

Statistical bulletin

Annual multi-factor productivity, market sector, UK: 2023

Annual estimates for up to 2022 and quarterly estimates for up to Quarter 2 (Apr to June) 2023. Experimental estimates.

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1 . Main points

- UK market sector multi-factor productivity (MFP) fell by an estimated 0.1% in 2022 when compared with previous year, following a 0.3% fall in 2021 when compared with 2020.
- Market sector output per hour fell 0.8% in 2022 when compared with previous year, while capital services grew by 4.9%.
- Multi-factor productivity is estimated to have decreased 1.4% in Quarter 2 (Apr to June) 2023 when compared with the same quarter a year ago.

This release contains the latest estimates for multi-factor productivity (MFP). MFP estimates have moved to annual publication schedule. We are looking to publish a separate analytical article using the latest MFP estimates later on this year.

Users should be aware that the gross value added (GVA) data used to estimate MFP, taken from our [Gross domestic product \(GDP\) quarterly national accounts, UK: April to June 2023 bulletin](#), have undergone revisions. These revisions were implemented as part of the [Blue Book 2023 National Accounts changes](#) and therefore estimates may be different from those published in the past.

Response rates for the Labour Force Survey (LFS) have been falling, as explained in our [How the ONS creates a full picture of changes in the labour market blog](#). For this reason, we are working to transform the LFS to enhance the quality of productivity and labour market estimates. We will keep users informed about [future developments of the Transformed Labour Force Survey \(TLFS\)](#).

Because of the limited LFS response rates, this publication excludes:

- industry A, agriculture
- industry B, mining and quarrying
- data for education category HQ2 (GCSEs) after 2020
- data for education category HQ4 (certificates of education) after 2020

More details about our comprehensive plan to address to the concerns around LFS estimates are available in our [Labour Force Survey: planned improvements and its reintroduction methodology](#).

2 . Annual multi-factor productivity data

[Multi-factor productivity, annual, UK](#)

Dataset | Released 9 November 2023

Annual multi-factor productivity data for the UK market sector and component industries. Experimental estimates.

3 . Measuring the data

Multi-factor productivity (MFP) estimates are compiled within the growth accounting framework, which decomposes changes in economic output, in this case gross value added (GVA) of the UK market sector, into contributions from changes in measured inputs: labour, capital and a residual element known as MFP. For more information, see our [simple guide to MFP](#).

In the growth accounting framework, the contribution of labour (CALI) to changes in economic output takes account of changes in labour composition or “quality” of the employed labour force, as well as changes in the “volume” of labour measured by hours worked. The CALI index is calculated by multiplying log changes in hours worked by income weights. The income weights reflect the shares of different types of labour of the total wage bill. Please refer to the [Quality-adjusted labour input \(QALI\) QMI](#) for a detailed explanation.

Movements in capital inputs (VICS) are captured through capital services, which measures the flow of services that different types of assets provide to the production process. Conceptually, this is comparable with the treatment of labour input to the extent that user cost weights are given to different forms of capital (such as machinery and software) to reflect their estimated contribution to the production process. However, unlike labour, where hours worked can be directly observed, there is no equivalent of a standard unit of capital service and so there is no quantifiable distinction between the volume and quality of capital. Please refer to our [Volume index of capital services \(VICS\) QMI](#) for a more detailed analysis of VICS.

To account for the impact of the coronavirus (COVID-19) pandemic, capital [utilisation factors](#) are used for the period of Quarter 1 (Jan to Mar) 2020 to Quarter 3 (July to Sept) 2021.

This release contains data that are consistent with the [UK National Accounts, The Blue Book: 2023](#). Data for all periods in this release are subject to revision in line with the [National Accounts Revision Policy](#) and our [Revisions policies for labour market statistics](#).

Quality

More quality and methodology information on strengths, limitations, appropriate uses, and how the data were created is available in our [Multi-factor productivity \(MFP\) QMI](#).

4 . Related links

[A simple guide to multi-factor productivity](#)

Methodology | Last revised 5 October 2018

Explains the concept and measurement of multi-factor productivity through simple stylised examples.

5 . Cite this statistical bulletin

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