

UK Public Services Productivity Review

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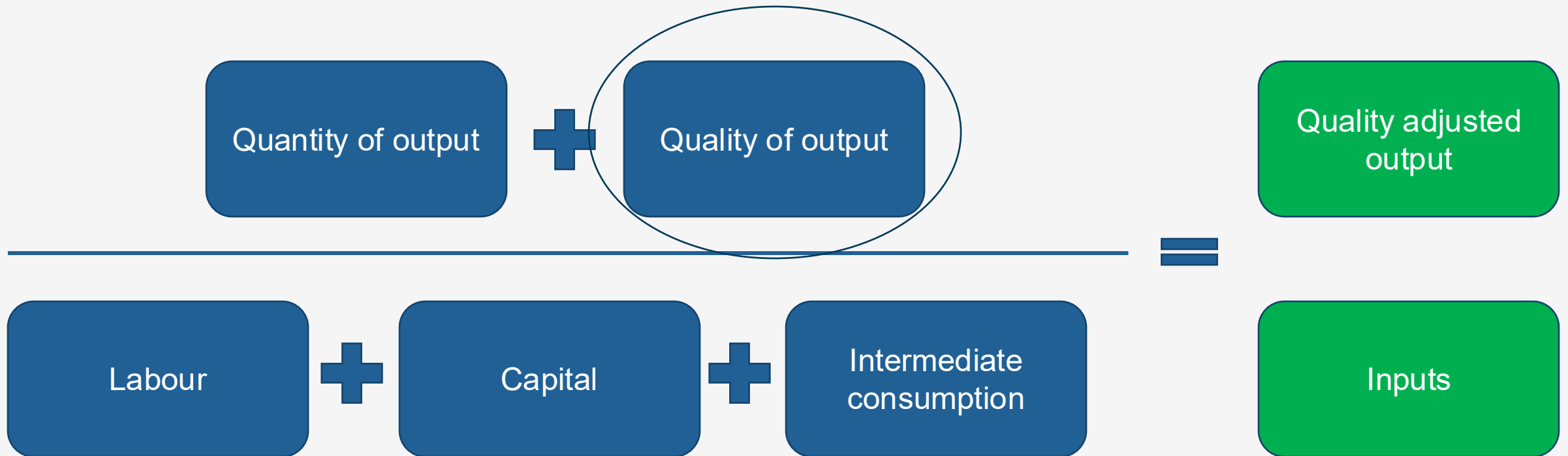
01 May 2026



Agenda

- Public services productivity review
- Weights / alternative to cost-weights
 - Social security administration
 - Equivalisation of weights in healthcare
- Recent improvements to Policing
- Next Steps
- Q&A

Estimation of Productivity



Types of Quality Adjustment

- Purpose of a quality adjustment is to better determine the value of an output in instances where there is no price to determine this.
- Primarily this represents how well the aims of the intervention were achieved.
- But customer satisfaction is also an important determinant of the value of a service.
- Table uses Healthcare as example

Types of quality adjustments	Description	Examples
What outcome is achieved	The intended outcome is achieved	QALY, PROMs, Life expectancy
How the outcome is achieved	Individual is satisfied with the service	Patient experience surveys
When the outcome is achieved	The service was delivered in a timely manner	Waiting times, cancellation rates

The long hard journey to measure public service productivity

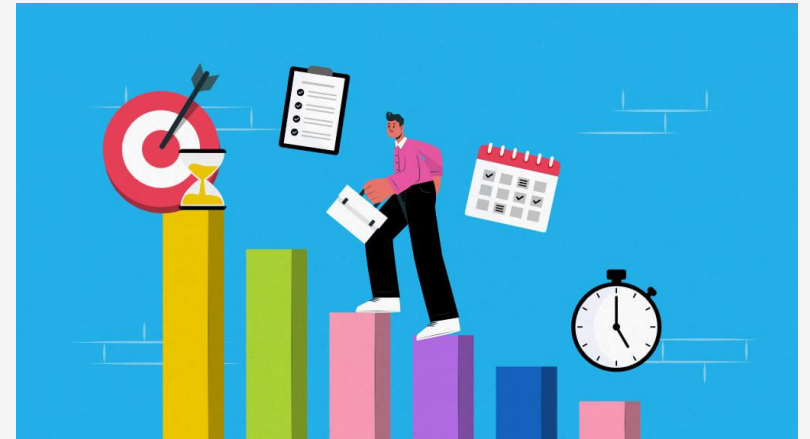


“The changing data and policy landscape (including the recent coronavirus (COVID-19) pandemic) and the need to find innovative ways to improve public services without increasing spend or taxes has brought the focus back onto public services, both in terms of measurement and making improvements to delivery itself.”

Public Service Productivity Review

The Public Service Productivity Review (PSPR)

- In **June 2023**, the then UK's Chancellor of Exchequer Jeremy Hunt highlighted the importance of public service productivity and asked the UK National Statistician Sir Ian Diamond to **review how to improve the measurement of public sector productivity**.
- The UK is **one of the few countries** to include public sector measures as well as input data in its productivity statistics.
- Builds on the **Atkinson Review (2005)**
- Public services contribute to approximately **20% of UK economic output**
- National Statistician's Review was published in March 2025 with 120 recommendations

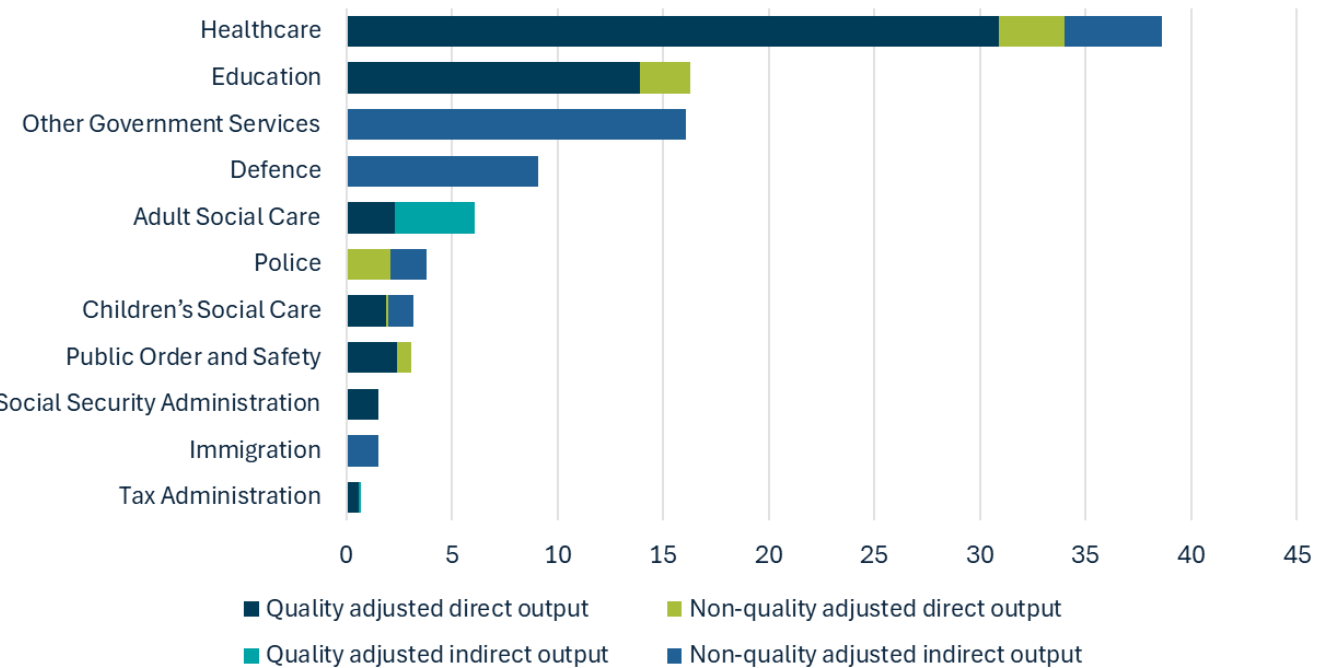


What are the major deliverables of the Review?

- Audit of existing methods and improvements across service areas
- Implementation of new methods into annual and quarterly statistics
- Improvement of timeliness through development of experimental 'nowcasting' modelling
- Improved deflators used to derive public service volume estimates of inputs and outputs
- Challenged the accepted concept of 'collective services', which has been used to brand some areas of public services as 'too hard to measure'
- Investment in new pilot surveys to garner analysis on public sector workers productivity
- Plan for improved coherence between annual accredited National Statistics and quarterly experimental statistics underway
- Development of UK National Accounts 'roadmap' for PSPR improvements
- Creating international interest and sharing best practice

Expenditure shares

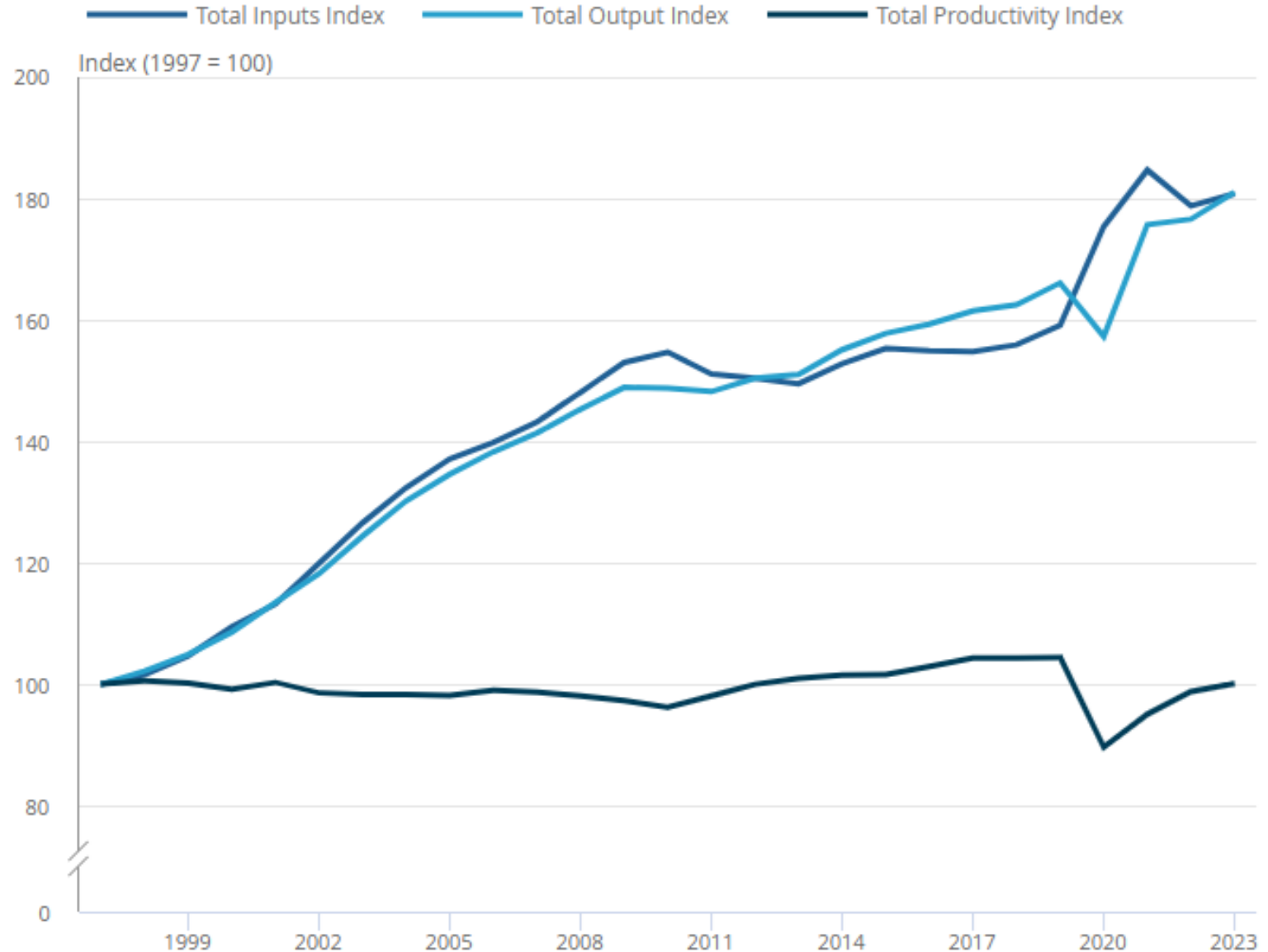
Expenditure shares and output types by service area, UK, 2023



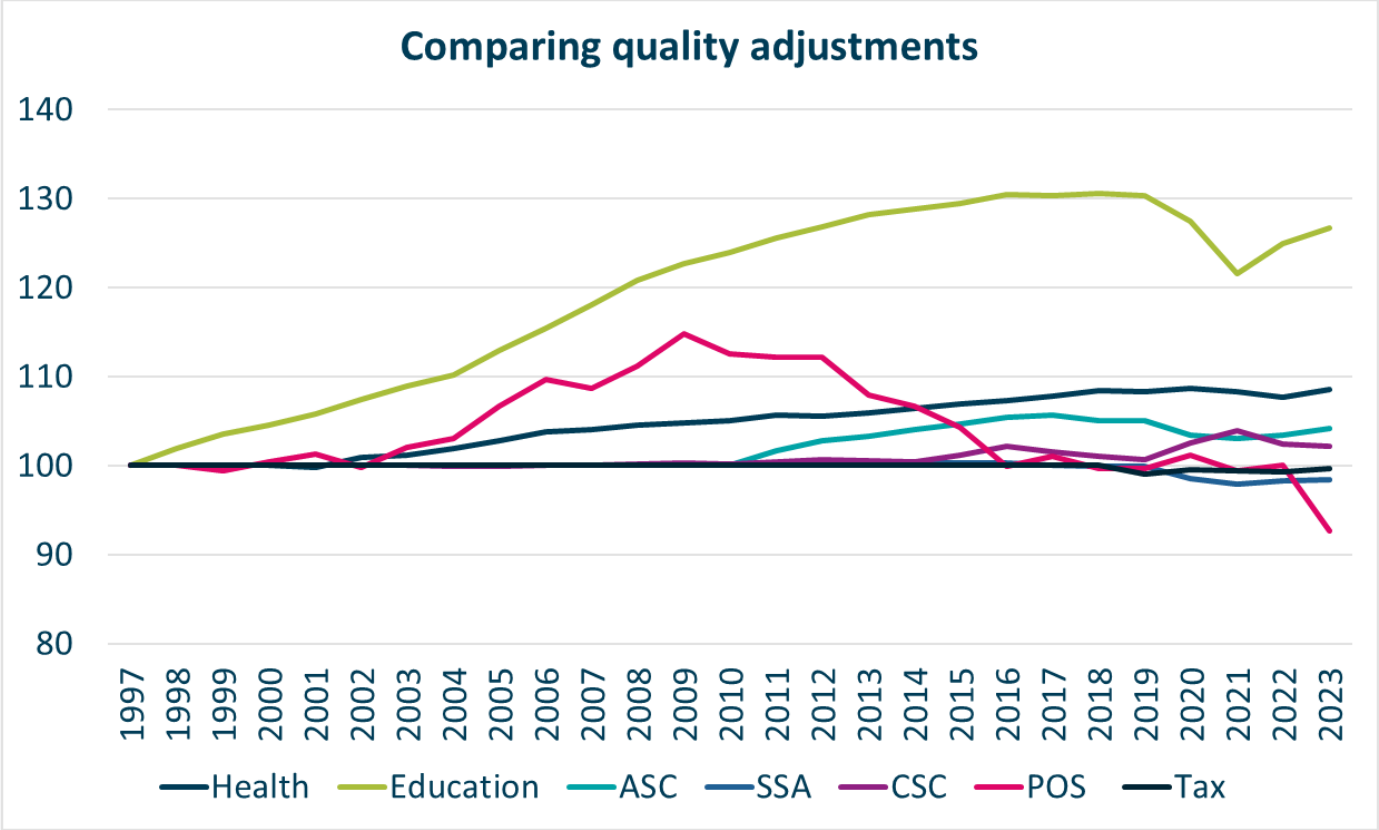
- Healthcare is the largest service area accounting for approximate 40% spend.
- In the UK we have some direct output measures for 8 out of 11 services areas
- In the UK we have some degree of quality adjustment for 7 out of 11 service areas

Public Service Productivity increased in 2023 but is still below pre-pandemic levels

Total public service productivity, inputs, output and productivity indices, UK, 1997 to 2023

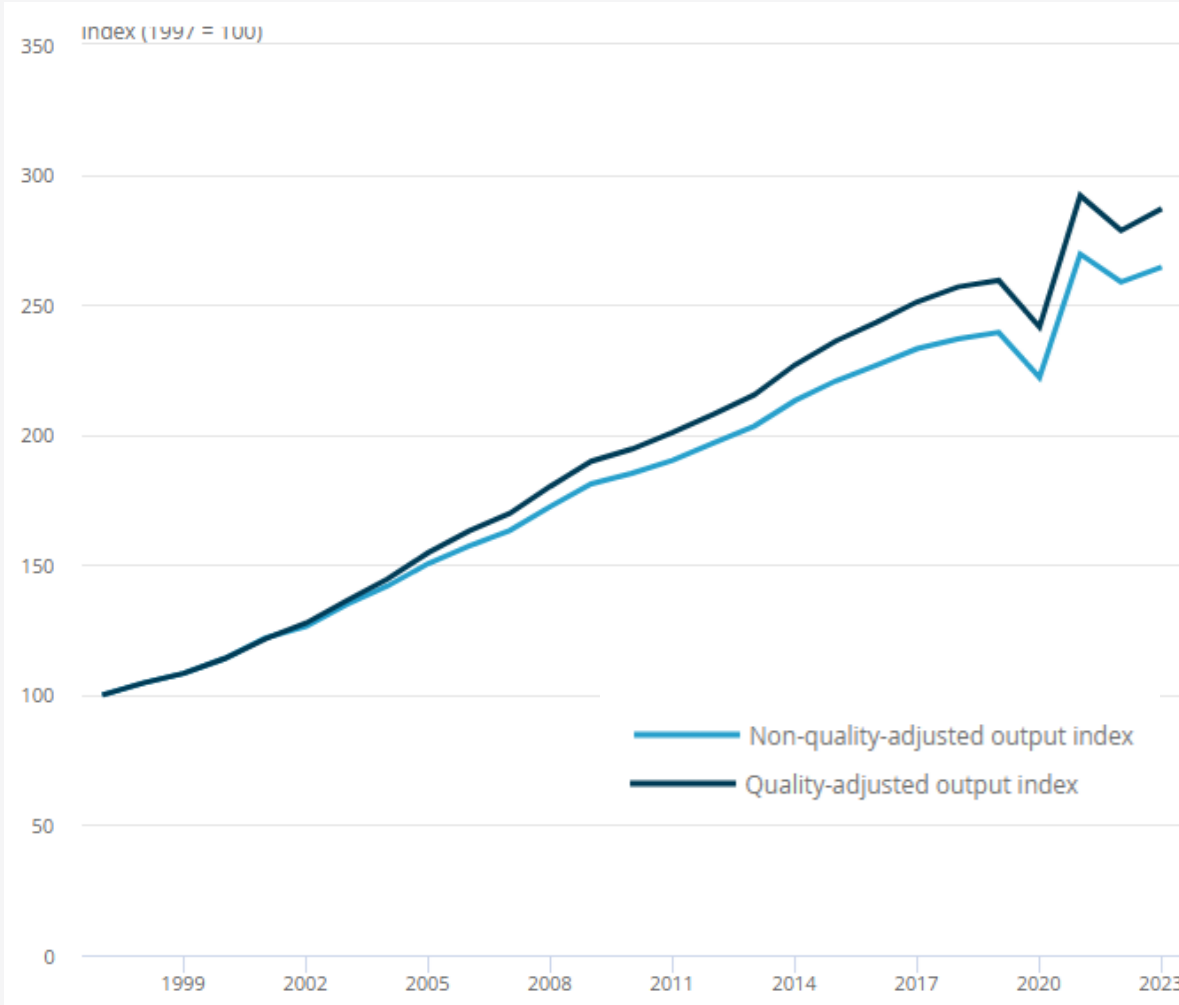


Impact of quality adjustments vary by service area



Service	Avg. 2009-19	2023 growth
Health	0.3%	0.8%
Education	0.7%	1.4%
ASC	0.4%	0.7%
SSA	0.0%	0.1%
CSC	0.0%	-0.2%
POS	-1.0%	-7.4%
Tax	-0.1%	0.3%
Total QA	0.2%	0.4%

The impact of quality adjustment in healthcare



- Healthcare quality-adjusted output increased 3.0% in 2023 similar to the average annual output growth of 3.2% in the decade to 2019.
- Non-quality-adjusted output average annual output growth 2010-2019 is 2.8%

Alternatives to Cost Weighting :Social security administration example

Cost-weighting & alternatives to cost-weighting

Activity is weighted by the unit cost of delivering that activity/ For example, the rate of growth of hip replacements is weighted by its unit cost

Implications:

High-cost activities will have greater impact on output than low-cost ones, for example:

Hip-replacement > dental check-up

Atkinson said: “It is the *feasibility* of cost weights rather than their *representation of value* that resulted in their choice.”

The problem:

Costs may be biased in their representation of value, causing counterintuitive results. For example, if one service becomes relatively cheaper to deliver over time, it should not necessarily diminish its impact on overall output.

Any alternative should consider the following:

- Selection must be objective not subjective or arbitrary
- Cost weights must be either inappropriate or inferior to an alternative method
- Expressible in monetary terms
- Exhibit internal consistency

About Social Security administration (SSA)



SSA includes Universal Credit, Job Seeker's Allowance, Income Support, PIP, Income Tax Credits, Child Benefits and Housing Benefit . Universal Credit transition begun in 2013.



SSA's share of total Public Service Productivity (PSP) expenditure in 2023



Problem: If Universal Credit could deliver **equivalent benefits at lower cost**, then a conventional index, using **cost weights**, would place a **lower value on the new Universal Credit activity**, and any resultant fall in inputs would be matched by a fall in output, and **productivity would not change**.

This is clearly incorrect: delivering the same benefits or support to citizens at a lower administrative cost should be seen as a productivity enhancement.

Example: Social Security Administration

Benefit-weighted approach

What we did

Developed a *benefit-weighted index* that better captured

- a) transition to UC, and
- b) changing composition of cases over time.

Accounts for allocative efficiency, and for heterogeneity in Universal Credit cases. The new index reflects the expected output growth we were previously unable to confidently quantify. These methods were jointly developed with DWP colleagues.

“A benefit payment bundle of equivalent value from Universal Credit and legacy benefits **would be given equivalent weight in output** and so output would not change where a benefit claimant was given equivalent support under legacy and Universal Credit payment schemes.

This means that **where there is a difference in the cost of delivering equivalent benefits** under the legacy and Universal Credit schemes, **this will manifest as a change in inputs but not output**. Therefore, the productivity measure will account for changes in the cost of delivery resulting from the introduction of Universal Credit.“

Source: Chapter 14.4, [National Statistician's Independent Review of the Measurement of Public Services Productivity](#)

Further SSA output developments

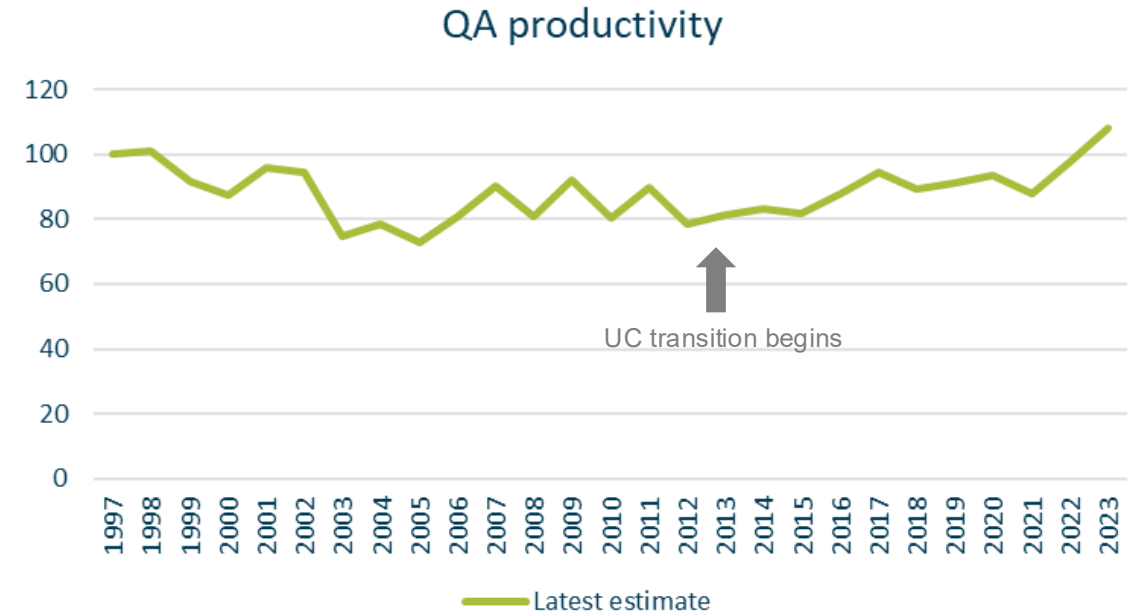
Recommendation 103:

The ONS should seek to acquire data to incorporate Tax Credits, Housing Benefit and Child Benefit in both output and inputs measures of Social Security Administration, while making appropriate adjustments to the “Other” grouping of inputs.

- In line with recommendation 103 of the public service productivity review, we intend to include HMRC benefits (tax credits and child benefit) into the output model for SSA
- Accordingly, inputs for HMRC benefits would also be factored into SSA inputs
- Recent developments have also included backcasting unit costs to estimate a 2013 cost-weight for PIP

SSA Productivity index

- Non-Quality Adjusted productivity grew by 10.4%, and is 19.8% above pre-pandemic 2019 levels
- Quality Adjusted productivity grew by 10.6%, and is 18.1% above pre-pandemic 2019 levels
- Quality adjustment represents fraud and error



Example 2: Equivalisation of weights in healthcare

Recent improvement for Healthcare

Equivalisation of weights – allocative efficiency

Elective care - inpatient, day cases, regular day or night admissions activity grouped together, and cost weights averaged for whichever combination of modes of provision are used for each HRG

Outpatient procedures also grouped with the above if the procedure is reimbursed at the same rate for outpatient and admitted patients in the NHS Payment Scheme

- Moving care from inpatients to day cases/outpatients will result in lower inputs, but not fall in outputs, therefore better productivity



Because some difference in cost between inpatients, day case and outpatients may be justified (patients in worse general health may require inpatient stay due to monitoring/slower recovery) we stratify cases by:

- “CC” (comorbidity and complication) scores
- broad age group
- grades of procedure used in NHS costing data (e.g. very major/major/intermediate/minor/minimal)

Ambulance services – weights averaged across ambulance services



Police and Immigration

Context

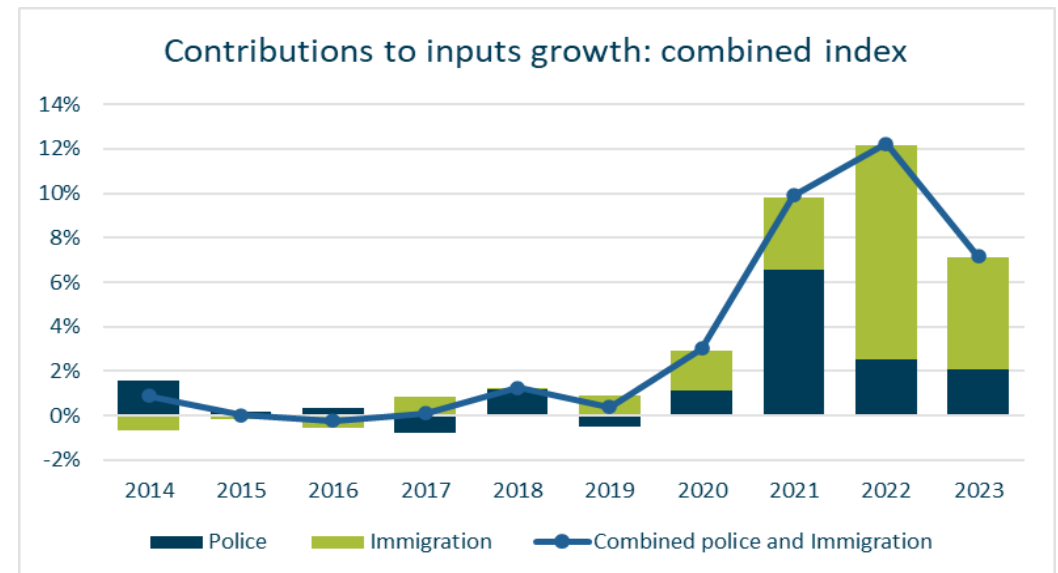
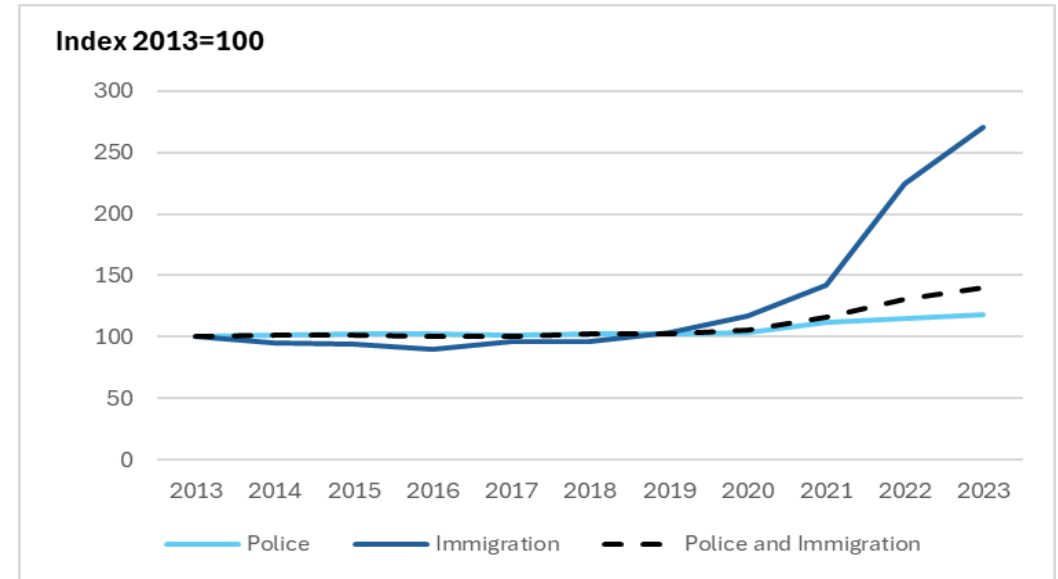
- [PSP Review](#) recommended to split COFOG301 ('Police services'). PSP review also conceptualised output measures and developed Proof of Concept methods.



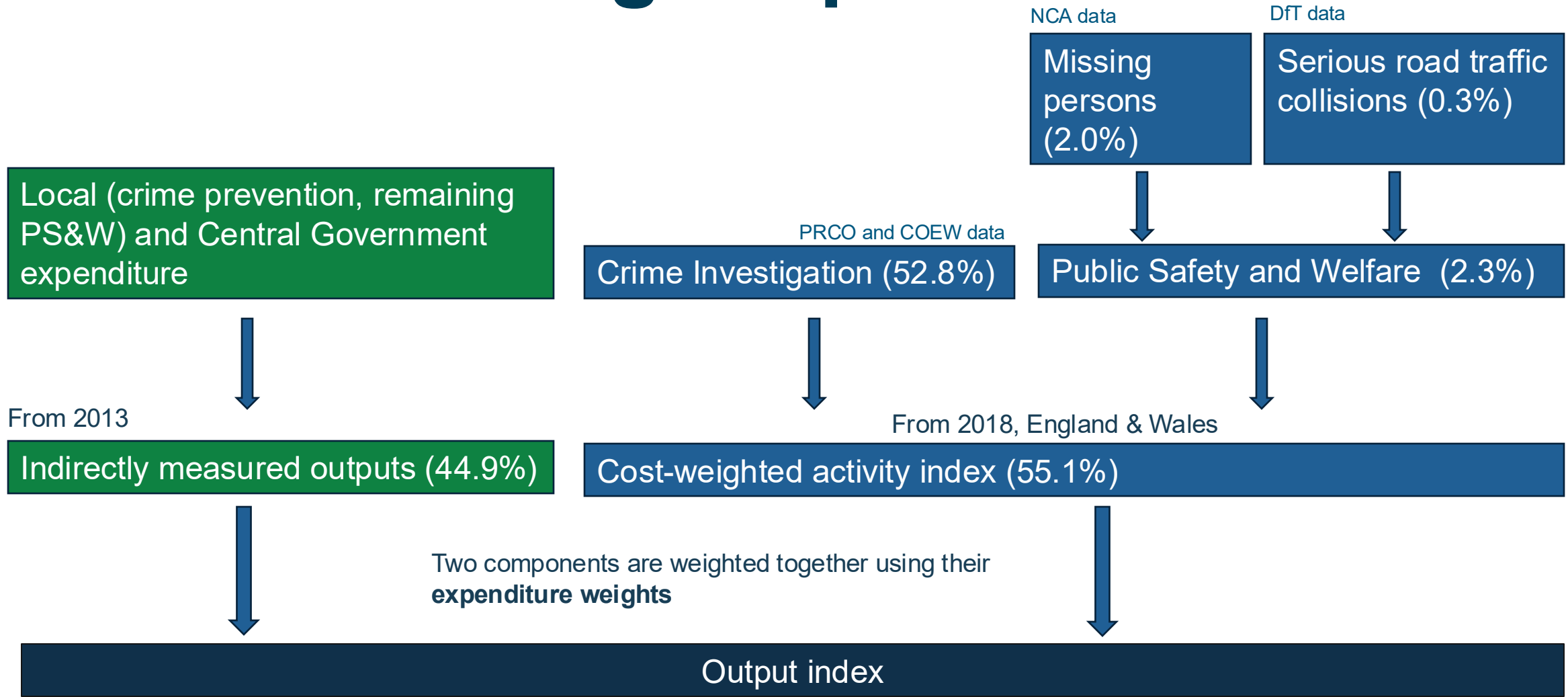
- This year the two service areas have been split for 2013; and a direct measure of police output has been introduced from 2018 (crime investigation; selected Public safety and welfare activities)

Inputs split

- Inputs for Immigration and Citizenship grew 20.6% in 2023
- Inputs for Policing grew 2.8% in 2023
- The combined police and Immigration index for 2023 grew by 7.2% in 2023

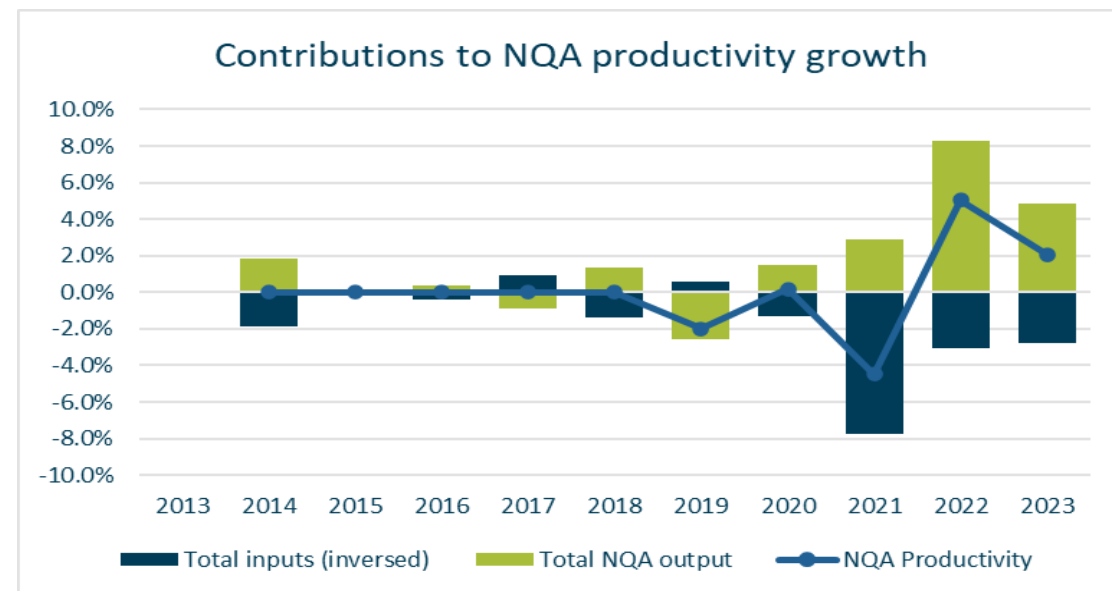
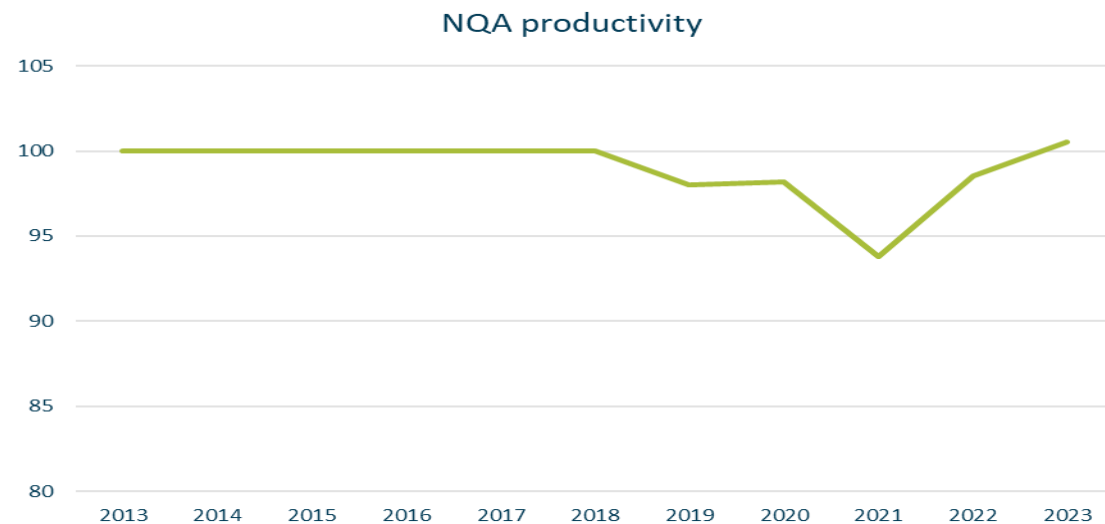


Policing output method



Police productivity

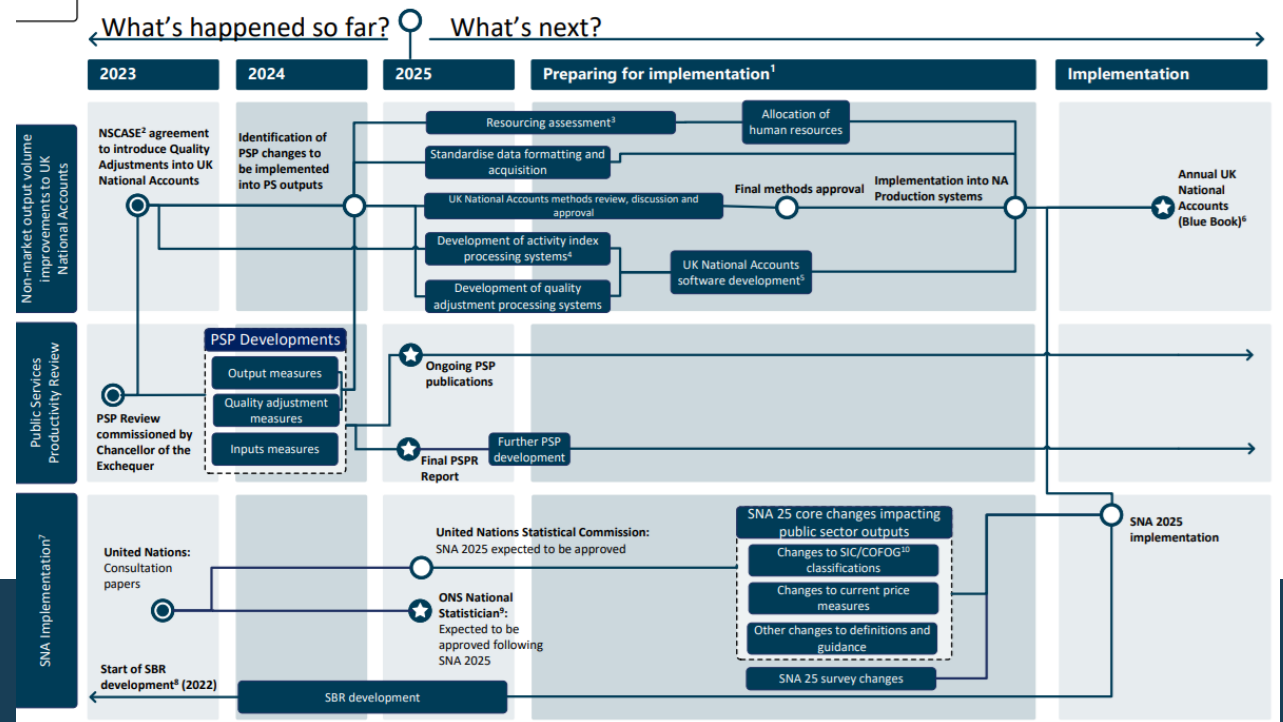
- Productivity grew 2.1% in 2023 and was driven by crime investigation and indirect output
- Productivity 2.6% higher than pre-pandemic (2019)



Next steps

Roadmap for National Accounts

The Review developed a high level ‘[roadmap](#)’ to incorporate quality adjustments into the UK National Accounts. This part of ONS planning for implementation of SNA25.



Further improvements to PSP measurement

- Estimating Immigration output
- Improving data sources and methods of Adult social care
- Research collaboration into Education and outcomes
- Timely and granular quarterly measure for PSP

Find out more and how do you get involved?

- [National Statistician's Independent Review of the Measurement of Public Services Productivity](#)
- Recent annual estimates: [Public service productivity: total, UK, 2023](#)
- Sources and methods: [Public service productivity estimates: sources and methods](#)
- Impact of changes from PSPR: [Public Services Productivity Review, impact of improved methods on total public service productivity: 1997 to 2021](#)
- Impact of most recent changes: [Impact of improved methods on total public service productivity: 1997 to 2022](#)

Any questions