differences are negligible
  Class mean imputation for the other cases
Prices collectors collect characteristics, SFO decides according to brand and fibre composition......
Conclusion of the first simulation....

**Imputation basis**: Average price movement of items in a same elementary aggregate, whose quality is similar. That means: matched and direct compared items.

Special offers, sale and missing items are not part of the imputation factor.
Simulation after the introduction....

At the level of clothing

Index (dec.10=100)

Clothing - simulated
Clothing - published
Simulation after the introduction....

At the level of children rain coats

Index (dec.10=100)

Children rain coats - simulated
Children rain coats - published
Conclusion of the second simulation . . .

Risk of an upward bias?

At a detailed level, effect can go in three directions (neutral, downward and upward)
General conclusions

- Choice of imputation method very important
- The basket of goods and services has to be adjusted
- The number of prices collected at the imputation level must be sufficient
- Simulation should be interpreted with caution
- Results should be carefully analysed