

Using PPIs and EPIs as proxies for IPIs

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Motivation

- Concerns raised regarding the quality of some IPIs used by ONS
- We're therefore investigating alternative methods to create IPIs to supplement current series
 - Currently use PPIs where appropriate IPIs are unavailable
 - Primary development work on using Unit Values Indices (UVIs) to deflate trade of homogeneous products (in first instance)
 - This presentation is on experimental work investigating the possibility of using an aggregate of PPIs or EPIs from other countries as a proxy for our IPI – to be used as a tool to assess current IPIs or to replace them if appropriate

Method

- Creating proxy index from PPIs and EPIs published by other NSIs to create an alternative deflator.
- Countries chosen based on which are sources of imports
- Split into EU and NEU

Method

Collecting current prices and identifying relevant countries using admin imports data from HM Revenue and Customs (HMRC)



Calculating annual weights for those countries



Identifying and retrieving relevant PPI/EPI series from their NSIs



Aggregating PPIs/EPIs using weights



Applying exchange rate factor to adjust for differences in exchange currency



Link T and T-1 series and re-reference

Results

Case study 1 – CPA C201

**Basic Chemicals, Fertilisers and Nitrogen
Compounds, Plastics and Synthetic Rubber in
Primary Forms**

Case study 1

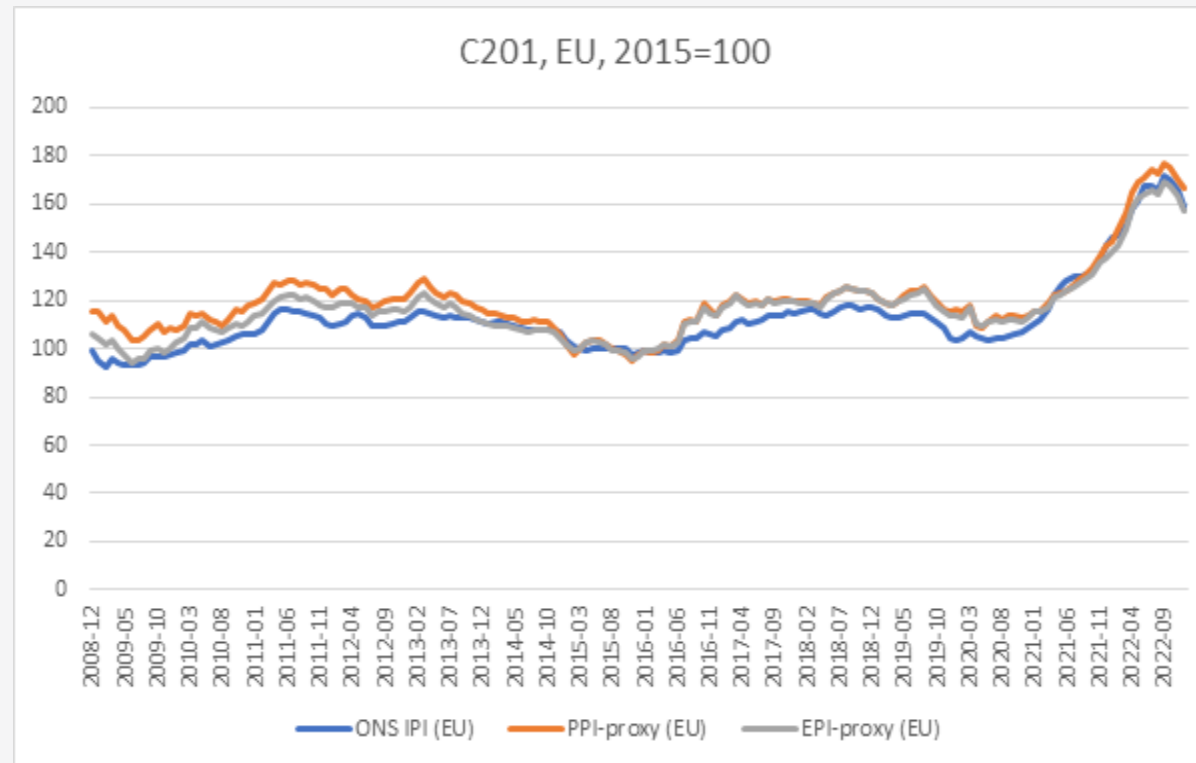
Basic Chemicals, Fertilisers and Nitrogen Compounds, Plastics and Synthetic Rubber in Primary Forms

- Product selected is Basic Chemicals, Fertilisers and Nitrogen Compounds, Plastics and Synthetic Rubber in Primary Forms.
- Current IPI is considered “good” for EU Imports, and “poor” for NEU imports, based on current sample size and coverage.
- Created proxies using PPIs and EPIs

Case study 1

Basic Chemicals, Fertilisers and Nitrogen Compounds, Plastics and Synthetic Rubber in Primary Forms

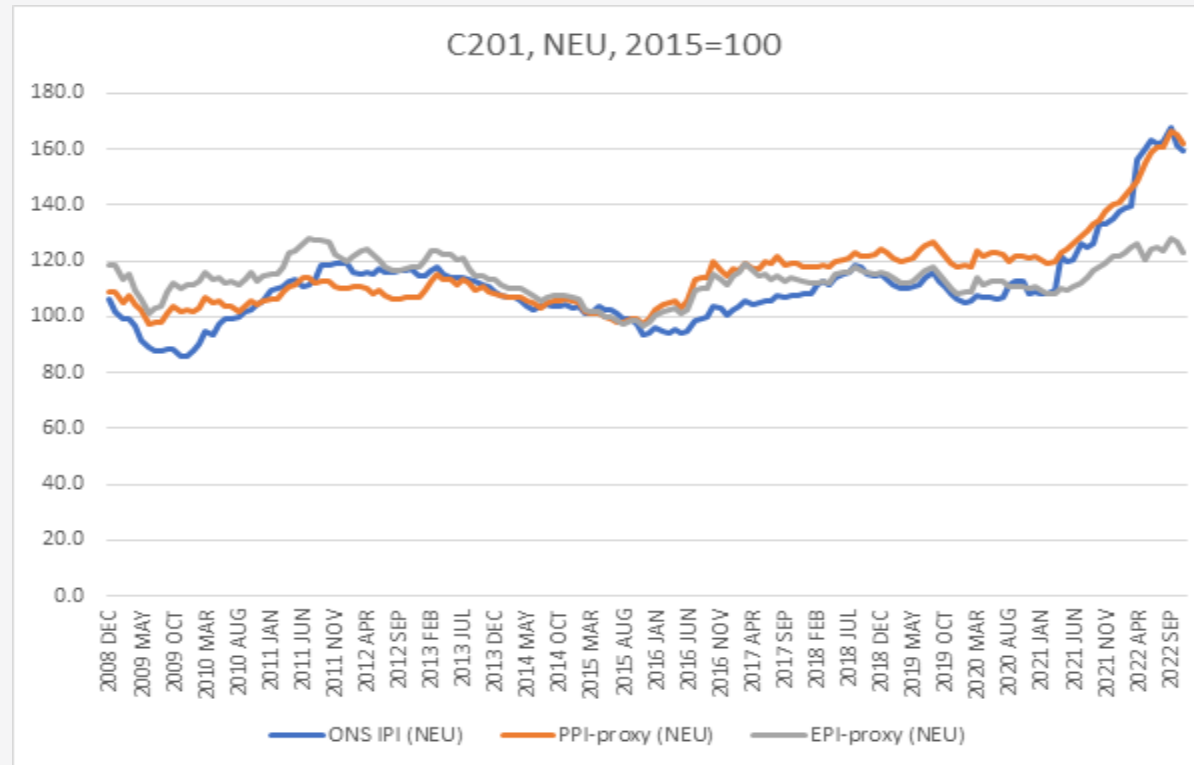
EU IPI proxies



Case study 1

Basic Chemicals, Fertilisers and Nitrogen Compounds, Plastics and Synthetic Rubber in Primary Forms

NEU IPI proxies



Case study 2 – CPA B061

Crude Petroleum

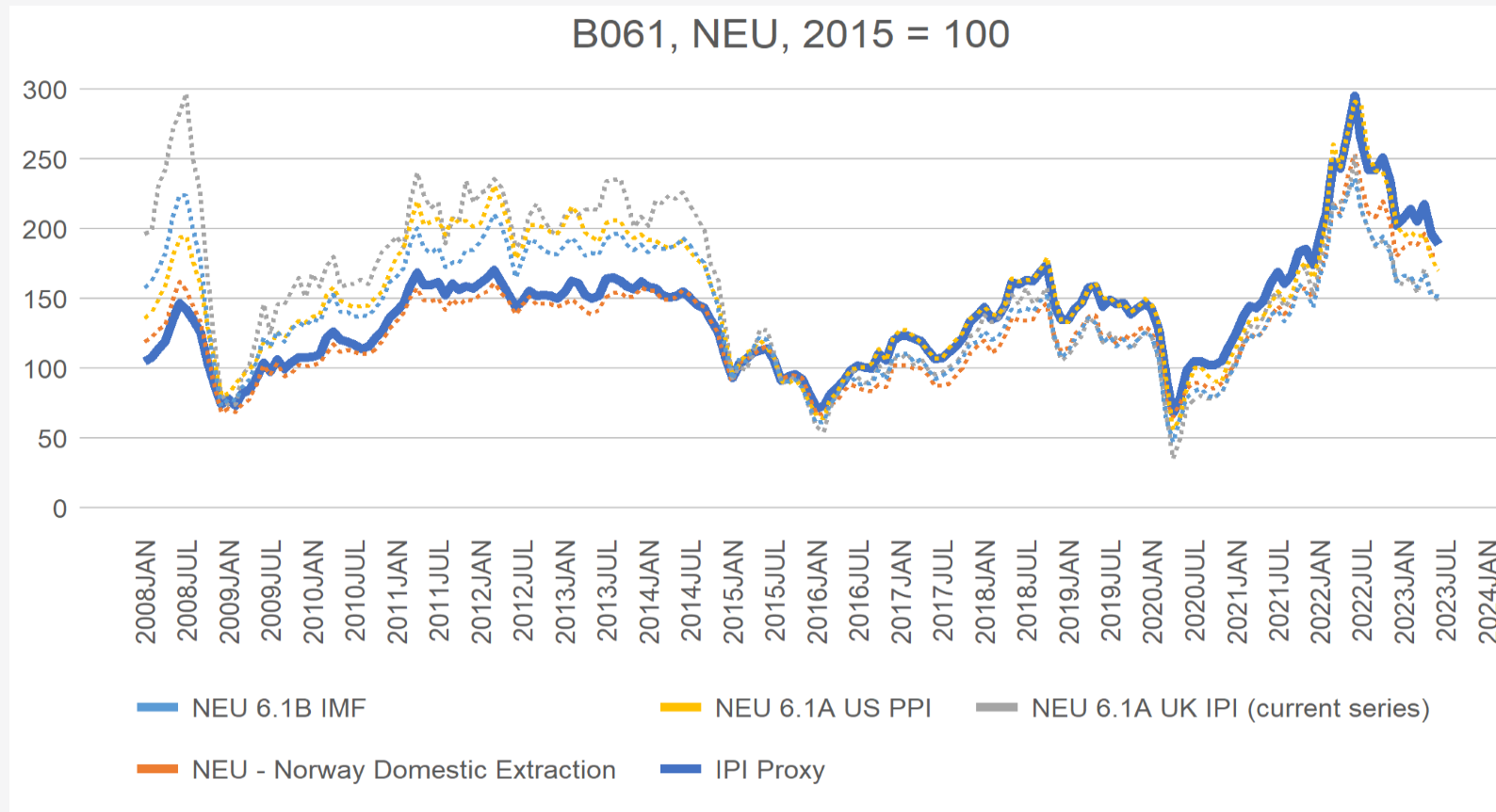
Case study 2

Crude Petroleum

- Chosen as one of the products for which we are researching the use of UVIs
- Countries included in proxy:
 - US
 - Norway
 - Russia (until 2022)
- NEU only due to very few EU imports

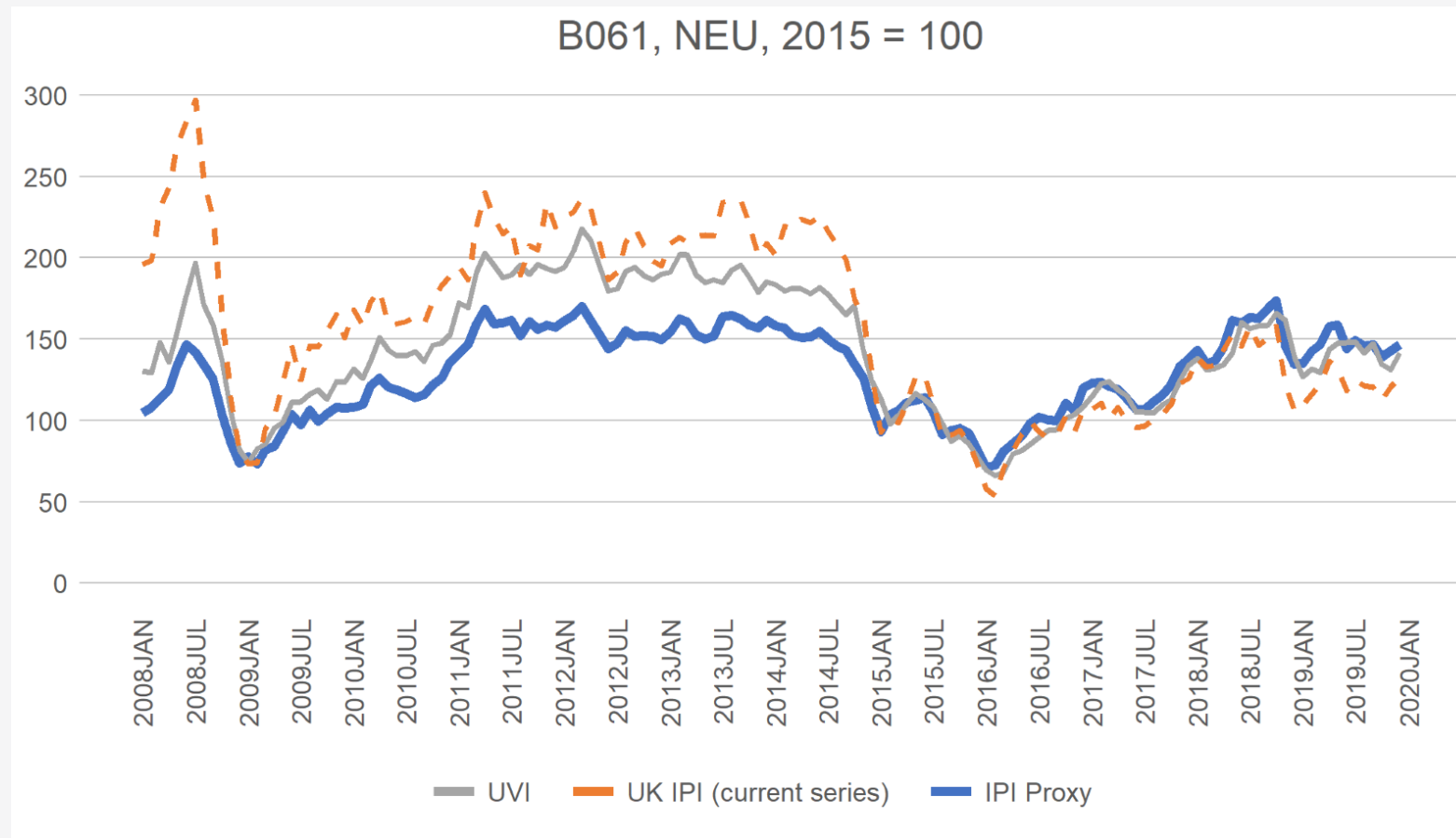
Case study 2

Crude Petroleum



Case study 2

Crude Petroleum



Case study 3 – CPA H53

Postal and Courier Services

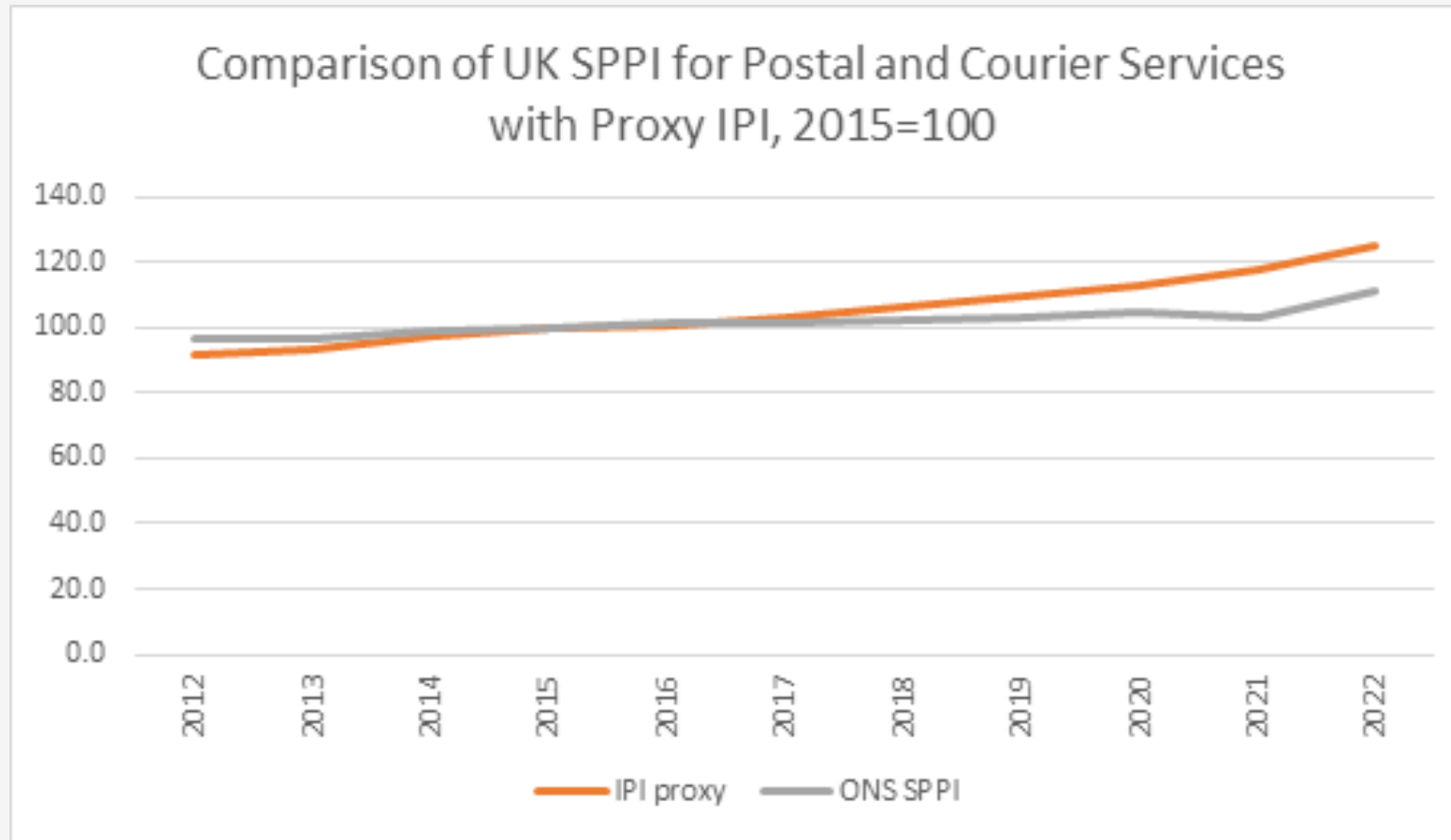
Case study 3

Postal and Courier Services

- No suitable deflator for trade in Postal and Courier Services currently
- Created a new deflator using other countries' SPPIs
- There was a minimal difference between proxy index and current SPPI; ONS is now considering using existing SPPI with exchange rate adjustment to deflate imports of these services

Case study 3

Postal and Courier Services



Findings and conclusions

Findings

- **First case study:** Both the proxies created using PPIs and EPIs closely tracked the IPI, providing supporting evidence for our own IPI
- **Second case study:** Experimental UVI may be better measures of prices than our traditional IPIs. Our proxy approach may have use for comparison purposes
- **Third Case study:** The SPPIs for the countries with which we engage in trade experienced similar trends in price movements as the UK's SPPI and a proxy IPI for services could be generated. Further investigation into the use of this would be required

Conclusions

- Useful tool to compare to existing deflators or other alternatives
- May be viable in some situations
 - Needs to be considered on case-by-case basis
- Use of PPIs may help to address areas where quality adjustment is needed if it's already been applied in the source-index