Comparison of maximum overlap and fixed sample methods for computer price indexes

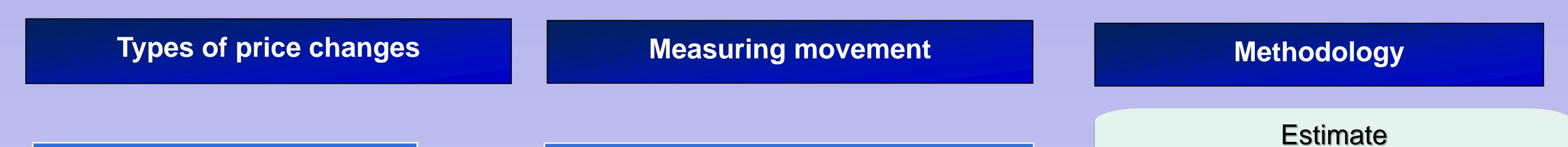
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Question:

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Given the production limitations of a monthly computer index, does a maximum overlap method or a fixed sample using hedonic adjustments better reflect computer price movements?



Price change within an existing model

Introduction of new models



Fixed sample using hedonic coefficients

- Time consuming
- Limited sample

Maximum overlap sample

- Much larger sample
- Less processing resources needed

• Published fixed sample (200 units)

- Maximum overlap (avg 5000 units)
- Large fixed sample (2500 units)

Compare different measures

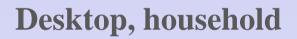
Determine best methods

- Maximum overlap
- Fixed sample

Hypothesis: Large fixed sample best measure of true price, but not operationally feasible

Comparison of different methods





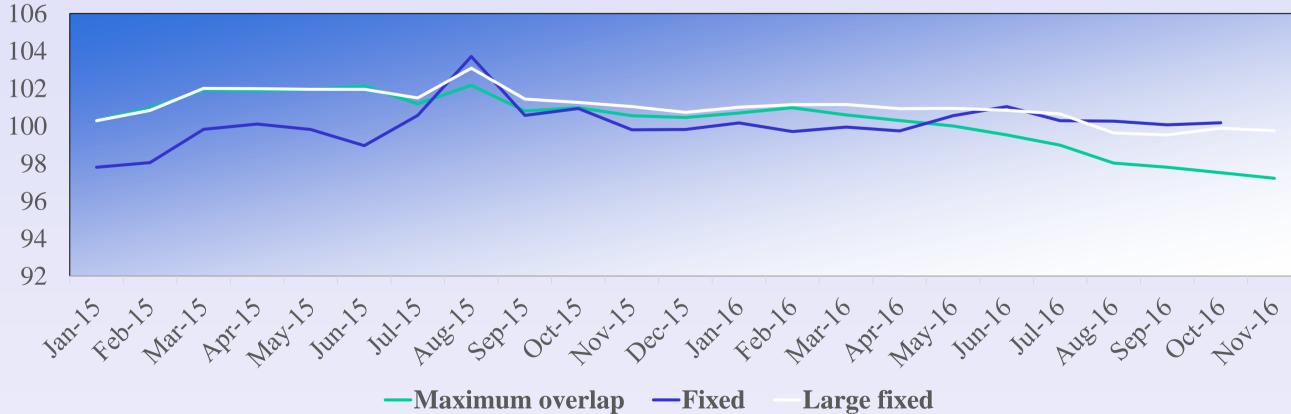


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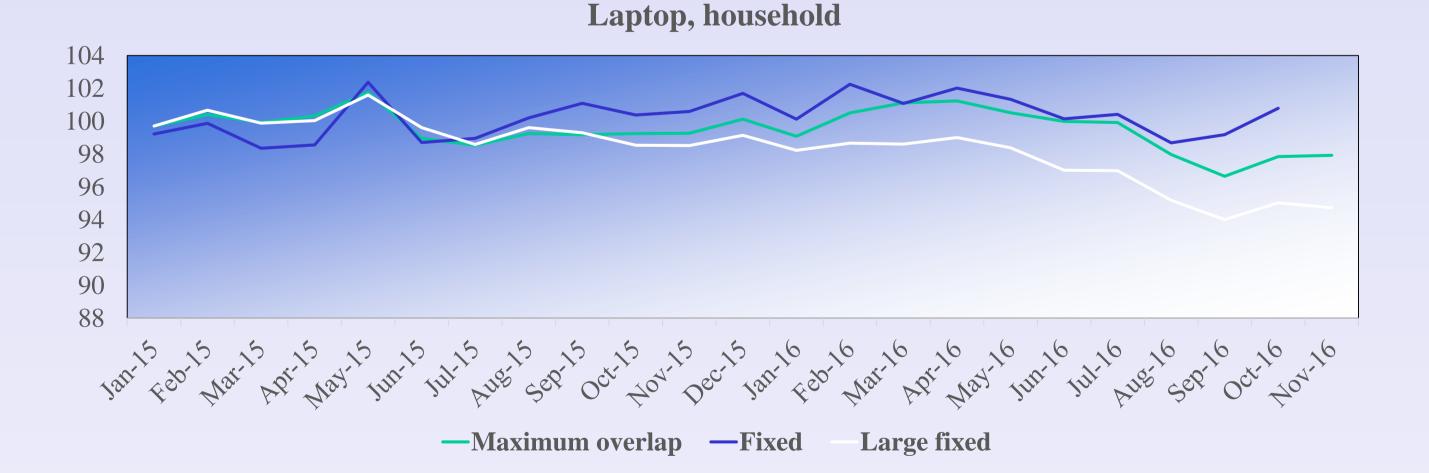
Laptop, business and government



Preliminary Findings

Maximum overlap follows large fixed sample more closely, but misleading

L Hypothesis incorrect. Sample is so large that



Next Steps

Recreate index with various sample sizes to determine optimal size → <u>Maximize sample size</u>

potential model replacements are limited

Poor replacement being chosen

- Hedonics of limited use and relative is excluded from the estimation
 - **Resulting index necessarily resembles maximum** overlap method

- **Minimize imputation rate**
 - **Compare resulting index with maximum overlap and** determine if there is value added in doing the hedonics



