

W11 COS30045

Lecture

Class

Agenda

Agenda

- Data visualisation design
- Project

W11.1 COS30045

Lecture

Agenda

- Data visualisation design

Reference

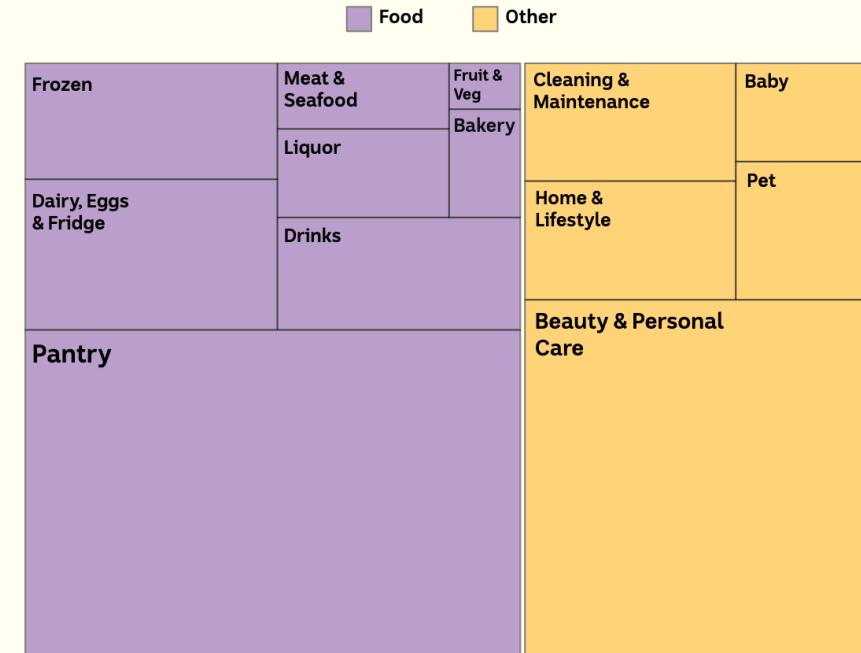
<https://datavizproject.com/>

Grocery prices at Coles and Woolworths go up and down. What's behind the pattern?

Tree map

The ABC found food items were most represented in high-low pricing

The proportion of items that undergo high-low price fluctuations, categorised by use.

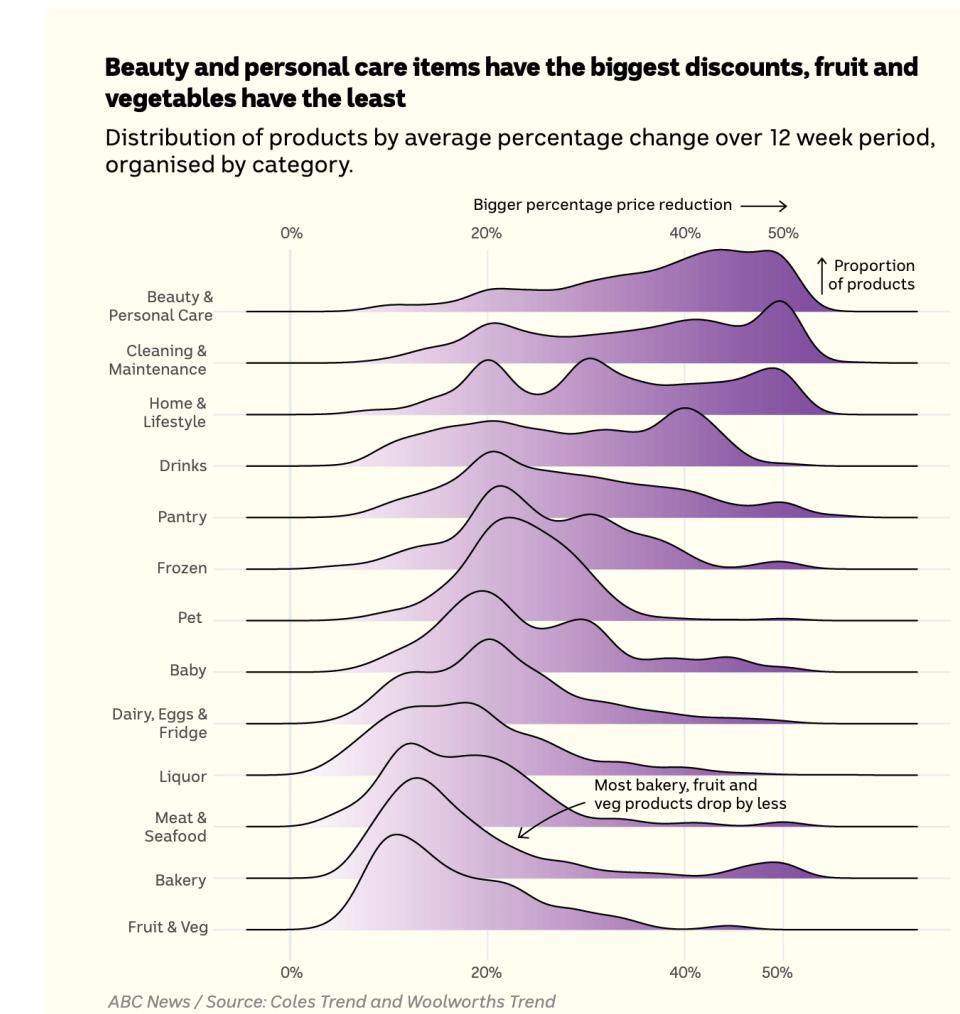


ABC News / Source: Coles Trend and Woolworths Trend

<https://www.abc.net.au/news/2024-10-26coles-woolworths-supermarket-pricespecials-cost-of-living/104470674>

Grocery prices at Coles and Woolworths go up and down. What's behind the pattern?

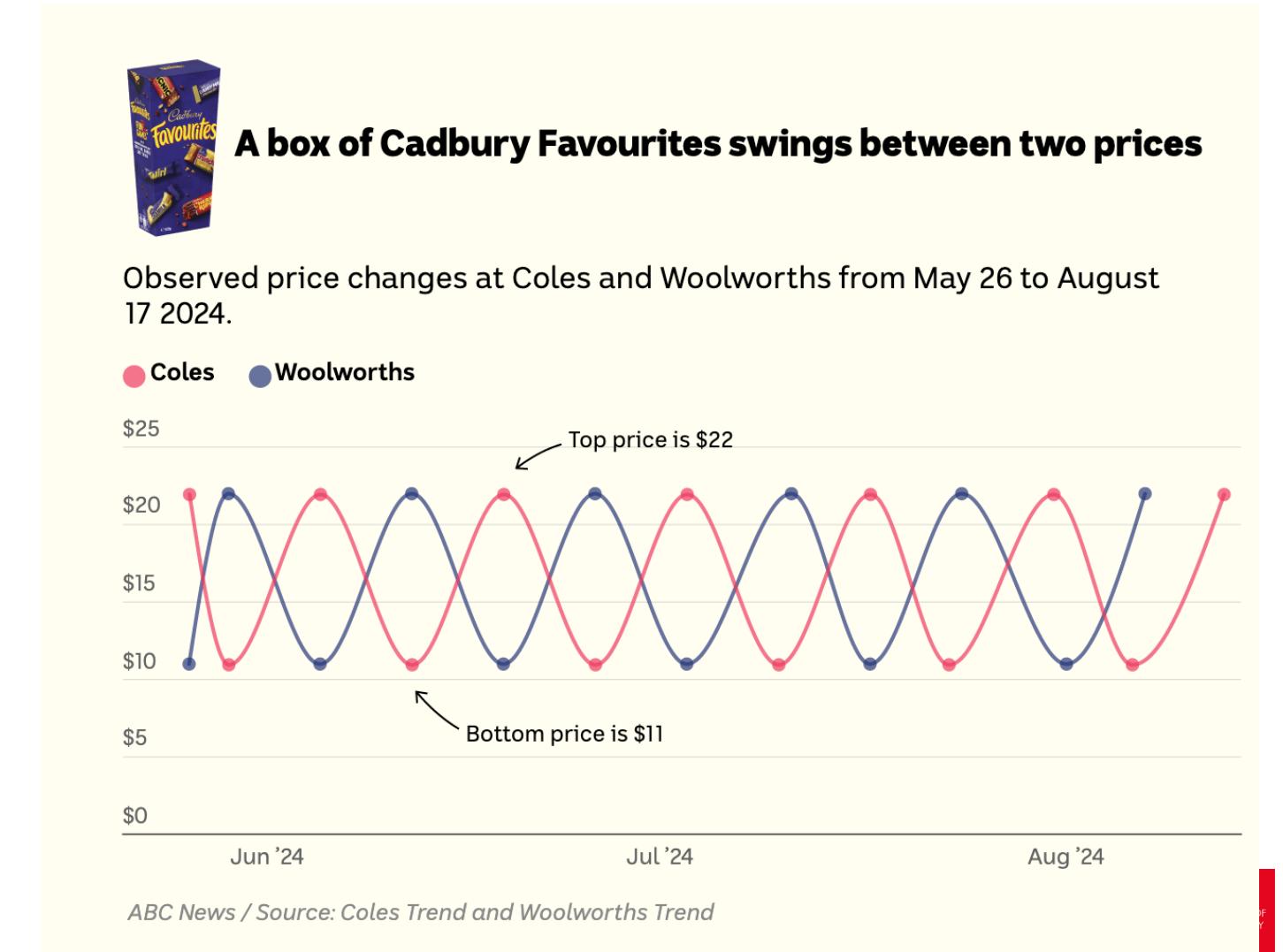
Layered Area chart



<https://www.abc.net.au/news/2024-10-26coles-woolworths-supermarket-pricespecials-cost-of-living/104470674>

Grocery prices at Coles and Woolworths go up and down. What's behind the pattern?

Line chart

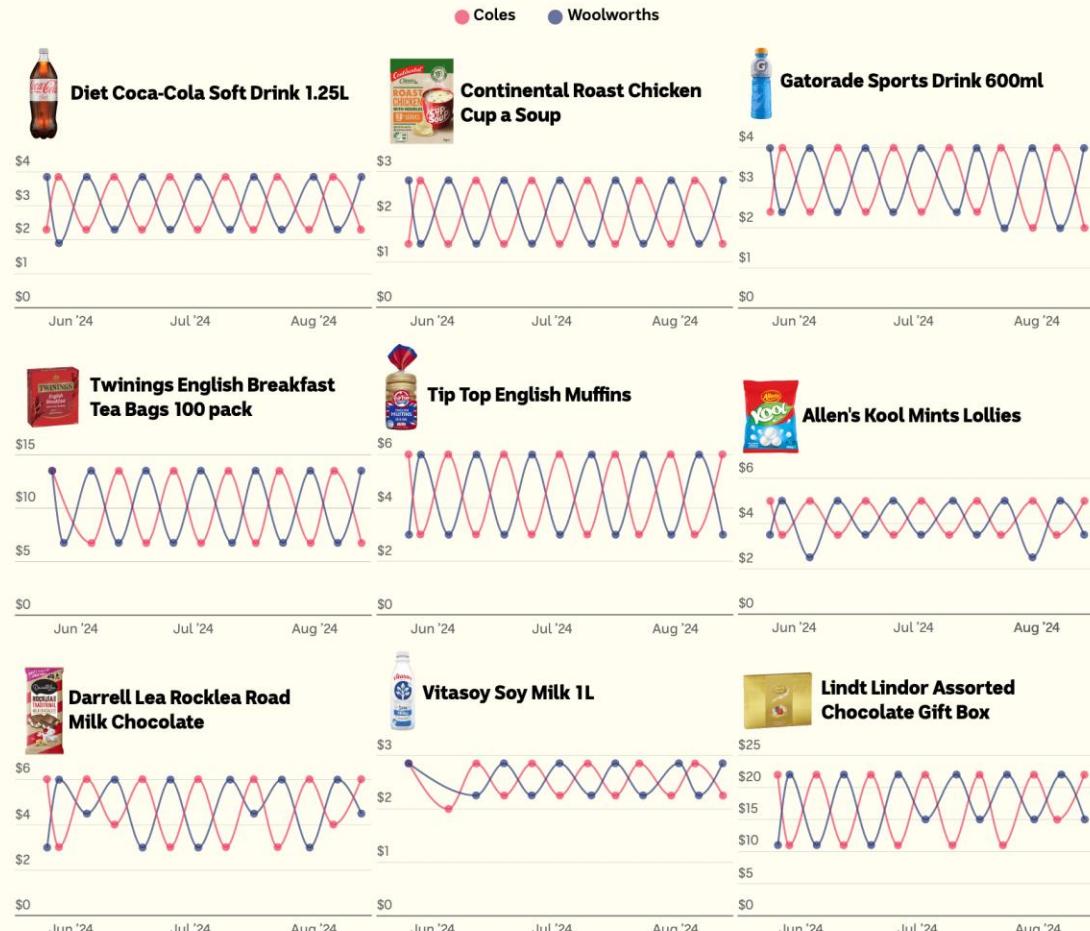


Grocery prices at Coles and Woolworths go up and down. What's behind the pattern?

Small multiples

The price cycles of various supermarket products

Observed price changes for a selection of products available at both Coles and Woolworths from May 26 to August 17 2024.



ABC News / Source: Coles Trend and Woolworths Trend

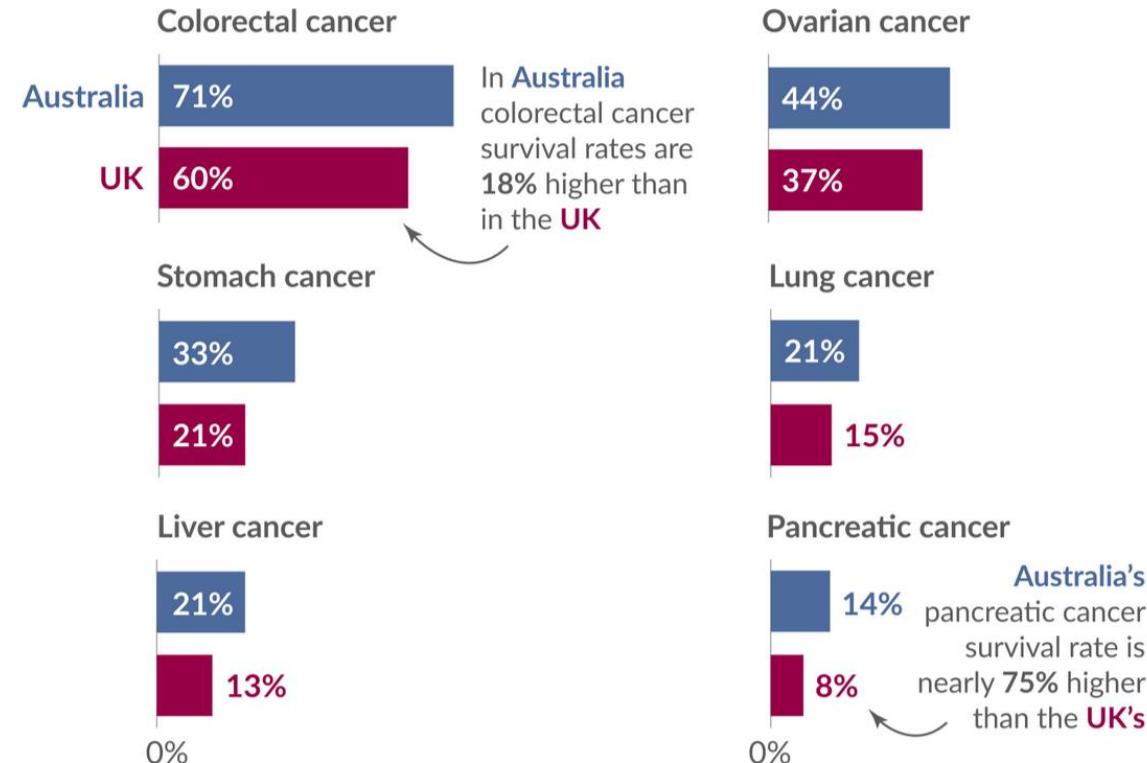
Small multiples

Horizontal bar chart

Cancer survival rates are higher in Australia than in the UK

Our World
in Data

Share of patients still alive 5 years after the diagnosis, assuming cancer is the only cause of death. Data for patients diagnosed in 2014.



Note: Differences in screening rates, treatment, healthcare systems, and risk factors may explain these gaps.

Data source: Global Cancer Observatory (2019)

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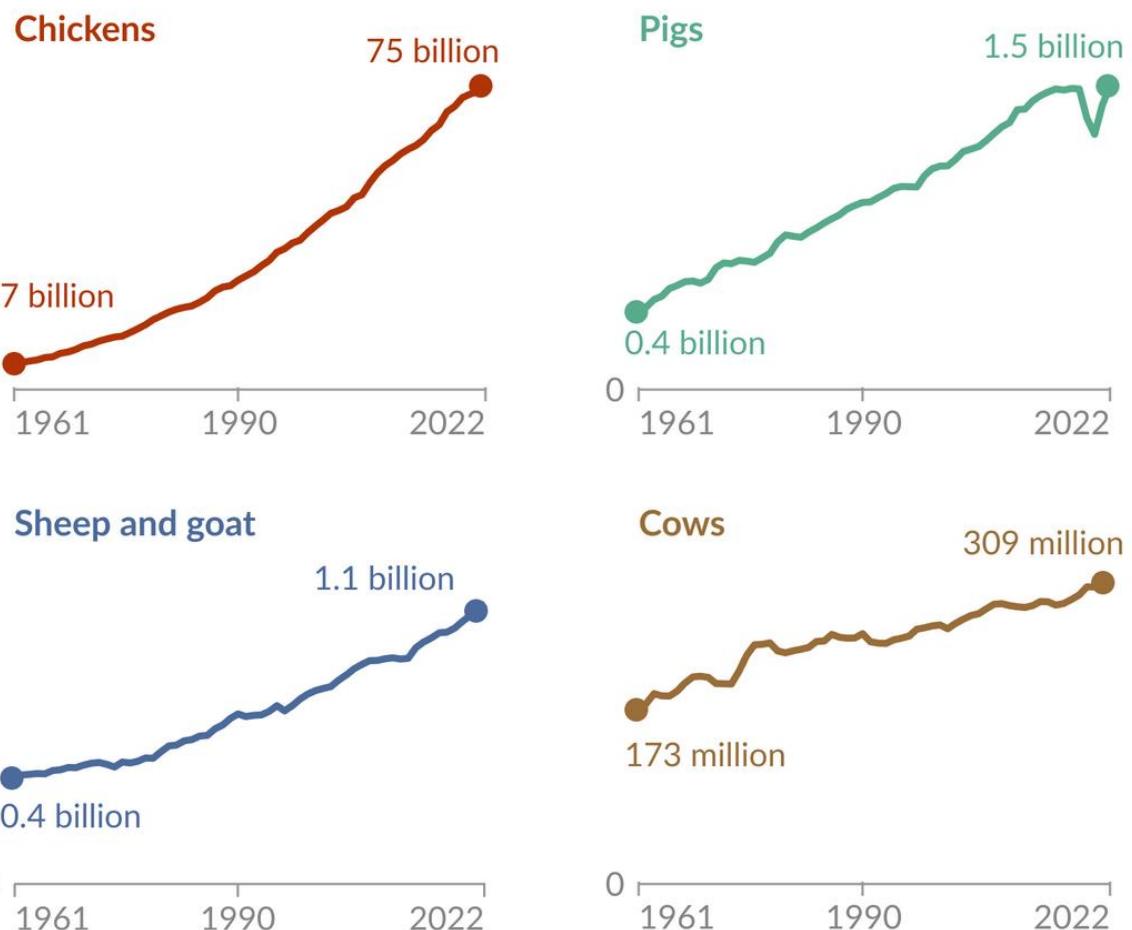
<https://ourworldindata.org/data-insights#most-recent-data-insight>

Small multiples

Line chart

Global numbers of animals killed for meat per year from 1961 to 2022

Our World
in Data



Data source: Food and Agriculture Organization of the UN (2023)

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Small multiples

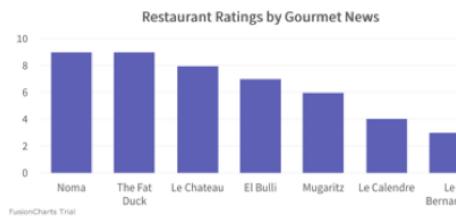
Line chart



<https://ourworldindata.org/data-insights#most-recent-data-insight>

Heatmap

Restaurant Ratings by Reviewers



Cookbook	Rating
The Fat Duck	9.5
Le Chateau	8.5
El Bulli	8.0
Noma	8.0
Mugaritz	5.0
Le Bernardin	2.5
Le Cale	2.5

A bar chart titled "Restaurant Ratings by Restaurant Mag". The y-axis represents the rating score from 0 to 10. The x-axis lists seven restaurants: The Fat Duck, Noma, Mugaritz, El Bulli, Le Chateau, Le Bernardin, and Le Cale. The bars show the following approximate ratings: The Fat Duck (9.5), Noma (8.0), Mugaritz (7.0), El Bulli (5.5), Le Chateau (5.5), Le Bernardin (3.0), and Le Cale (3.0).

Restaurant	Rating
The Fat Duck	9.5
Noma	8.0
Mugaritz	7.0
El Bulli	5.5
Le Chateau	5.5
Le Bernardin	3.0
Le Cale	3.0

A bar chart titled "Restaurant Ratings by Food Magazine". The y-axis represents the rating scale from 0 to 10. The x-axis lists seven restaurants: El Bulli, Mugaritz, The Fat Duck, Noma, Le Chateau, Le Bernardin, and Le Cale. The bars show the following approximate ratings: El Bulli (8.5), Mugaritz (8.5), The Fat Duck (7.5), Noma (6.0), Le Chateau (6.0), Le Bernardin (2.5), and Le Cale (1.5).

Restaurant	Rating
El Bulli	8.5
Mugaritz	8.5
The Fat Duck	7.5
Noma	6.0
Le Chateau	6.0
Le Bernardin	2.5
Le Cale	1.5

A bar chart titled "Restaurant Ratings by Restaurant Business". The y-axis represents the average rating from 0 to 10. The x-axis lists six restaurant names: "The Fat Duck", "El Bulli", "Mugaritz", "Le Chateau", "Noma", "Le Calendre", and "Le Berna". Each name is positioned above a blue vertical bar. The approximate average ratings are: The Fat Duck (8.5), El Bulli (8.0), Mugaritz (8.0), Le Chateau (7.0), Noma (7.0), Le Calendre (5.0), and Le Berna (4.0).

Restaurant Business	Average Rating
The Fat Duck	8.5
El Bulli	8.0
Mugaritz	8.0
Le Chateau	7.0
Noma	7.0
Le Calendre	5.0
Le Berna	4.0



FusionCharts Trial

<https://www.fusioncharts.com/resources/chart-primers/heat-map-chart>

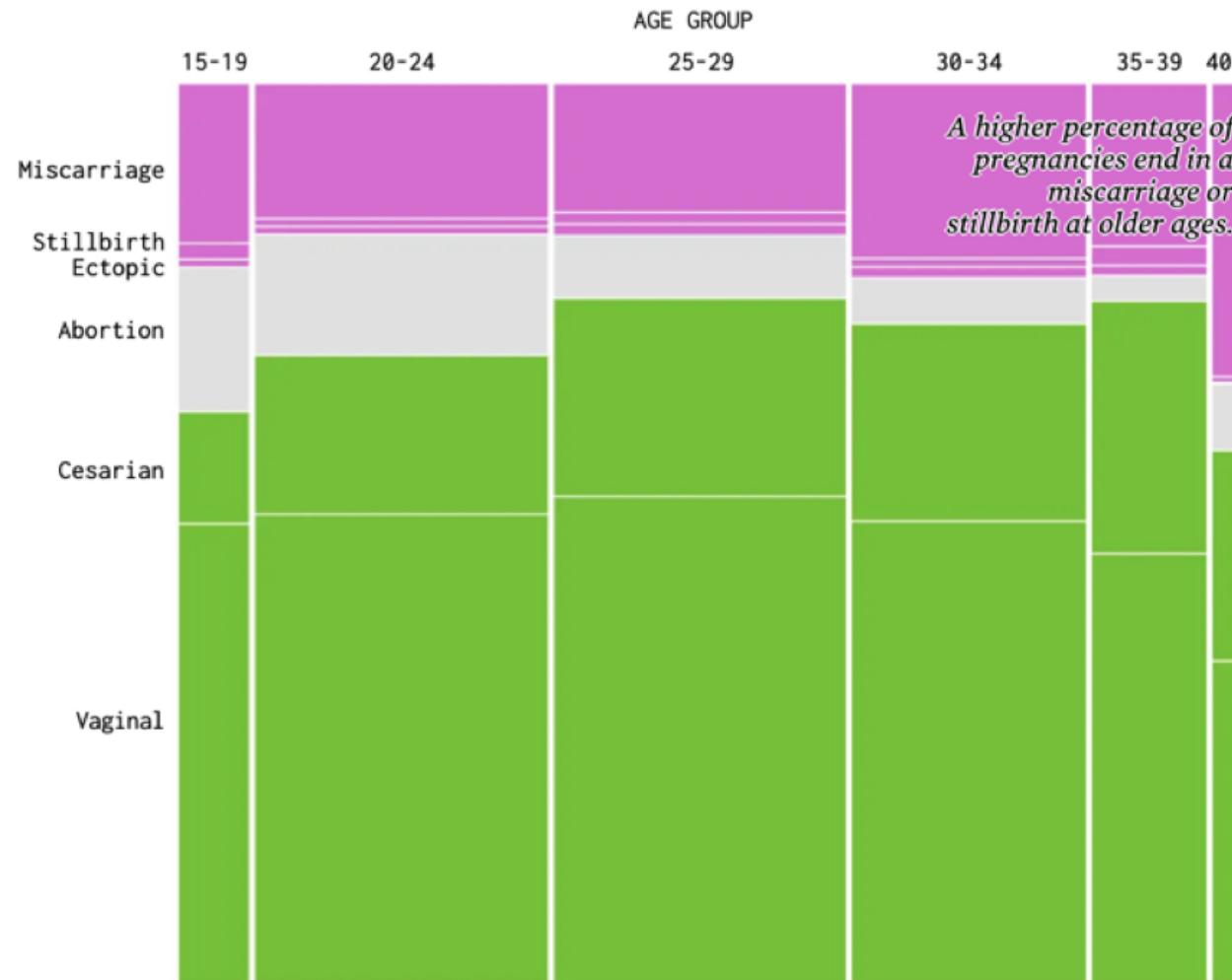
Marimekko Chart

Mekko chart

Mosaic

PREGNANCY OUTCOME BY AGE OF MOTHER

Getting pregnant can mean different things depending on where you are in life. Maybe pester newlyweds less.

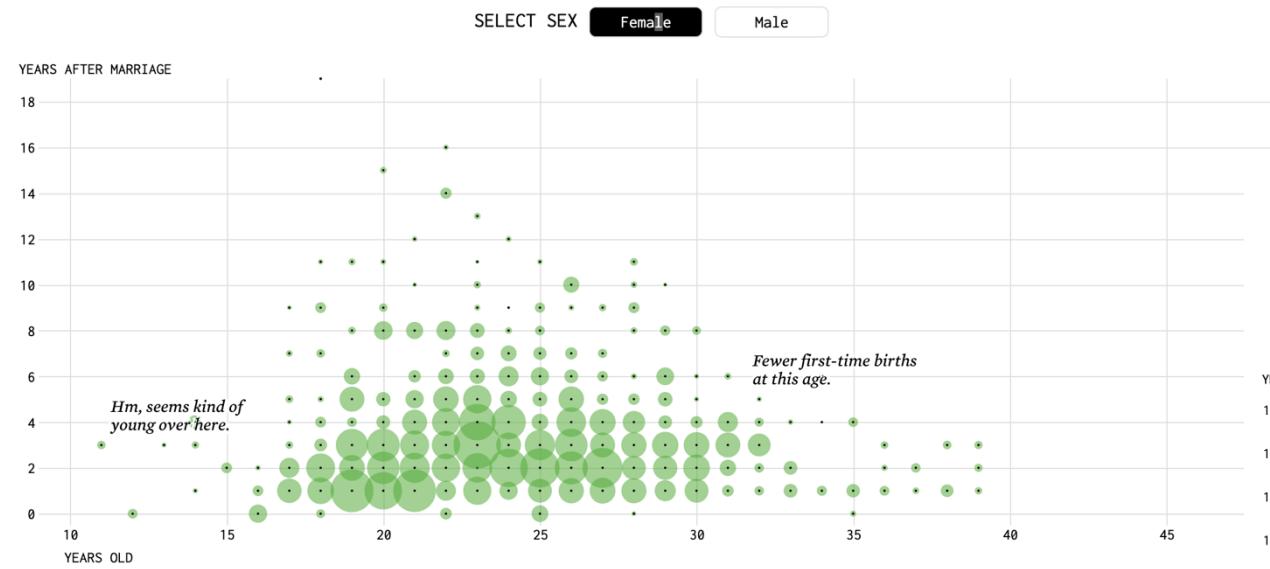


<https://flowingdata.com/2019/01/28/after-marriage-how-long-people-wait-to-have-kids>

Bubble chart

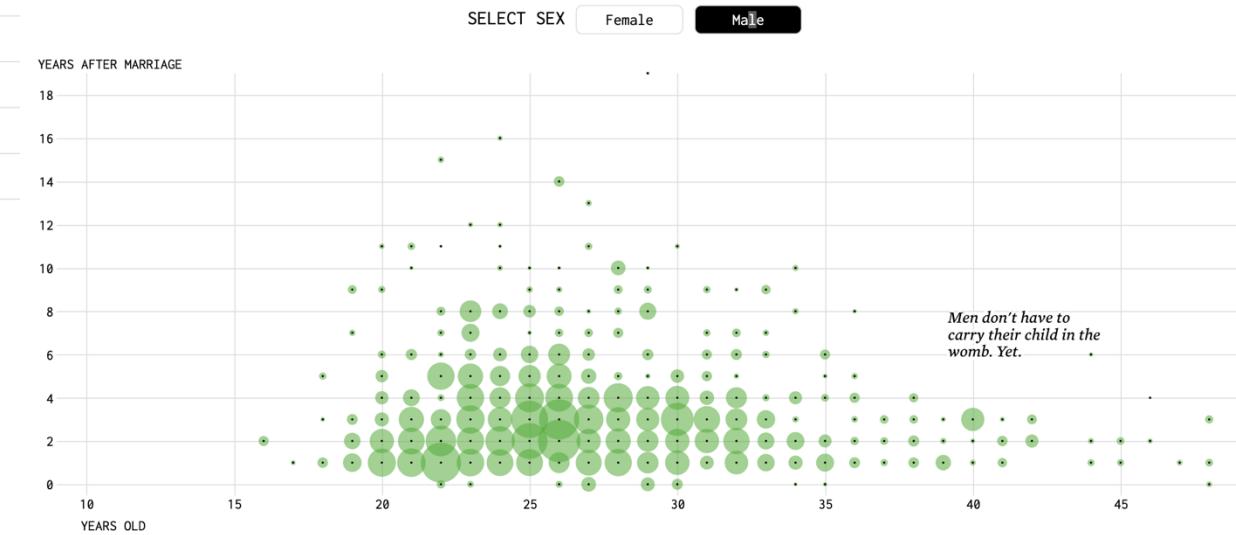
AGE AT MARRIAGE VS. TIME TO HAVE A KID

If they do have kids, married people usually have their first one during the first six years of marriage.



AGE AT MARRIAGE VS. TIME TO HAVE A KID

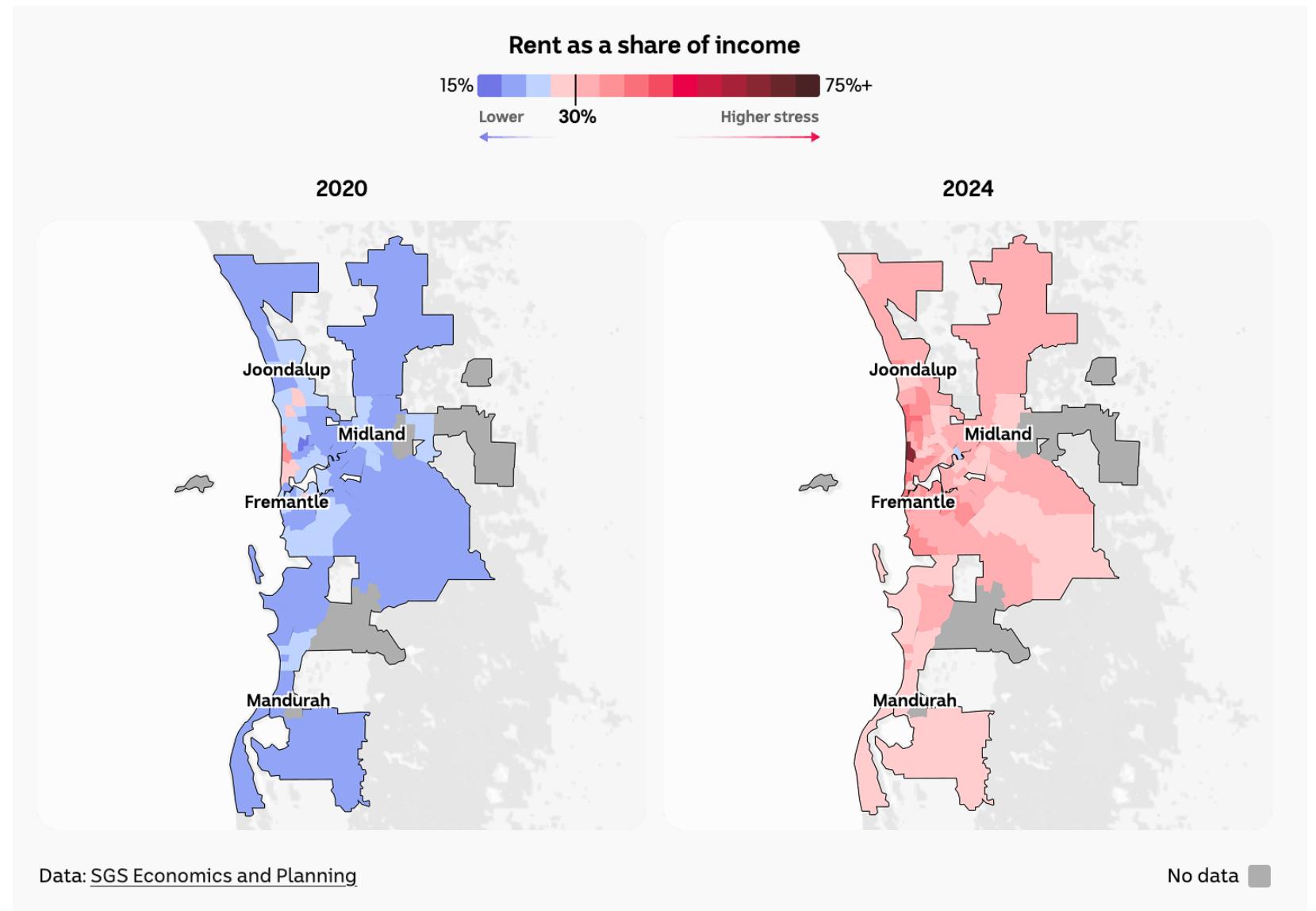
If they do have kids, married people usually have their first one during the first six years of marriage.



<https://flowingdata.com/2019/01/28/after-marriage-how-long-people-wait-to-have-kids>

Choropleth - divergent colour scale

The rent crisis
behind Australia's
two-faced cities



<https://www.abc.net.au/news/2025-04-06/the-rent-crisis-behind-australia-s-two-faced-cities/105118328>

Line chart

The rent crisis
behind
Australia's two-
faced cities

How do rents compare in your neighbourhood?

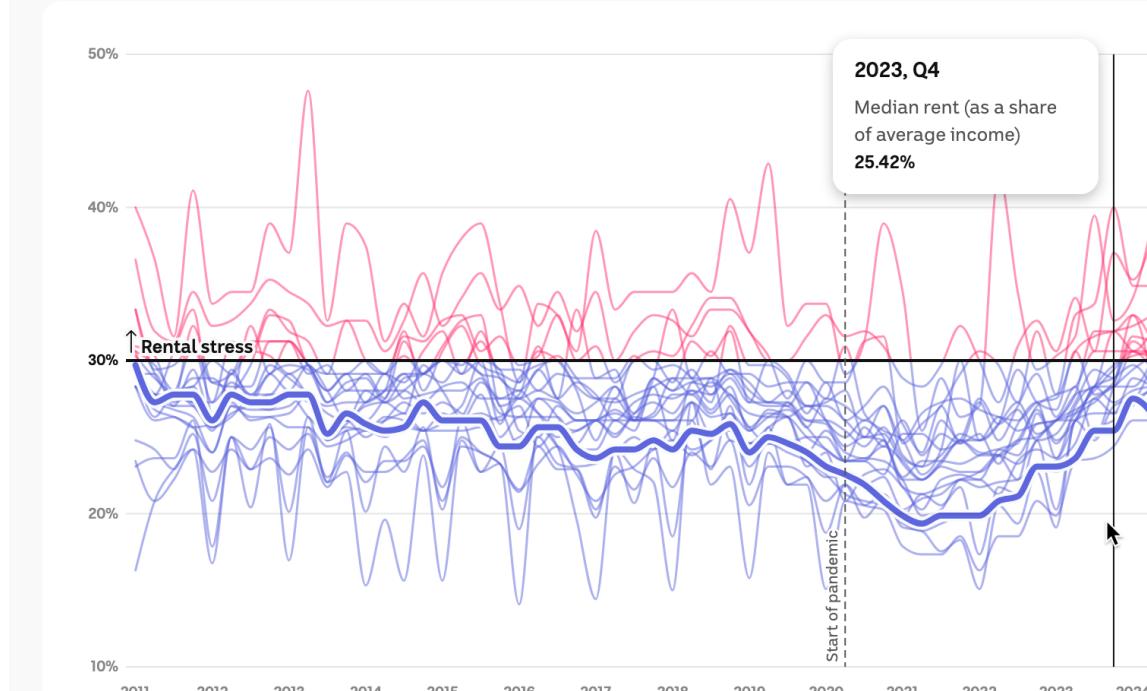
Hawthorn, VIC (3123)



Victoria

Melbourne - Inner East

Select other lines to explore your neighbourhood



Data: SGS Economics and Planning
Median = half of rents are more expensive and half are cheaper
Typical rental household refers to the average income rental household
Data for the NT was not made available

Hawthorn (3123) is acceptable for the typical rental household.

In 2024, Q2 the median rent was **26.6%** of the average income (\$112,476) for rental households in **Greater Melbourne**.

This compares to **22.6%** at the start of the pandemic in **2020, Q2**.

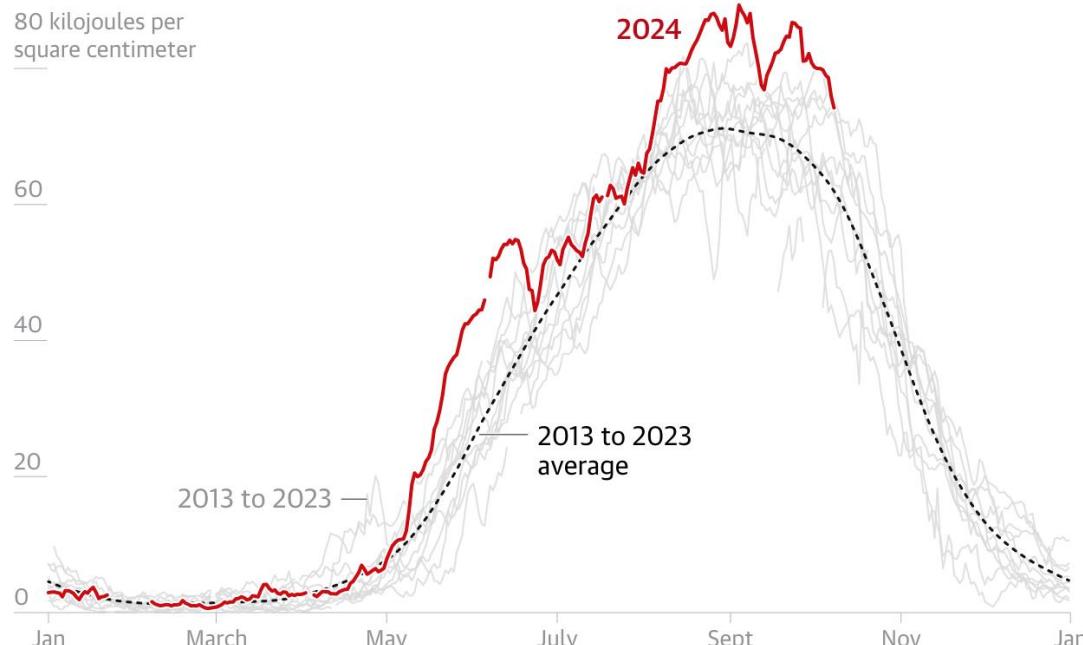
<https://www.abc.net.au/news/2025-04-06/the-rent-crisis-behind-australia-s-two-faced-cities/105118328>

A visual guide to the damage caused by Hurricane Milton

Are hurricanes getting worse? Here's what you need to know

Line chart

The Gulf of Mexico is absorbing and storing heat at increasingly high levels



The Gulf of Mexico is significantly hotter than average



Notes

Ocean heat content (OHC) is a measure of the amount of heat present in ocean water. It is measured in kilojoules (kJ) per cm². The data above shows the OHC for the Gulf of Mexico. Data accessed on Oct. 6, 2024.

Source: Brian McNoldy, University of Miami, Rosenstiel School of Marine, Atmospheric, and Earth Science

Credit: Daniel Wood and Alyson Hurt/NPR

<https://www.theguardian.com/us-news/2024/oct/10/hurricane-milton-maps-charts-graphics-damage>

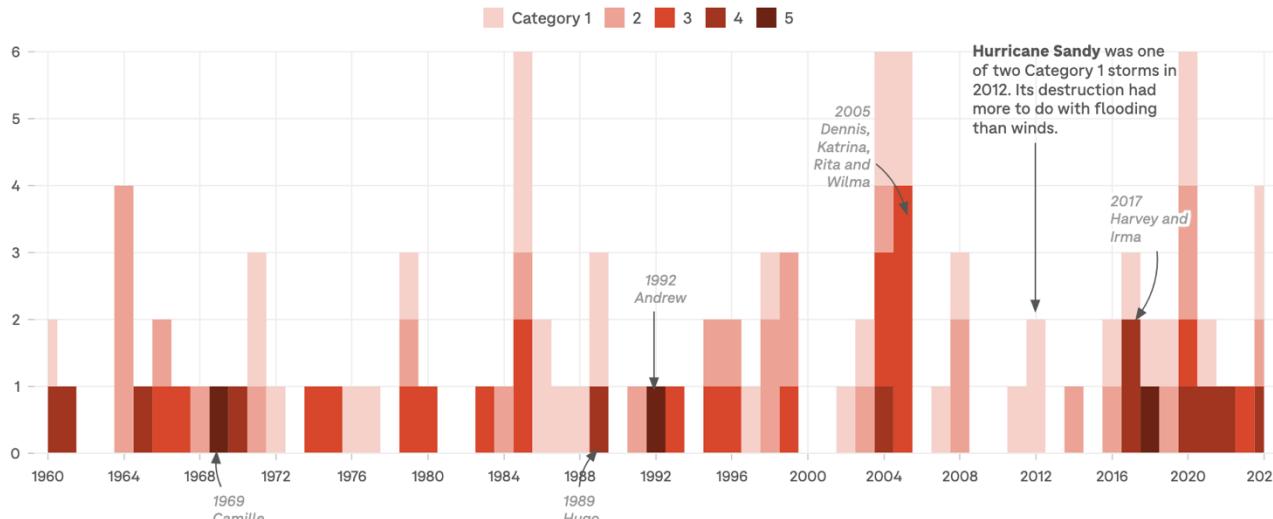
<https://www.npr.org/2024/10/08/nx-s1-5143320/hurricanes-climate-change>

Are hurricanes getting worse? Here's what you need to know

Bar charts

Hurricanes are not necessarily hitting the U.S. more often ...

Number of hurricanes to hit the United States, by year and strength at landfall



Notes

— The Saffir-Simpson category scale reflects only wind speed, not heavy precipitation and storm surge.

— 2024 hurricanes include Beryl, Debby, Francine and Helene. Milton, forecast to make landfall on Wednesday, is not included in this chart.

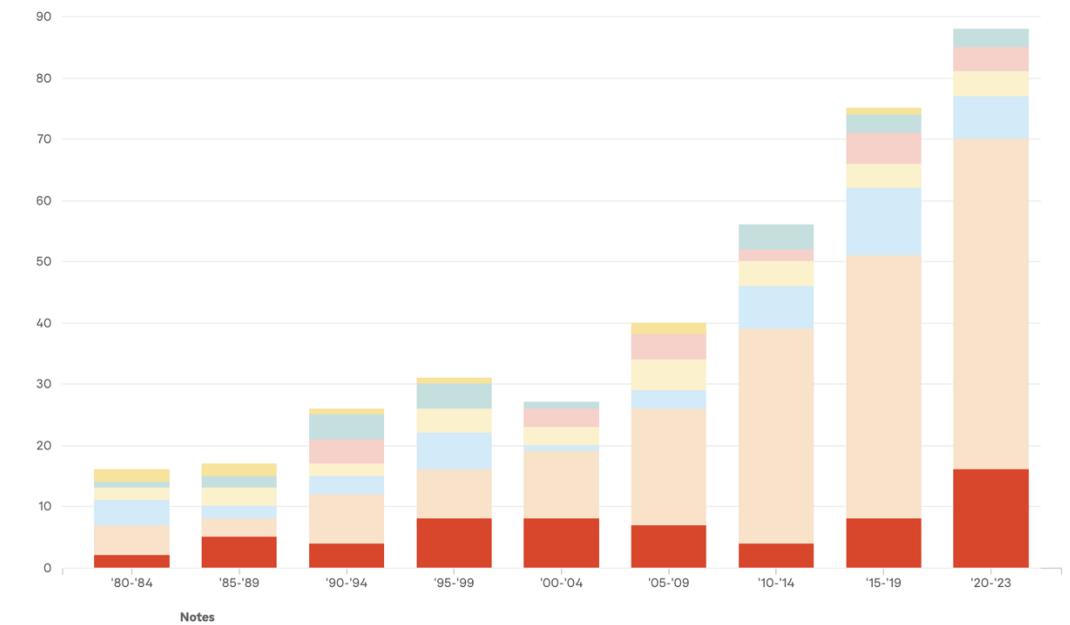
Source: National Oceanic and Atmospheric Administration

Credit: Alyson Hurt/NPR

... but more storms are causing over \$1B damage each

In the 1980s, the U.S. experienced one (inflation-adjusted) billion-dollar disaster every four months on average. Now the country experiences about two a month.

■ Tropical cyclone ■ Severe storm ■ Flooding ■ Drought ■ Wildfire ■ Winter storm ■ Freeze



Notes

Dollar amounts are inflation-adjusted; these include insurance losses, FEMA assistance, fire suppression costs and estimates of uninsured losses.

Source: NOAA's National Centers for Environmental Information

Credit: Brent Jones/NPR

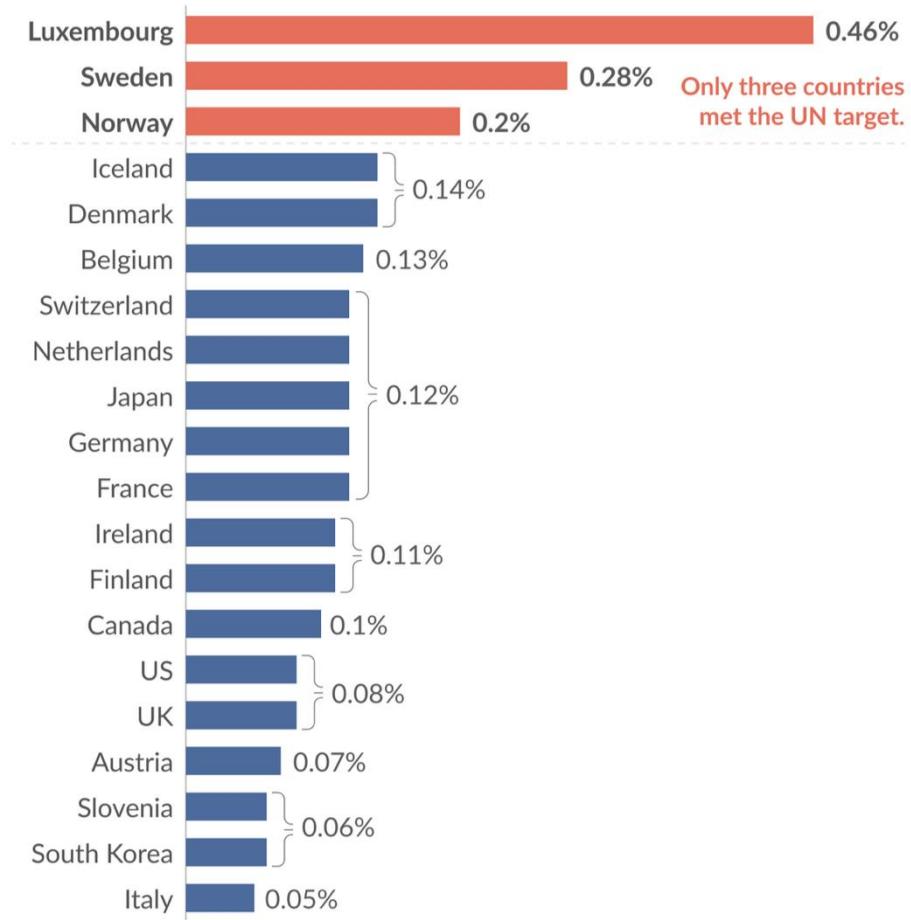
<https://www.npr.org/2024/10/08/nx-s1-5143320/hurricanes-climate-change>

Horizontal bar

Which countries met the UN's target for aid to the poorest nations in 2022?

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in Data

Developed countries should give at least 0.15% of national income as Official Development Assistance (ODA) to the least developed countries, according to UN targets.



Note: The countries shown are the 20 OECD nations giving the most aid, percentage-wise, to the poorest nations.

Data source: OECD (2024)

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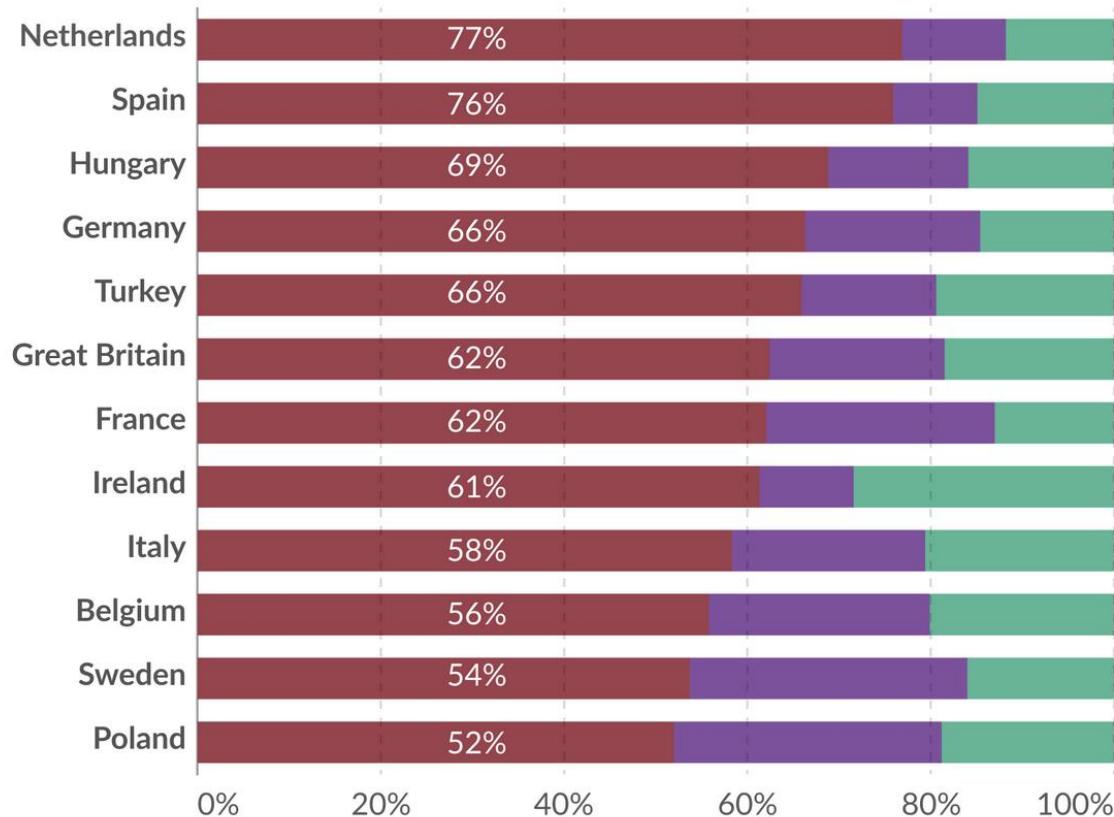
Horizontal stacked bar

Europeans are pessimistic on housing

Our World
in Data

"In general, do you think that your country is on the right track or the wrong track when it comes to housing?"

■ Wrong track ■ Don't know ■ Right track



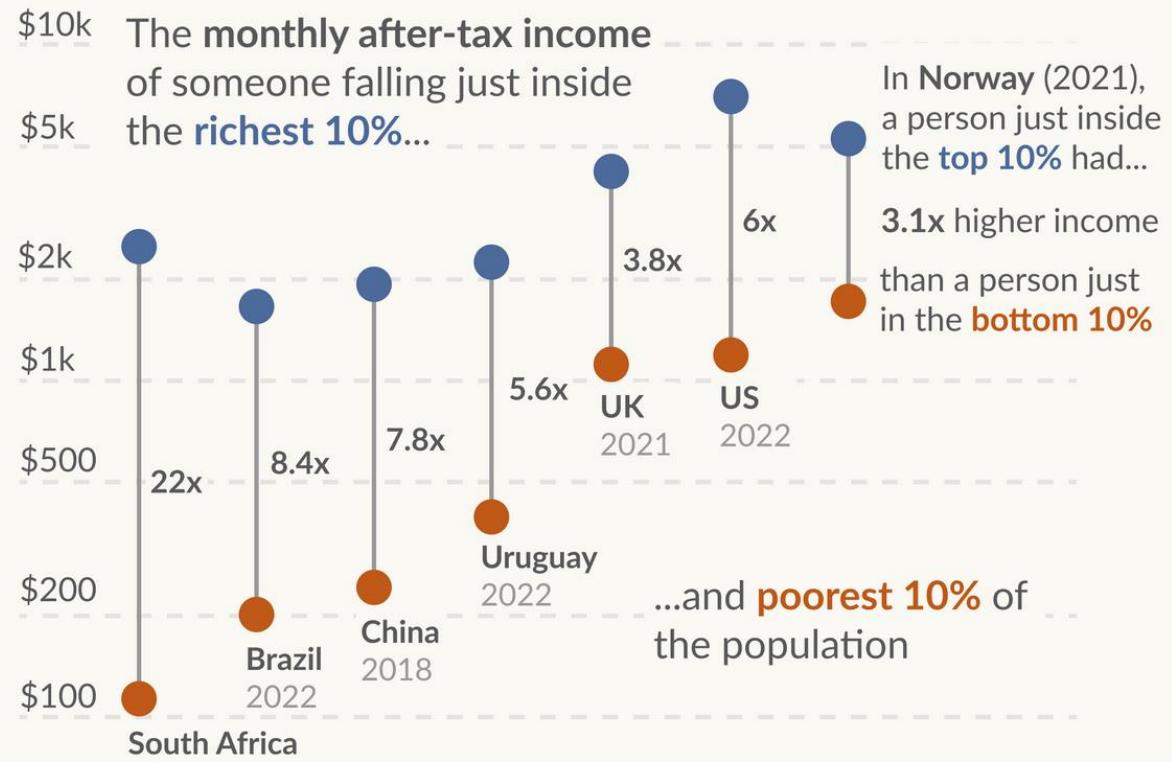
Data source: Ipsos (2025), survey conducted in December 2024

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<https://ourworldindata.org/data-insights#most-recent-data-insight>

Dumbbell

How far apart are the incomes of the rich and poor in different countries?



Data source: Luxembourg Income Study (2024)

Note: Incomes measured in international-\$ at 2017 prices to account for differences in the cost of living between countries. | CC BY

Our World
in Data

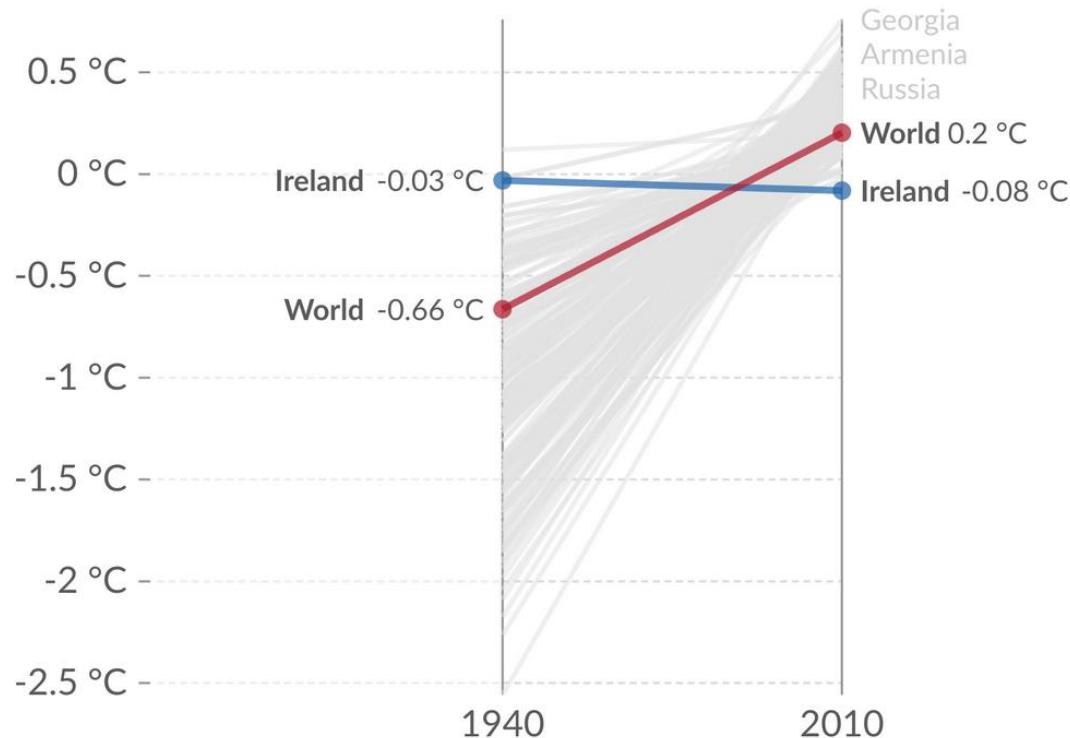
<https://ourworldindata.org/data-insights#most-recent-data-insight>

Slope

Temperature anomalies in the 1940s compared to 2010s

Our World
in Data

The deviation of a specific decade's average surface temperature from the 1991-2020 mean, in degrees Celsius.



Data source: Contains modified Copernicus Climate Change Service information (2019)
CC BY

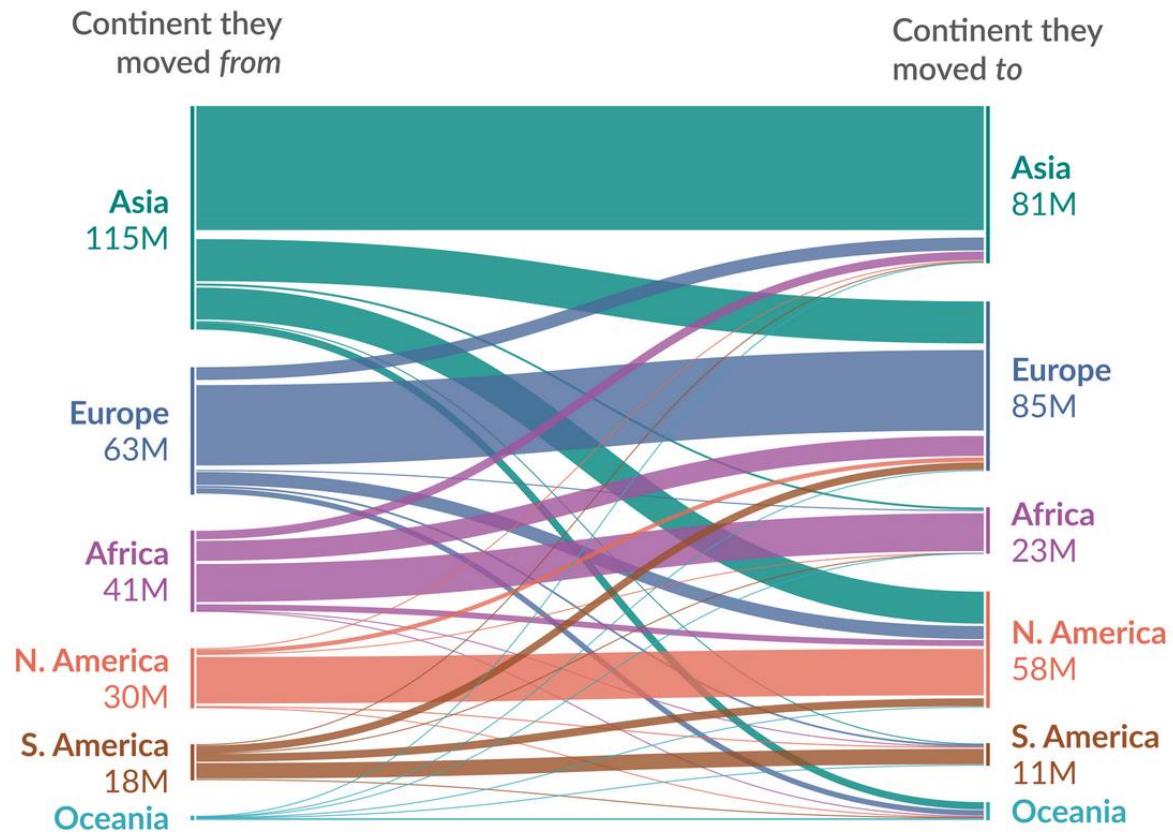
<https://ourworldindata.org/data-insights/every-country-in-the-world-was-warmer-in-the-2010s-than-in-the-1940s-except-ireland>

Alluvial Sankey

Most people who leave their country stay in the same continent

Our World
in Data

Total number of international migrants by birthplace & residence in 2020.



Data source: UN Department of Economic and Social Affairs (2020)
OurWorldInData.org/migration

CC BY

<https://ourworldindata.org/data-insights#most-recent-data-insight>

Bee swarm

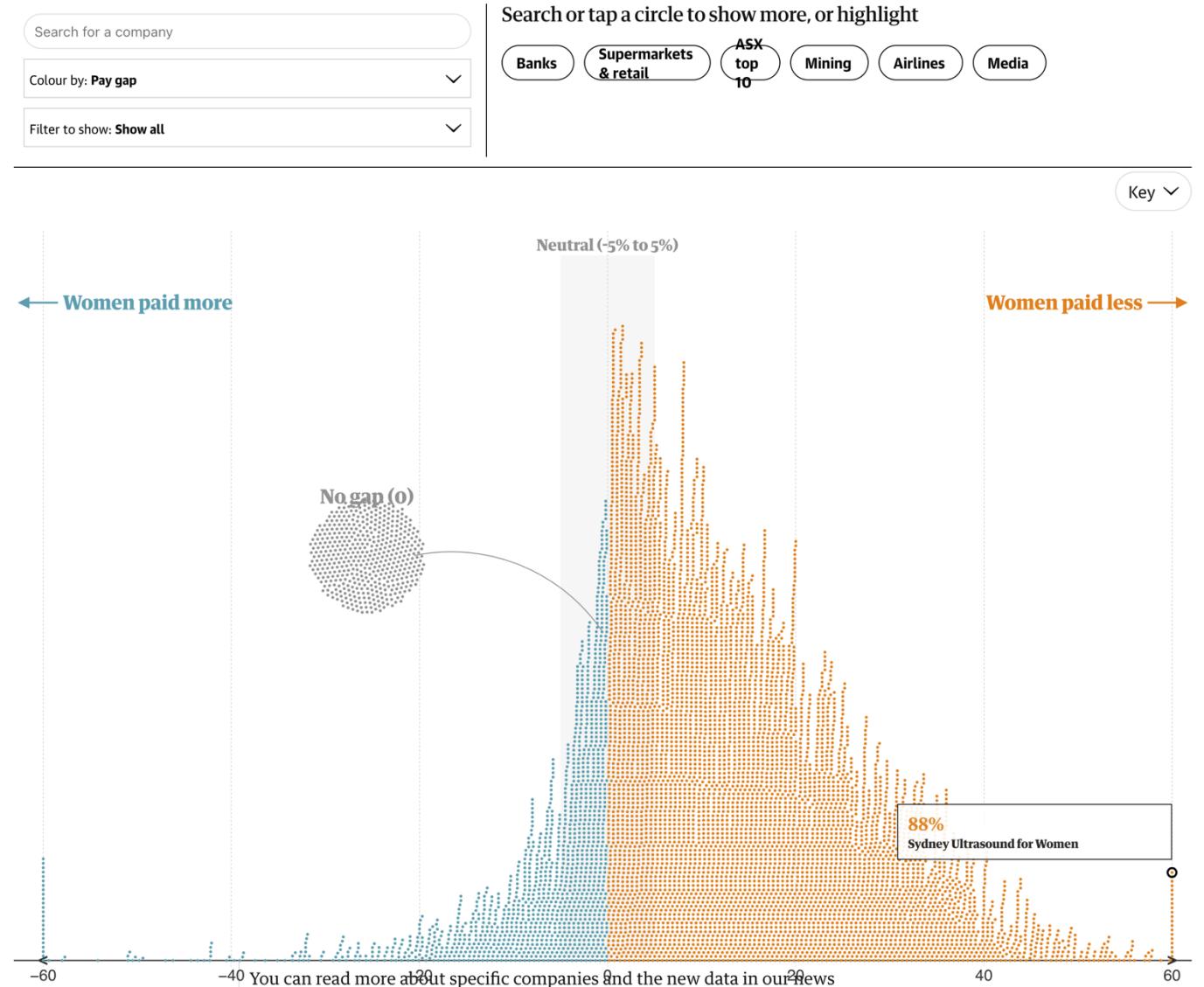
The rent crisis behind Australia's two-faced cities



<https://www.abc.net.au/news/2025-04-06/the-rent-crisis-behind-australia-s-two-faced-cities/105118328>

Dot plot

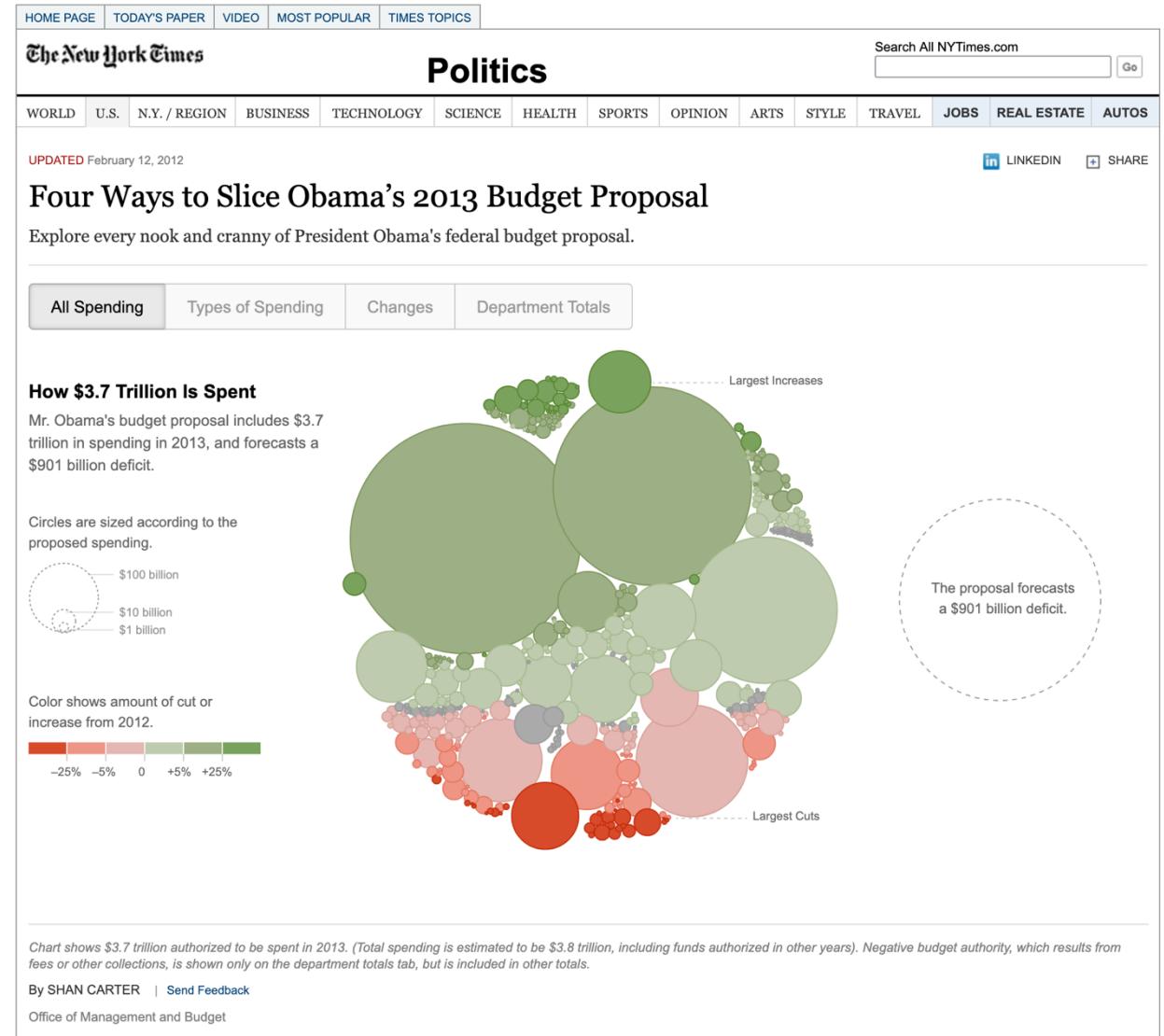
Australia's gender pay gap explorer 2025: where does your workplace rank?



<https://www.theguardian.com/australia-news/ng-interactive/2025/mar/03/australia-gender-pay-gap-2025-by-employer-rankings-data>

Packed circle

Four Ways to Slice Obama's 2013 Budget Proposal



https://archive.nytimes.com/www.nytimes.com/interactive/2012/02/13/us/politics/2013-budget-proposal-graphic.html?_r=0