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MANAGEMENT REVIEW

Management without theatre.



KPIS

OUTPUT PER HOUR: HOW THE NUMBER IS MADE

What goes above the line and below it, output per hour across the OECD, which hours count as worked, one economy with two denominators, how to count a site's hours, and a card.

1,335 hours worked per worker in Germany in 2023, the fewest in the OECD; output per hour was USD 94, against an OECD average of 71.

OECD, 2025

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In this issue

Output per hour is quoted for countries, sectors and sites, often as proof that people work hard or do not. It measures neither effort nor how busy anyone looked. This issue asks what the number divides by what, and how a site can make it honestly.

For the OECD, labour productivity is GDP divided by hours actually worked, not hours paid or contracted. In 2023 the OECD average was about USD 70 an hour; Germany, with the fewest hours per worker, produced 94. The ILO counts waiting at a broken machine as hours worked, and notes that working time does not reflect the intensity of work. In Germany output per person and per hour moved differently in each year from 2022 to 2025. A way to count a site's hours and a card close the issue.

Stiven Janaqi EDITOR · STIVEN CATALYST

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HOW TO READ THIS ISSUE

Figure
Every figure has its source and year at the foot of its page.

Our reading
Where the editor interprets rather than the research, it says so.

Practice
The steps and the card are proposals to try, not research results.

COVER STORY

A fraction with two lines

The OECD calls labour productivity the most frequently computed productivity indicator: the volume of output per unit of labour input. In its Compendium the output is GDP and the labour input is hours worked, or the number employed where hours are not known.

Above the line: output

- Value added: production minus what was bought in to make it
- In volume, without the effect of prices
- Across countries, converted at purchasing power parities

Below the line: labour

- Hours actually worked, paid or not
- Not hours paid, contracted or usual
- Each hour the same: skills and experience are not counted

Leave, public holidays, sickness and strikes are taken out of the hours. Where the number employed stands in for hours, part-time work and shorter working weeks make countries and years hard to compare.

OUR READING

The number moves when output changes, and also when the hours do. Read both lines before reading the ratio.

Source: OECD Publishing, Paris, 2025

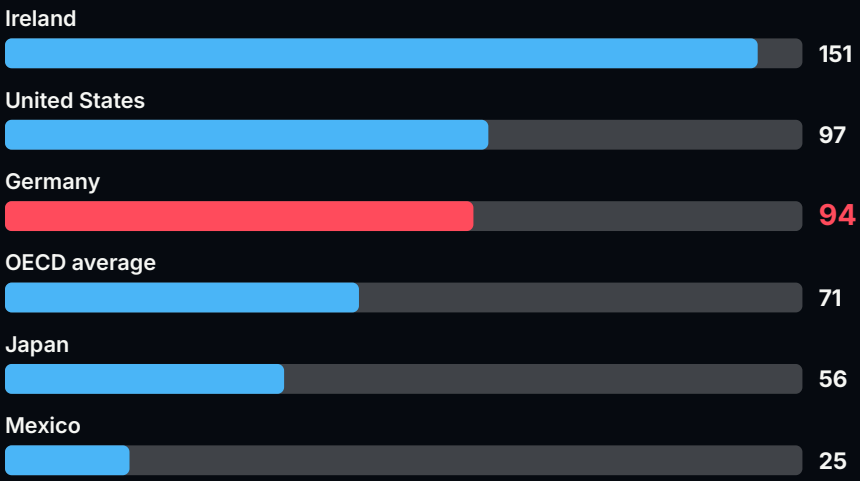
Definitions as the OECD Compendium of Productivity Indicators 2025 gives them, chapter 4. The OECD notes that hours worked ignore the quality of the workforce and so likely understate labour's effective contribution.

THE NUMBERS

Fewer hours, more per hour

In 2023 an average hour worked in the OECD produced about USD 70 of GDP, at purchasing power parities. The economies where each worker puts in the most hours are not those that produce most in each hour.

GDP PER HOUR WORKED, USD AT CURRENT PPPS, 2023



Hours per worker in 2023: Mexico 2,207, the United States 1,751, Japan 1,611, Germany 1,335. Multiplied out, a US worker produced about 170,000 dollars a year and a German one about 125,000: per person a third apart, per hour 97 against 94.

OUR READING

Ireland's lead sits partly in the numerator: output of multinationals recorded there. For such cases the OECD finds income-based measures more accurate.

Source: OECD Publishing, Paris, 2025

OECD Productivity Database, from the data files of the Compendium's Figures 4.5 and 4.6, rounded; the OECD average is 70.5. Output per worker is the editors' product of the two OECD figures. Hours for some countries are OECD estimates.

THE MODEL

What counts as an hour worked

In 2008 the International Conference of Labour Statisticians set out what goes into hours actually worked, the figure productivity divides by. It is the time spent in a job on activities that contribute to producing goods or services.

Counted as worked

- Direct hours: the tasks of the job
- Related hours: cleaning, preparing tools, changing clothes, required training
- Down time: a breakdown, no supplies, no power, still available
- Short rest: a tea or coffee break

Not counted

- Annual leave, public holidays, sick leave
- Commuting between home and work
- Longer meal breaks, even when paid

The resolution adds one sentence that matters for any manager reading the ratio: working time “does not reflect the quality, intensity or efficiency of work”.

OUR READING

An hour standing at a stopped machine weighs as much below the line as a hard-working one. Busy is not in the formula; waiting lowers the result.

Source: International Labour Organization, 2008

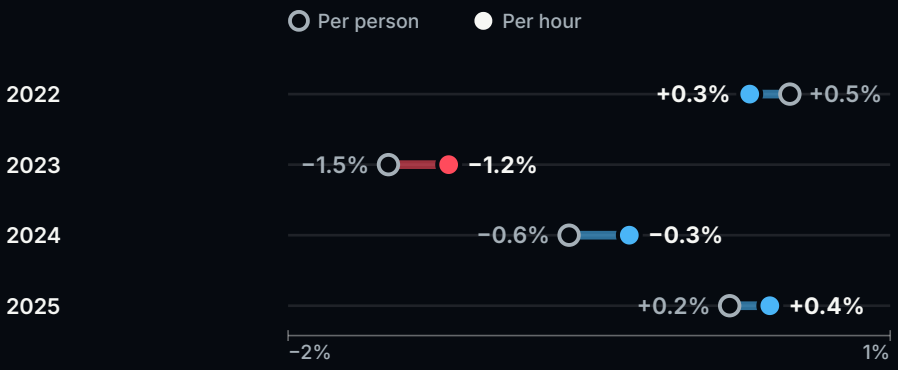
ILO, Resolution concerning the measurement of working time (2008), paragraphs 9 and 11, for work within the national accounts' production boundary; the lists are shortened by the editors.

WHAT THE RESEARCH SAYS

One economy, two denominators

Destatis publishes German output both per person employed and per hour worked, each price-adjusted. In 2025, 46.0 million people worked in Germany, about as many as a year before. The two measures did not agree once from 2022 to 2025.

PRICE-ADJUSTED GDP, CHANGE ON THE YEAR BEFORE, GERMANY



Countries count hours in two ways, the OECD explains: by asking workers in surveys, or by starting from paid or contractual hours and adjusting for absence and overtime. Self-reported hours tend to come out higher, so levels compare less well across countries than growth does.

OUR READING

When hours per person fall, output per person looks worse than output per hour. Ask which denominator a figure uses before you call it a trend.

Sources: Statistisches Bundesamt (Destatis), 2026; OECD Publishing, Paris, 2025

Destatis, first annual results, press release of 15 January 2026; earlier years are revised figures and may change again. The differences are small in absolute terms. Methods of counting hours: OECD Compendium 2025, chapter 4.

HOW IT IS MEASURED

Output per hour on a site

The ILO gives a site the arithmetic for the denominator: hours actually worked are hours paid for, plus unpaid overtime, minus paid absence. Above the line goes what left the site to standard in the same period, counted by the same people.

INVENTED EXAMPLE, ONE WEEK ON A SITE

Hours	1,000 paid + 20 unpaid overtime − 80 paid leave and sickness = 940 worked
Output	12,000 units to standard: 12.8 per hour worked, 12.0 per hour paid

Site and figures are invented by the editors. If 60 of the 940 hours were spent waiting for trucks, they stay below the line.

01	**One unit, one definition**	what counts as done, and rework counted once
02	**Same period, same people**	agency and borrowed staff in the hours if their output is in
03	**Down time noted, not removed**	it explains a low week; taking it out hides it

Source: International Labour Organization, 2008

The formula is the ILO's (2008, paragraph 26); the checks are the editors' proposal. Machine losses are in No. 48 (OEE), the cost of a minute in No. 73, rates per 200,000 hours in No. 87.

More in the essay What last mile taught me about running real operations

TOOL OF THE ISSUE

The output-per-hour card

One card per process and week, filled from the time records and the output count. The Shift Capacity tool takes the result as a rate in units per productive hour and turns the next forecast volume into heads per shift.

01 Process and week and who is in it: own staff, agency, borrowed

02 Output units done to standard; the definition of done

03 Hours paid from the time records

04 + unpaid overtime – paid absence leave, holidays, sickness out

05 = Hours worked, and output per hour and the same for last week

06 Down time inside the hours hours and causes: waiting, breakdowns, no material

Sources: International Labour Organization, 2008; OECD Publishing, Paris, 2025

The card is the editors' proposal, built on the ILO's definition of hours worked and the OECD's ratio; the essay linked on page 7 tells why pressure should not turn into people trying to look busy.

Open the tool: Shift Capacity stivencatalyst.com/tools/shift-capacity/

SOURCES AND METHOD

Every figure has a source.

The figures in this issue come from the sources below. The year shows how recent each one is.

OECD Compendium of Productivity Indicators 2025
OECD Publishing, Paris, 2025
https://doi.org/10.1787/b024d9e1-en

Resolution concerning the measurement of working time (18th International Conference of Labour Statisticians)
International Labour Organization, 2008
https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@dgreports/@stat/documents/normativeinstrument/wcms_112455.pdf

Bruttoinlandsprodukt im Jahr 2025 um 0,2 % gewachsen (Pressemitteilung Nr. 017)
Statistisches Bundesamt (Destatis), 2026
https://www.destatis.de/DE/Presse/Pressemitteilungen/2026/01/PD26_017_811.html

EDITORIAL METHOD

Each figure was checked for its year, its publisher and what it measures, in the full text where it could be opened. A source read only in a summary, an abstract or excerpts is marked “via”. A figure not confirmed in what was read is marked so on its page, or left out. The editor's interpretation is marked “Our reading”.



MANAGEMENT REVIEW

Management without theatre.

Every issue, one management question, checked against the best research.

ALL ISSUES

stivencatalyst.com/magazine/management-review.html

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Edited by Stiven Janaqi, who answers for it; “the editors” in this publication means him. Its texts, translations, layout and the checking of figures against their sources are done in working sessions with Claude, an AI model by Anthropic.
stivencatalyst.com/how-this-is-made.html