Discussion on Policy-Relevant Exchange Rate Pass-Through to U.S. Import Prices

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Downward bias in exchange rate pass-through to U.S. import price index
Questions

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- Possible reasons investigated:
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- Possible reasons investigated:
  - Improper lag selection
  - Selection biases in the entry of items in the basket of prices
  - Selection biases in the exit of items from the basket of prices.
Arguments

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  - Standard lag length selection criteria may lead underprediction of pass-through over the medium run
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  - Include, say, 24 lags in monthly data
  - Monte-Carlo: Benefits are higher compared to costs
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- Selection biases in the entry of items
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- Items that are less responsive to recent exchange rate movements than items already in the index.
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  - Items that are less responsive to recent exchange rate movements than items already in the index.
  - The size of this bias is sensitive to the speed of pass-through.
  - Construct an alternative price index by delaying the entry of substitutes in the basket.
Selection biases in the exit of items
Selection biases in the exit of items

The key source of bias?
Arguments

- Selection biases in the exit of items
  - The key source of bias??
  - Due to the possibility of items leaving the basket having higher deviation from their reset price
Selection biases in the exit of items

The key source of bias??

Due to the possibility of items leaving the basket having higher deviation from their reset price

Further details are necessary from BLS to work on this
Can the problem be solved by using the maximum lag of an item?
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If any of the items are affected by lagged exchange rates, you may want to include as many lags just to capture the dynamics of these items.
Create two price series:

- One with 24 lags of exchange rate effect
- The other with 2 lags of exchange rate effect

Take the weighted average of the two series. With low-enough weights on the 24-lag series, the lag selection through AIC or SC can be as low as 2 or 3. Hence, the 24-lag series almost disappear in lag selection through AIC or SC. But, can we still use 24 lags on the weighted average to see the overall effects (for medium or long-run)?
Lag selection

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- The answer is yes if you believe in the following alternative lag selection:

  When I used sequential F-test with maximum 50 possible lags (for 10,000 simulations) as a lag selection criterion, the highest lag with the medium (and mode) lag selection equal to itself (and the mean lag selection very close to itself) was 24, while it was not the case for any higher possible lags. Hence, through sequential F-test, select the highest lag which minimizes the distance with itself after 10,000 simulations. In my case, 99% of simulations selected 24 lags.

I repeated this exercise with creating price series with many different exchange rate lags; the results were the same. Hence, using sequential F-test can be an alternative solution.
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More to learn from micro-prices