Cross cutting topic (7)

Update on Improvements to National Accounts and UK Deflator Gateway

Robert Bucknall, Office for National Statistics

Contents

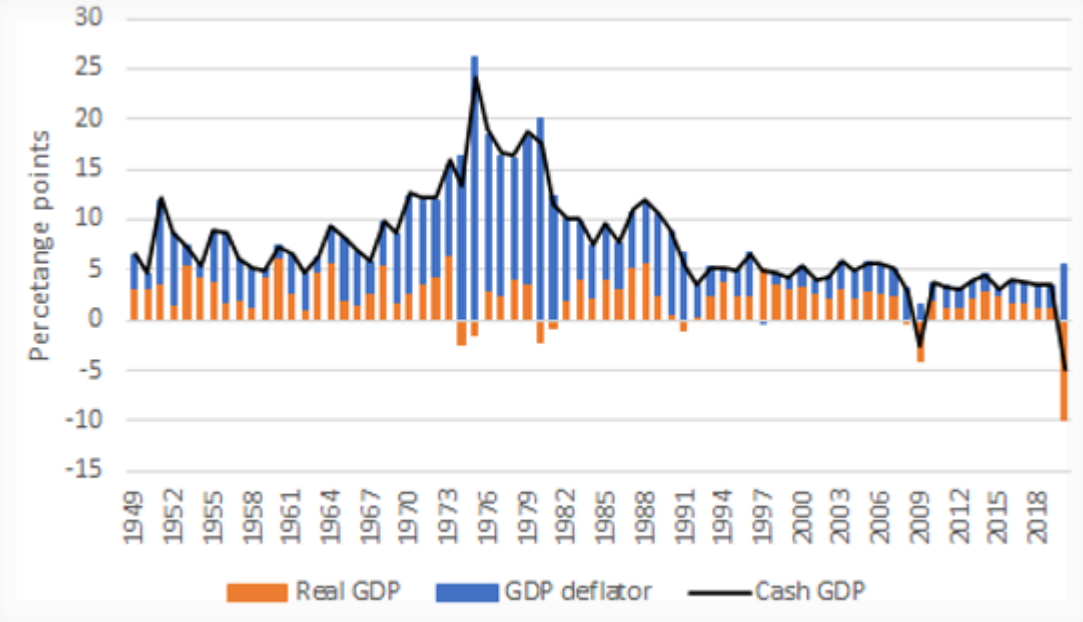
- UK National Accounts improvements 2023:
  - Deflators in the National Accounts
  - Deflator Gateway
  - Improved aggregation of output deflators
  - Improved trade in services travel deflator
  - Improved deflator for computer hardware
  - Improved service sector deflators

Deflators in the National Accounts

Office for National Statistics

Deflators in the National Accounts

- Deflators remove effects of price change from current price estimates of key NA estimates, enabling ‘real term’ comparisons



GDP(E)
The expenditure approach

Deflated with consumption deflators e.g CPI.

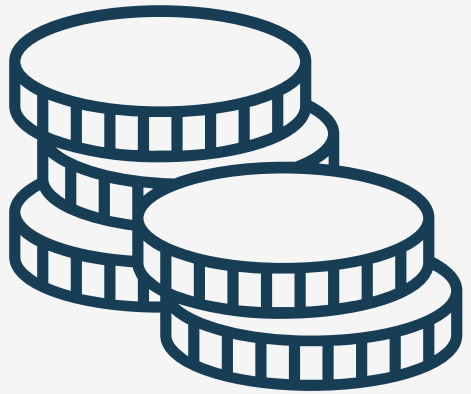
GDP(I)
The income approach

Not deflated; The GDP (I) components are only published in current prices

GDP production approach GDP(O)

Remove inflation using GDP(O) deflators e.g PPI

GDP Headline Volume Measure

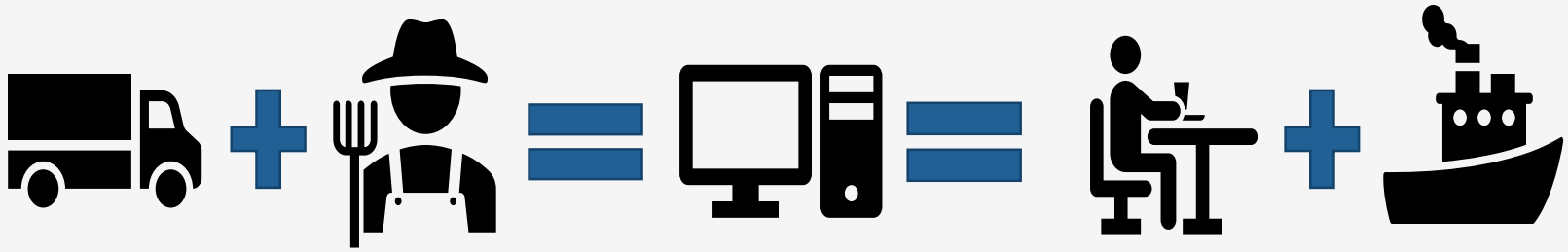


Supply and Use tables (SUTs)

SUTs show the whole economy by industry.

They show the links between components of Gross Value Added, industry inputs and outputs, product supply and demand.

The SUTs link different sectors of the economy (for example, public corporations) together with detail of imports and exports of goods and services, government expenditure, household expenditure and capital expenditure.

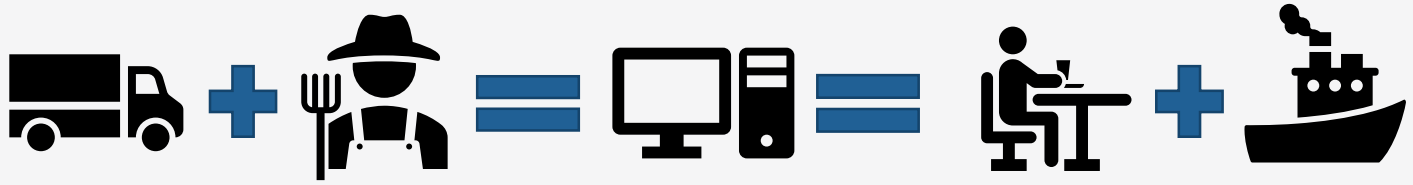


IPI PPI CPI EPI

National Accounts systems

Compiler system	
GDP(O)	Capstocks
GGFCE	Inventories
T&S	Valuables
NPISH	Construction/OPI
FISIM	RSI
TiG	HHFCE
TiS	Regional
GDPP	Price and volume
GFCF	Productivity

- Many of these compiler systems are also feeding data to the “Supply and use” framework. The idea being that total supply=total use



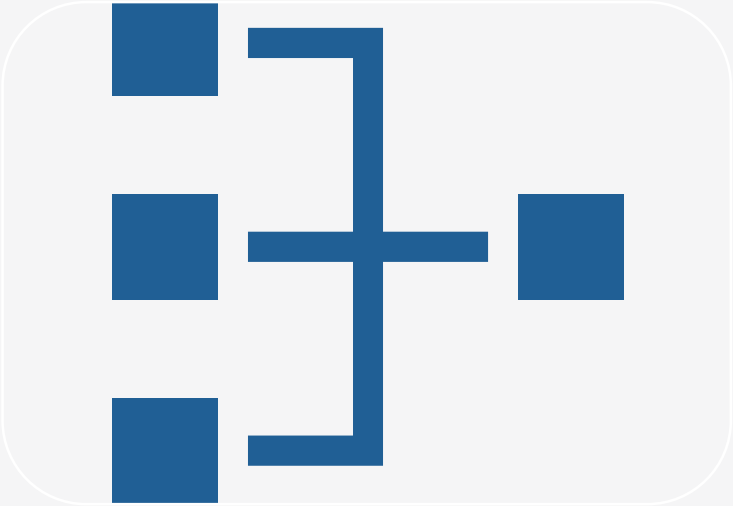
IPI PPI CPI EPI

Supply **Use**

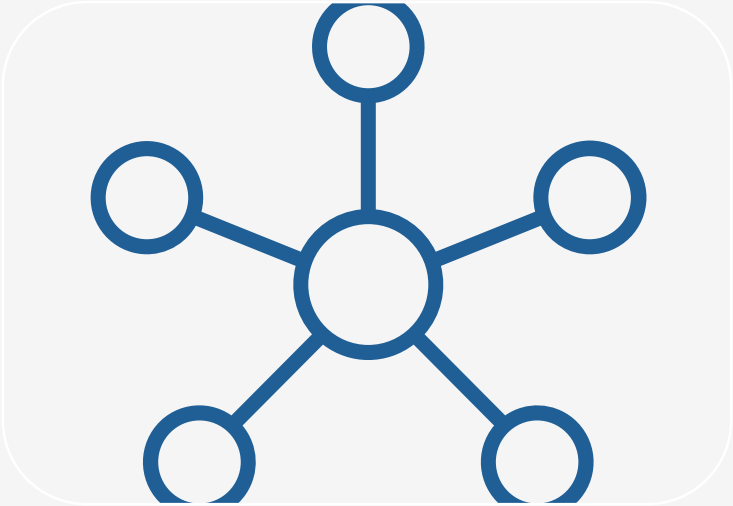
Deflator Gateway

Office for National Statistics

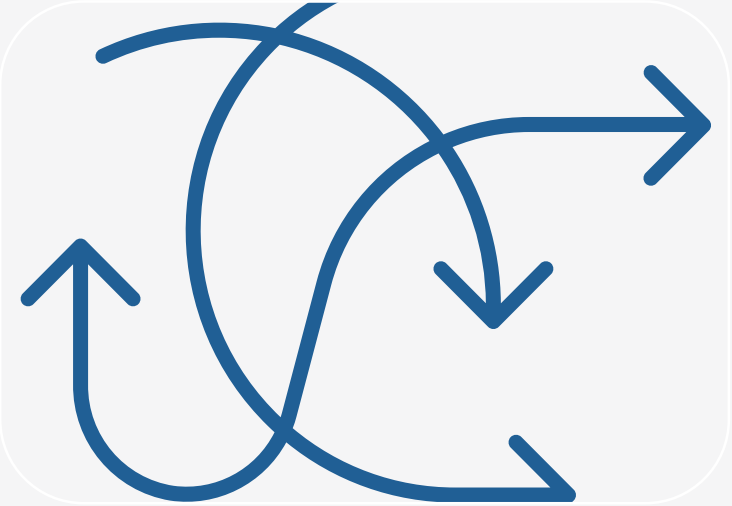
Background



Historically, deflator processing has happened in various parts of the National Accounts and there wasn’t a clear ownership of deflators.



The GDPO(O) system was acting as a form of Deflator Gateway.

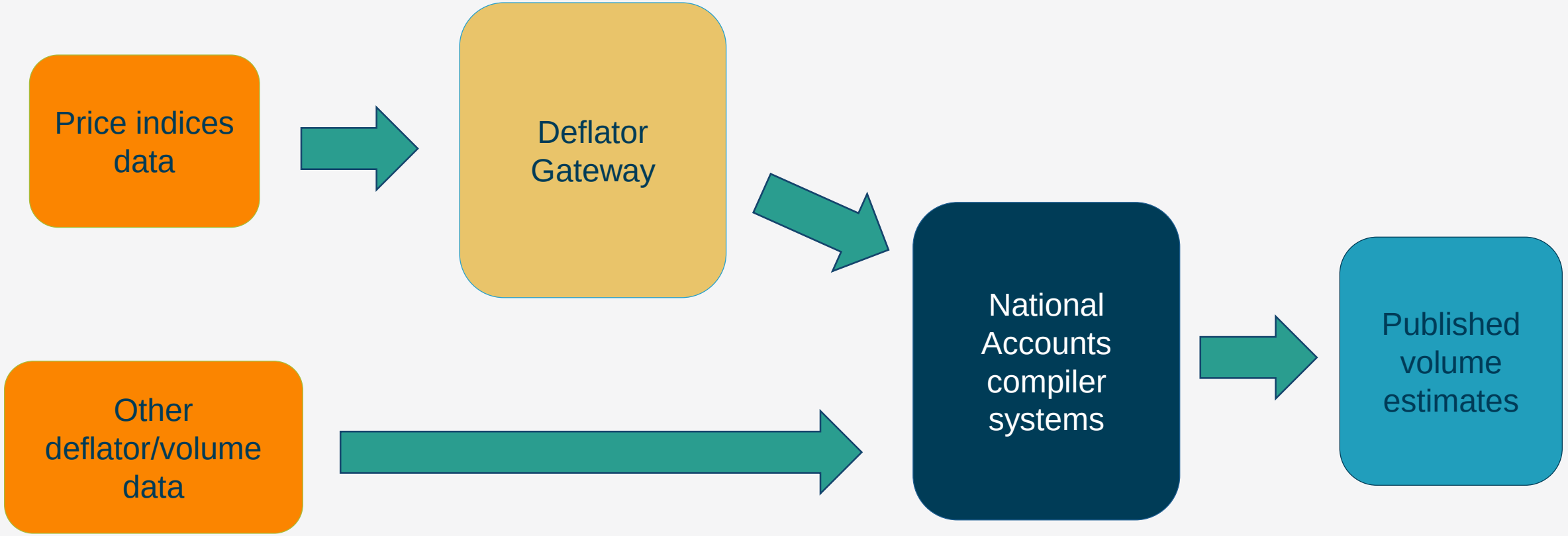


The approach made it difficult to investigate the use of deflators across the systems and to implement improvements.

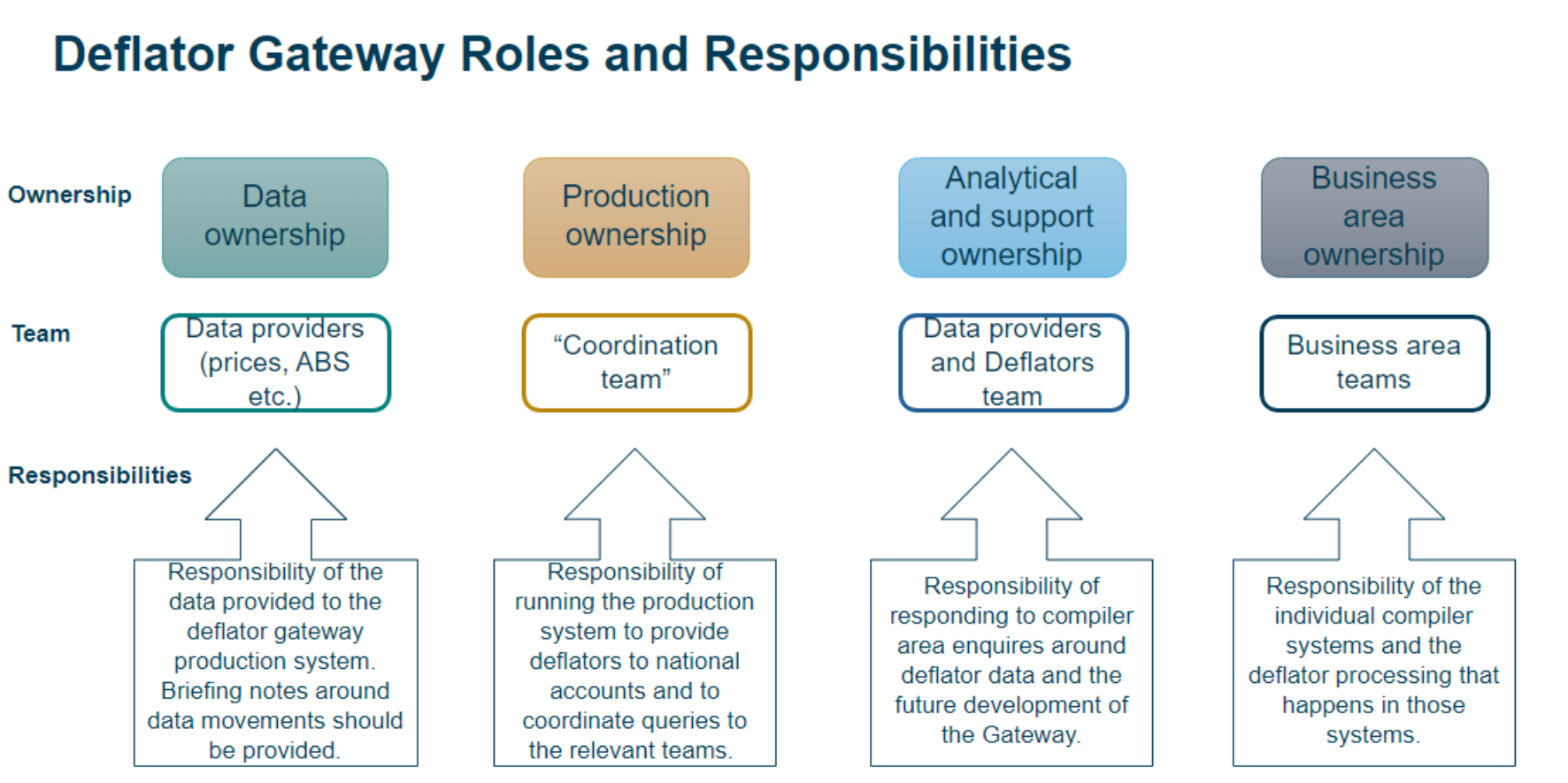
Deflator Gateway aims

- Streamline the processing of deflators across the National Accounts.
- Create more consistency and transparency around the use of deflators in the various processing systems.
- Make quality assurance of deflators easer.
- Improve the narrative around deflators.
- Reduce the burden on compiler areas.
- Improve vintage control.

Deflator Gateway



Deflator Gateway ownership



Improved aggregation of output deflators

Office for National Statistics

Improved output deflators (BB23)

- In the national accounts, various product deflators are constructed by aggregating Producer Price Indices (PPI) and Export Price Indices (EPI).
- Previously, these deflators relied on Monthly Business Survey data at the industry level, resulting in deviant trends and variability in index calculations due to monthly weights at an unsuitable level.
- The new approach uses more suitable data sources, specifically HM Revenue and Customs and Prodcom data, at the product level.
- This new method, with annual chain-linking, addresses these issues and provides a more accurate representation of price trends.

Improved trade in services travel deflator

Office for National Statistics

Improved Trade in Services travel deflators (BB23)

- The data source for the imports deflator ended in 2016 Q3, prompting an opportunity to develop improved methods and sources for both imports and exports deflators
- For exports, two new deflators developed:
  - Travel services (excluding education)
  - Education travel services, given their significant contribution to the travel services exports account. This is created using the CPI for International Student Tuition fees.
- For imports, a single deflator has been developed, constructed using a weighted average of travel-related CPIs, adjusted for exchange rates.
- These improvements ensure deflators are more representative, with source data available on a regular basis

Improved deflator for computer hardware

Office for National Statistics

Improved computer hardware deflator (BB23)

Part 1

- To address the lack of quality adjustment in deflators other than CPI, we are using Implicit Quality Indices (IQIs) derived from hedonic adjustment in CPI
- We propose applying these adjustments proportionally to the weight of PCs, laptops and tablets in each transaction

Part 2

- To address the current poor coverage of IPIs for CPA 26.2, we are:
  - In the short term, imputing the PPIs for CPA 26.2 or equivalent from countries from which we import computer hardware products as a proxy for our IPI
  - In the long term, we will improve the coverage of our own IPIs

Improved service sector deflators

Office for National Statistics

Improved service sector deflators (BB23)

- Nine services are currently deflated using generic bespoke deflators - 50:50 combination of the headline CPIY and AWE for the relevant Section. SPPIs will replace these generic deflators in BB23

- SPPIs are theoretically most appropriate price index to use for the deflation of services and recent methodological improvements to UK SPPI include:
  - Introducing annual chain-linking
  - A new source for index weights – Annual Survey of Goods and Services
  - A change to classification framework – CPA08 to CPA2.1
  - Coverage increased to not just cover transactions to businesses but also to consumers, moving from business-to business transactions to business-to-all

Questions