Gross Dometic Product — the system that builds it and how we are making it better

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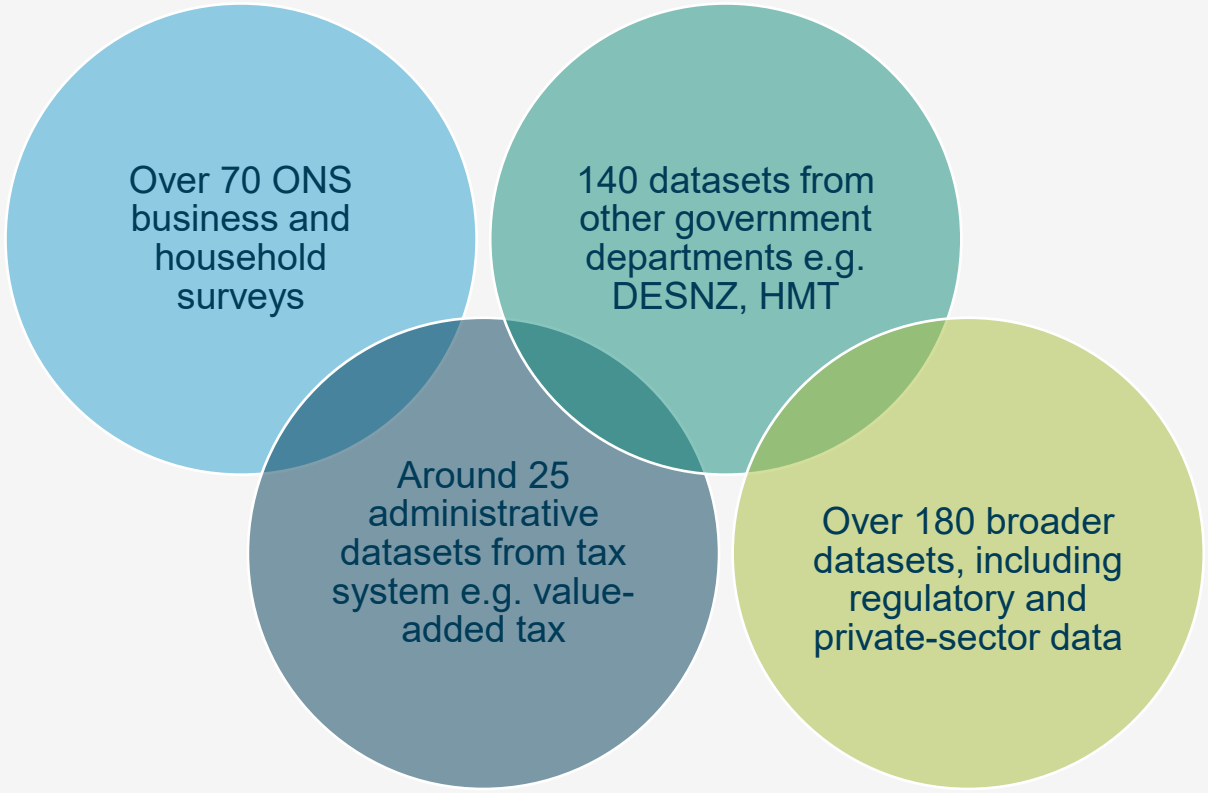
Office for National Statistics

GDP summarises a System of National Accounts that is populated by over 400 different data sources



- Data sources available at different points in time. Some monthly, some come with two-year lag.
- For the latest two quarterly periods, the expenditure and income approaches are aligned to output as our best measure due to higher data content.
- Before that an average of all three approaches is used.

ONS Business Surveys are integral to the timeliness, breadth and depth of the estimates we produce

74 ONS Business Surveys

- 65 surveys feed UK economic outputs
- All are mandatory, bar 3 (including Business Insights and Conditions, UK Innovation Survey, Management & Expectations Survey)
- 9 are run on behalf of Other Government Departments and Devolved Administrations

2.5 million questionnaires sent per year

- 2.2 million collected digitally (and counting!)
- Circa. 345,000 (13% of our register) from business population sampled each year
- Sample stratified to cover larger businesses more frequently
- 71% of these are only selected for one survey

We complement surveys with other data sources, will always need the surveys to ensure timeliness of our outputs and match the economic concept we need information on.

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We run a regular cycle to update GDP as data comes in

Monthly cycle

First month of quarter
(40-days after month-end)

Second month of quarter

Third month of quarter

Estimates led by mandatory monthly business survey of 34,000 firms.

Turnover coverage typically around 85% after 1 month, rising to 97% after 3 months.

Quarterly cycle

First quarterly estimate
(40-days after quarter-end)

Data-content: output 80%, expenditure 60%, income 40%

Quarterly national accounts
(85-days after quarter-end)

Data-content: output 93%, expenditure 75%, income 85%

VAT data are incorporated only in the second quarterly estimate

Annual cycle

First annual data-set
(3-months after year-end)

Blue Book
(21 months currently, will be 18 months from 2027)

First supply-use balance.
Annual Business Survey and some structural surveys available.
Methods changes implemented

Later supply-use balancing

After 33 months: second balance.
Corporate profits and self-employment income data. Most surveys final.
After 45 months. Third balance.
Limited new data. Revisions minor

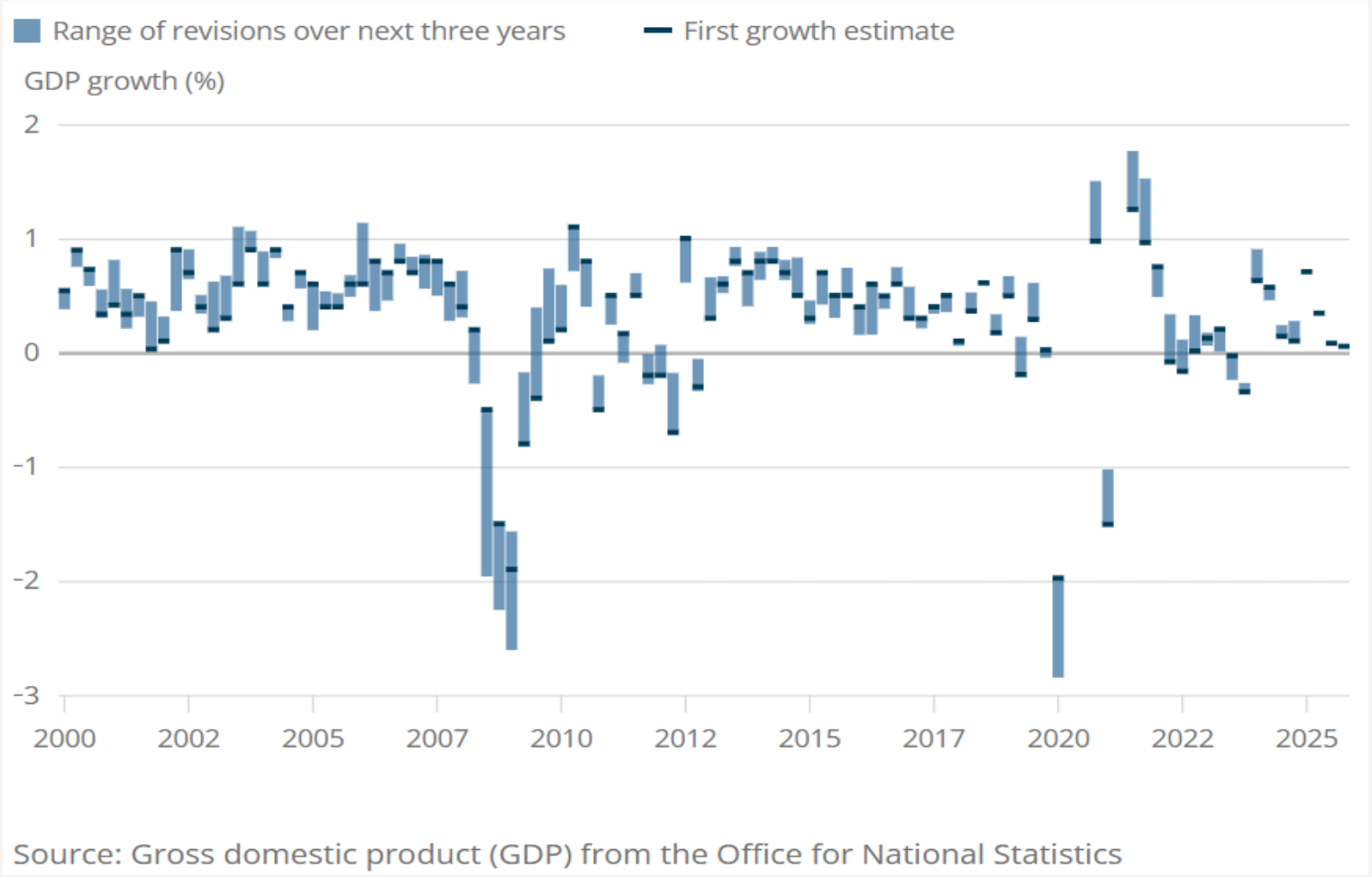
We update (or revise) the system of national accounts as more data comes improving estimates of GDP

Updates to incorporate better or more complete source data

- More complete reporting by survey respondents
- Later or more comprehensive data

Improving methods

- Changes in statistical methods
- Concepts, definitions or classifications



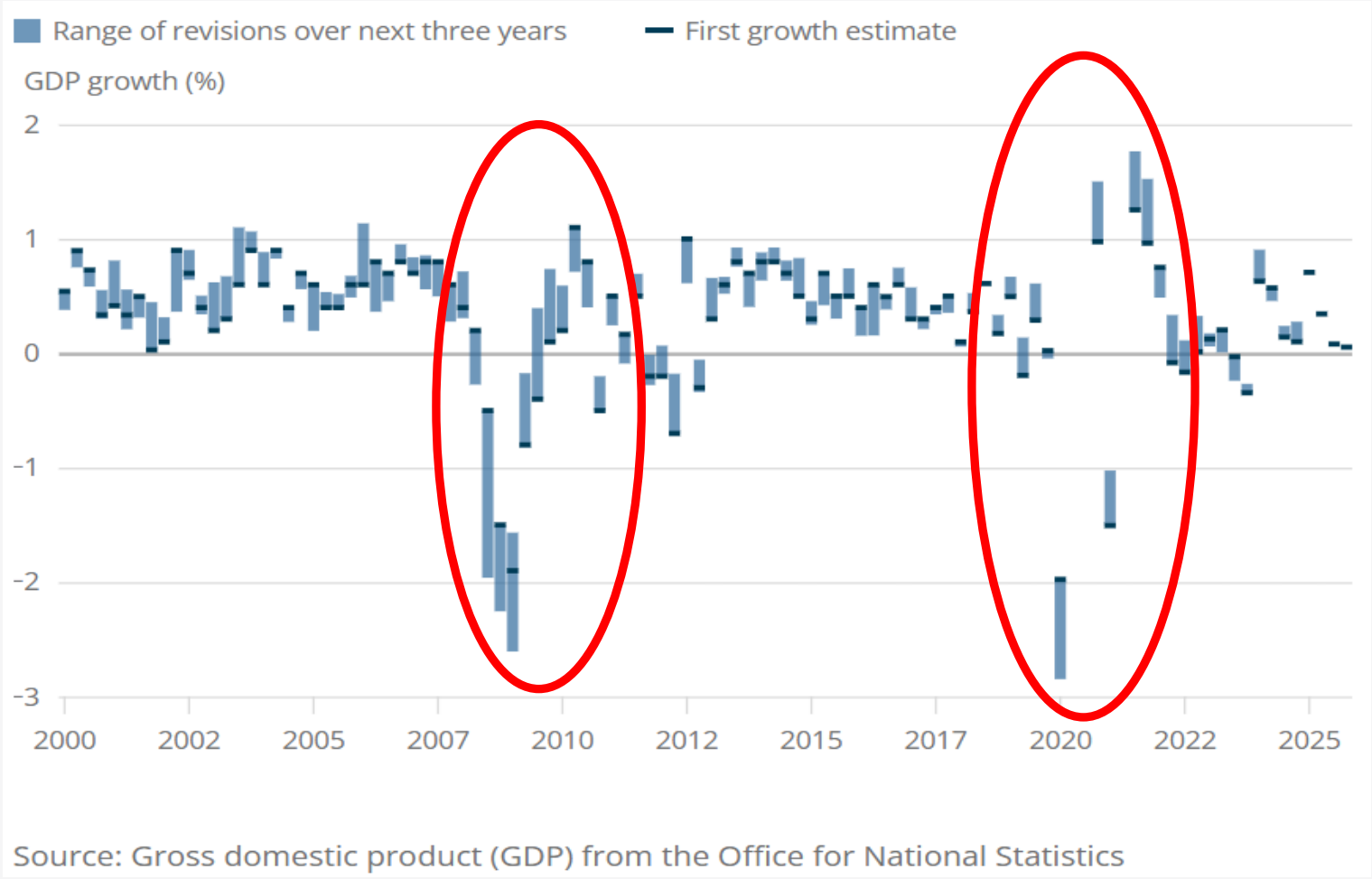
Source: Gross domestic product (GDP) from the Office for National Statistics

Outside of recessions/recoveries, revisions are small and insignificantly different from zero

Quarterly growth*

	Full sample	Normal	Recessions & recovery
Average growth	0.3%	0.5%	0.1%
Average revision between first and final	0.1%	0.0%	0.2%
Average absolute revision	0.3%	0.2%	0.5%

* Between 2020Q1 and 2025Q4. Recessions and recoveries defined as period from first fall in GDP to the point when it recovered beyond the previous peak 2008Q2 to 2013Q3 and 2020Q1 to 2021Q3. On this definition average growth is positive given the final quarter goes beyond the previous peak.

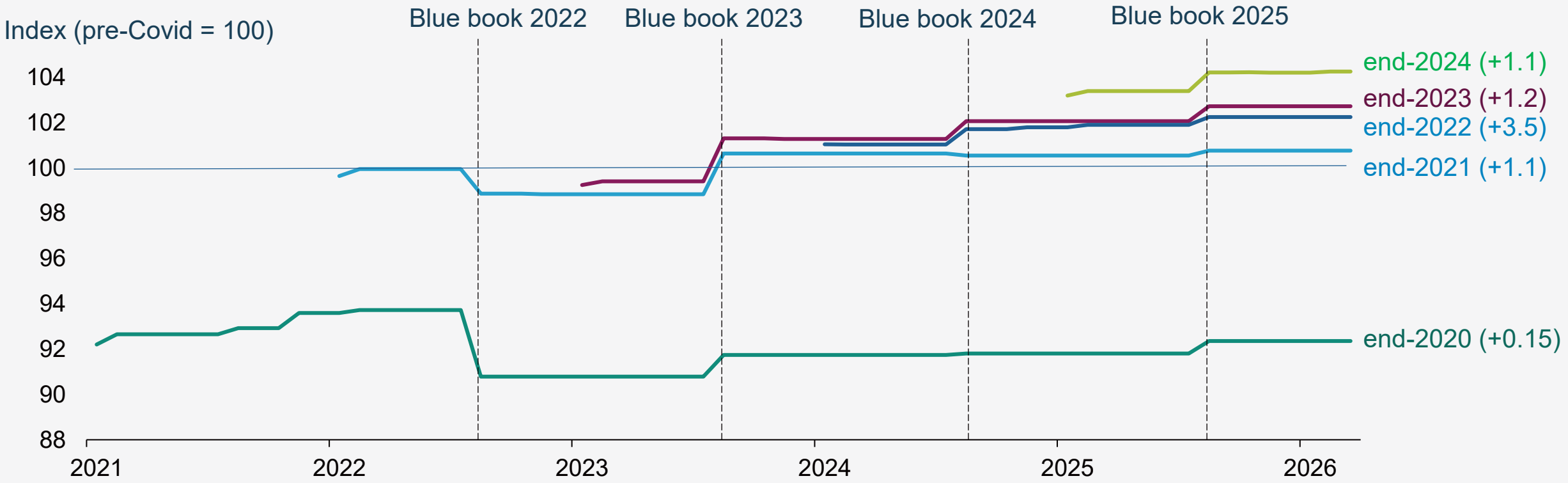


Updates to GDP through the Covid contraction and recovery driven both by new data and new methods

	Data available	Blue book methods improvements
2021	Complement survey data for 2020 with VAT and annual benchmarks for Trade in Services and Foreign Direct Investment.	Introduction of double-deflation
2022	First supply-use balance of 2020.	Improved methods for insurance companies and pension schemes.
2023	First supply-use balance of 2021, further 2020 data including HMRC Company Profits	Improved methods on global supply chains and telecoms deflators
2024	First supply-use balance of 2022, further 2021 data including HMRC Company Profits.	Reinstated the last base year and moved onto 2022
2025	First supply-use balance of 2023, further 2022 data including HMRC Company Profits.	Improved methods for Research & Development, pharmaceuticals, education

Big revisions to GDP come with the Blue Books. Original estimate of fall stands. Recovery stronger.

Indexed levels of quarterly real GDP, relative to pre-Covid estimate

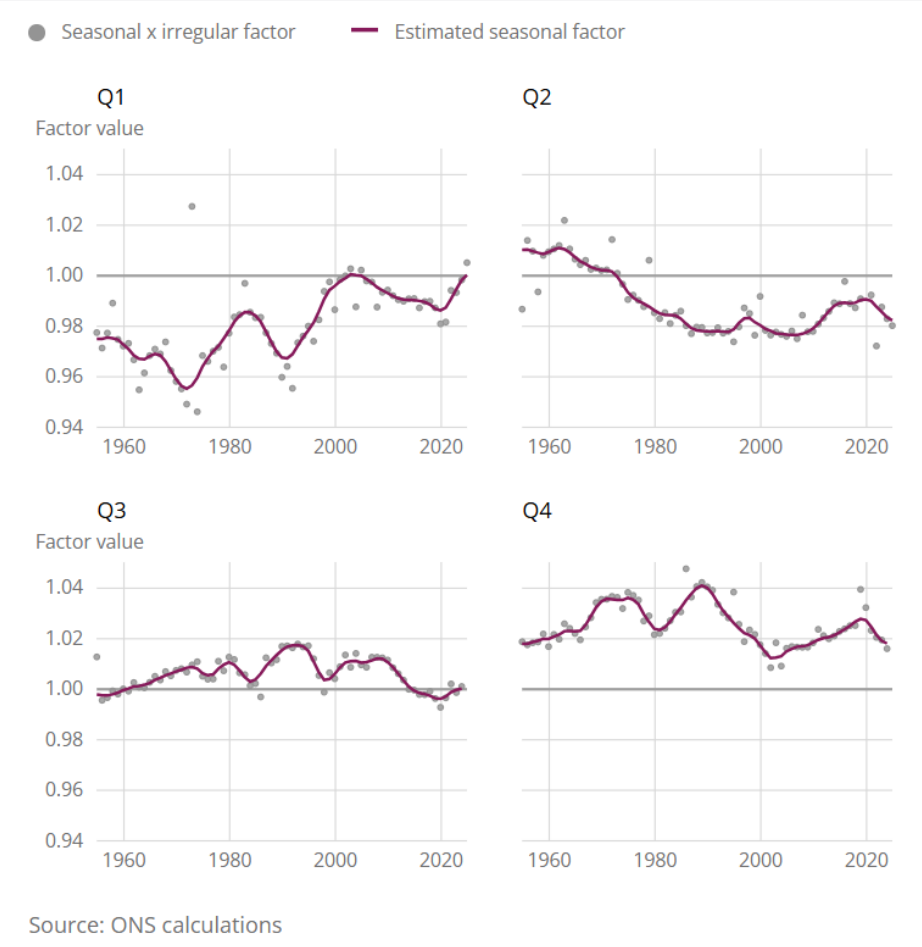


Headline GDP estimates strip out significant seasonal patterns in output

- Our source data show significant seasonal patterns, with activity stronger in second half of year, reflecting, for example, seasonally high consumer spending in the run-up to Christmas and a tendency to bunch expenditure at the end of accounting periods.

Methodology adapts for changing seasonal patterns. There have been significant changes since Covid.

Chart: Estimated seasonal factors for GDP



Source: ONS calculations

- We seasonally adjust source data dynamically, allowing seasonal patterns to evolve over time
- Since around 2022, our estimates show sharp changes in seasonal patterns across three quarters, where activity in Quarter 1 is returning to levels seen in the early 2000s.
- We have not seen such sharp movements in seasonal factors for around 30 years.
- We run our seasonal adjustments bottom up, but also test for any ‘residual’ seasonality in GDP series.
- Our tests to date find no statistical evidence of residual seasonality.
- We will publish on 12th May an article setting out our overall approach which will be informed by an external review of our methods by the University of Southampton.

Stronger seasonal factors have absorbed roughly 85% of the additional strength we are seeing in Q1

Table 1: Non-seasonally adjusted GDP growth

	2018/19	2024/25	Change
Q1	-3.4%	-0.9%	2.6pp
Q2	0.6%	-2%	-2.6pp
Q3	0.8%	2.2%	1.4pp
Q4	3.3%	1.7%	-1.6pp

Table 2: Seasonally adjusted GDP growth (headline)

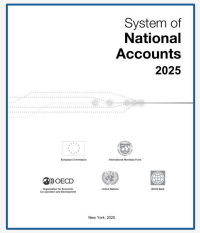
	2018/19	2024/25	Change
Q1	0.3%	0.7%	0.4pp
Q2	0.2%	0.4%	0.2pp
Q3	0.4%	0.2%	-0.3pp
Q4	0.1%	0.2%	0.1pp

- Non-seasonally adjusted data is showing a markedly different pattern prior to 2020, with growth in the first quarter of the year, while still showing a fall, coming in 2.6pp stronger that previously.
- The non-seasonally adjusted data reflect patterns in expenditure and calendar events like Easter (which can move between Q1 and Q2) and Christmas.
- Seasonal adjustment seeks to strip out regular calendar related impacts. Only 15% of the additional strength in Q1 is flowing through to additional strength in our headline estimates.
- The debate about whether we have gone far enough.
- The d

We have a broad agenda in train to improve the system of national accounts and our GDP estimates

Strengthening our **survey infrastructure**, with a **new business register** and **system of classifications**

Improving **data collection processes** and **engagement with businesses**



Improving quality of GDP estimates and their relevance by implementing **new international standards**

Scanning the horizon so statistics remain relevant, including responding to **AI**

We are updating Standard Industrial Classifications and building a new Statistical Business Register

We are introducing a new **Statistical Business Register** (SBR), to nearly **double its coverage from 3.1 to 5.5 million** and greatly **enhance** its **functionality**.

We published results from our consultation on how the UK will implement **Standard Industrial Classifications** (SIC) last month and need the new Register to implement it.

Live sampling from the new Register already adopted for six business surveys. Corporation Tax data now been incorporated and exploited for Financial Services Survey.

2026/27

- Transition further surveys to the SBR
- Evaluation of HMRC self-assessment data
- Mapping businesses to new set of SIC codes

2027/28

- Transitioning further surveys onto SBR
- SIC update to survey sample design

2028+

- Adoption of Corporation tax and self-assessment tax
- Exploitation of full business population
- Full SBR adoption
- SIC transition (2031+ Full Adoption)

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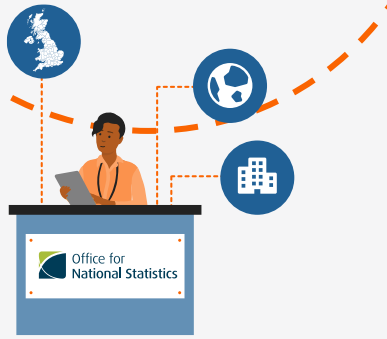
We are working to improve business surveys and engagement



Large Cases Unit

Manages 16 multi-national groups, covering 300 sampled reporting units and more than 6% of Monthly Business Survey sample. We are onboarding more groups, focusing next on the extraction sector.

Strong relationships with pharmaceutical businesses have supported improved methods for measuring globalisation in the National Accounts.

Account Management Model

Have expanded account management to a further 290 Reporting Units across the wider data collection operation, with notable improvements to response rates, data accuracy and efficiency.

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Digital surveys

ASHE is ONS's largest annual business survey and has just moved to online collection reaching 125,000 businesses across the UK and gathering data relating to 335,000 employees. That is already improving timeliness and quality of survey returns.

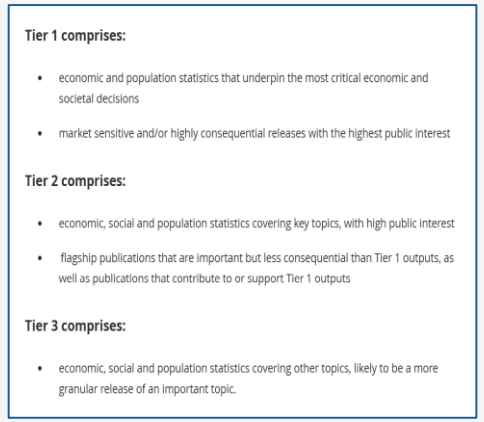
Business Engagement Survey: 5th May close

To date, 64 responses to our survey. Emerging themes are:

- Relationships matter; get to know the business
- Do more to play statistics back
- A survey calendar would help

And are improving quality and relevance of GDP

- GDP is an agreed ‘Tier 1’ statistic and improvement plans there will take priority. We are refining plans as we refresh of the Economic Statistics Plan in July and looking to:
  - Enhance ‘balancing’ of conflicts in source data and to introduce consistent labour market accounts
  - Bring in earlier use of real-time indicators and alternative data sources like scanner data.
  - Build on our work that goes ‘Beyond GDP’, focusing particularly on how AI changes things.
- Setting the path to implement new international standards (SNA25 and BPM7) is also an agreed priority, where we have an ambition to implement the core of the new standards by 2030/31.
  - Includes measuring the value of data, provision of clous computing services, new product breakdowns and classification structures
- Where we can we will implement changes early and incrementally, eg using experimental statistics



Tier 1 comprises:

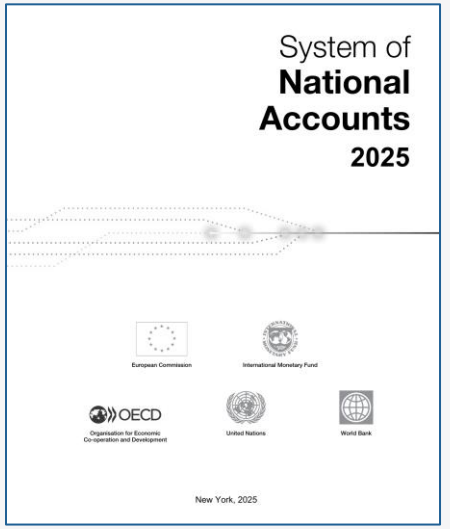
- economic and population statistics that underpin the most critical economic and societal decisions
- market sensitive and/or highly consequential releases with the highest public interest

Tier 2 comprises:

- economic, social and population statistics covering key topics, with high public interest
- flagship publications that are important but less consequential than Tier 1 outputs, as well as publications that contribute to or support Tier 1 outputs

Tier 3 comprises:

- economic, social and population statistics covering other topics, likely to be a more granular release of an important topic.



We are adapting our statistics to capture AI's impact on the UK economy and society

Artificial intelligence (AI) is already influencing labour markets, productivity and economic activity. It is important that ONS outputs remain relevant though potentially rapid change.

Our surveys are already providing insights:

- **BICs** fortnightly survey provides timely insights on business adoption and use, impact on workforce.
- **MES** (ad-hoc) assess firm level AI adoption, including any motivation and barriers.
- **OPN** (monthly) provides timely insights on public opinion and AI use.
- **Time Use Survey** can monitor shifts in unpaid household activities (annually).

Further development is underway to:

- Include additional **AI questions** to surveys as we identify knowledge gaps
- Consolidate what we are seeing across our surveys and draw together the main themes in a published article
- Engage with **international stakeholders** to align approaches and remain cohesive and comparable.

GDP summarises a complex and evolving system of national accounts that we need to work on together

- GDP is just one summary statistic of our system of national accounts draws together over 400 datasets to reflect the country back to itself.
- The system necessarily evolves as more data become available, allowing an updated view on the economy, including seasonal patterns. This is a feature not a bug.
- We have a broad agenda to improve how we produce GDP, are refining our plans and would welcome your input on them as we do.
- Producing statistics inherently a collective endeavour and works best as a team sport. We will be better at how we draw in data to produce GDP with your engagement: **➔YOUR NATIONAL STATISTICS NEED YOU**