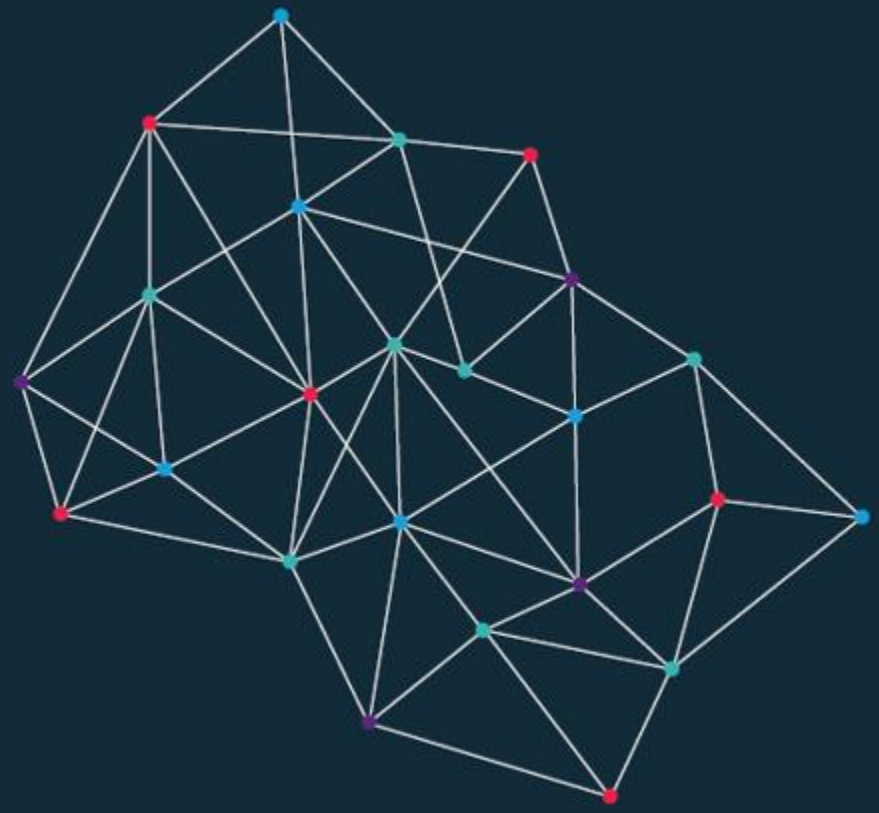
Communicating Economics.



Lecture 3

Today's session

- Communicating research
  - Strengths/ limitations of academic research
  - Turning research findings into a policy brief

- Communicating numbers
  - Reflections from Brexit
  - Making numbers meaningful
    - Big (and not so) big numbers
    - Research findings

What is the point of academic research?

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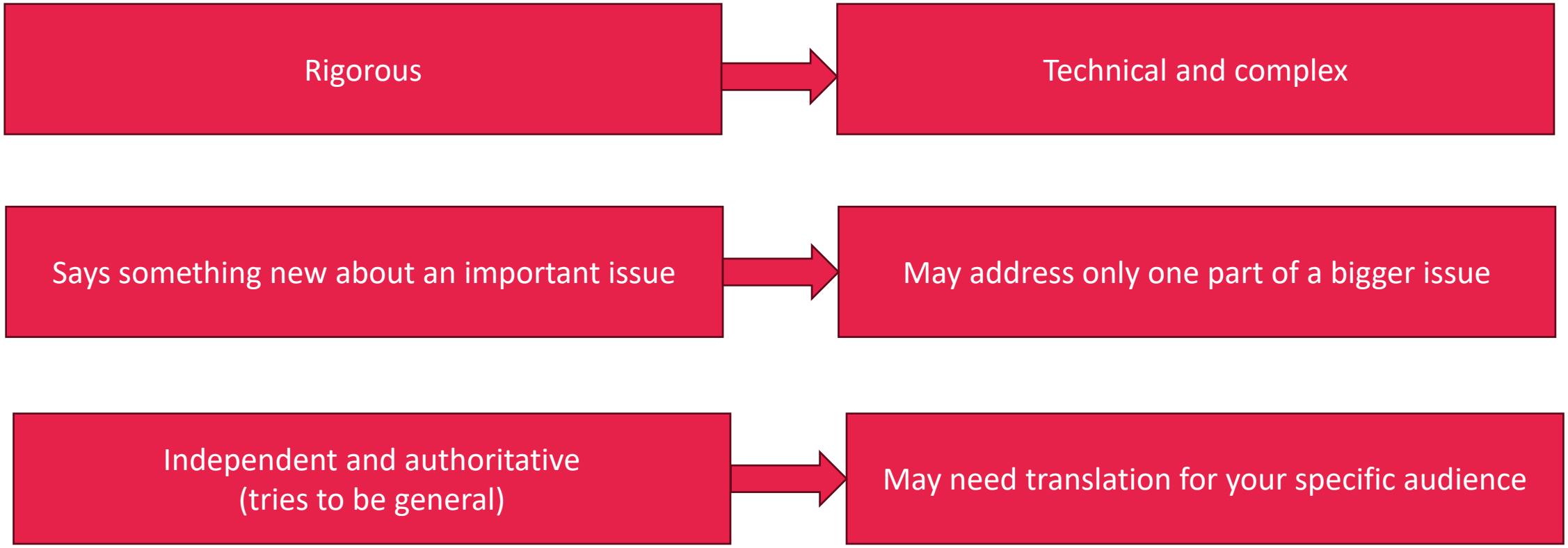
Academic journal articles

Audience

Aim

Strengths and limitations (for a policy brief)



Rigour

- All the papers are published/ forthcoming in leading economics journals
- They have been subject to peer review (one or two rounds of revisions, addressing referees' concerns)
- Implication 1: You can assume that the findings have **internal validity** (i.e. any claim to identify an effect is credible). You aren't expected to critique/ pick holes in the methodology/ findings
- Implication 2: Researchers do numerous robustness checks to ward off/ deal with referees' concerns (a lot of these are about whether they have really identified a causal effect)
  - Checks for (different forms of) omitted variable bias
  - Specification checks
  - These are aimed at a specific, technical audience and <u>you don't need to report on them</u>

  - You are not critiquing the paper; you are presenting the method and main findings in a clear, focused way and discussing the implications for your organisation

What is new?

- Empirical papers are typically concerned with the effect of X on Y
- Each paper will have something new to say

- But **what is** new?
  - Do we learn that there is a link between X and Y? (eg no-one has previously thought that X affected Y)
  - Do we learn about mechanisms? (eg a new insight into how/ why X affects Y)
  - Do we learn about the direction of the effect? (eg the effect of X on Y could be positive or negative)
  - Do we learn about the magnitude of the effect?

  - Your brief should be clear about what is new and interesting

Taking the research to a real-world audience

- **Internal validity**
  - Are the findings robust within the specific context of the research?
  - Do the researchers credibly identify a causal effect?

- **External validity**
  - How applicable are the findings outside the specific context of the context of the research?
  - Think about the relevant context for your organisation – (how) can you apply the research findings?
    - Apply findings from one country to another
    - Apply findings from previous policy reforms to a current policy debate
    - Apply findings from an experiment to a real-world situation
    - Apply findings from one sector of the economy to the whole economy

Acknowledge differences
Use your judgement

Examples

- Research on the effects of Trump's 2018 tariffs
- What can you say about the effects of Trump's 2025 tariffs?

- Research on the effects of regionally-varying wealth taxes on internal migration
- What can you say about the effects of national wealth tax on external migration?

- Lab-experiment on the effects of dark trading platforms
- What can you say about the effects of dark trading on real financial markets?

- Research on the effects of Norwegian paternity leave reforms
- What can you say about the effects of paternity leave reform in the UK

What can an organization learn from the research?

- Research typically addresses important issues
- But it may only have something to say about part of a wider issue
    - What else would someone need to know to inform decision-making?
    - What have the researchers not addressed?
    - You can identify gaps
    - You can also try to fill some of them (further research/ your judgement)

Implications

- What are the implications of the research findings for your organisation

  - Your policy brief should set out the relevant issues for your organisation at the start
  - You should circle back to these issues you highlighted
  - Reflect on the research and think about the **“so what (now)”** for your organisation

  - Draw on you own research (policy papers, other academic articles)
  - Critically apply economic thinking and your judgement

What you need to do

- Think about what might be interesting for a particular organisation (What's at stake?)
- Make sure you understand the paper's methodology and the findings
- Focus on the take-aways from the research that you want to put in the policy brief
- Answer the "so what (now)" for your organisation
  - External validity, limitations, implications
- Research more widely – policy papers, your organisation, other academic research
  - You are writing about one academic paper, but you want to put the findings into a wider context

Communicating numbers

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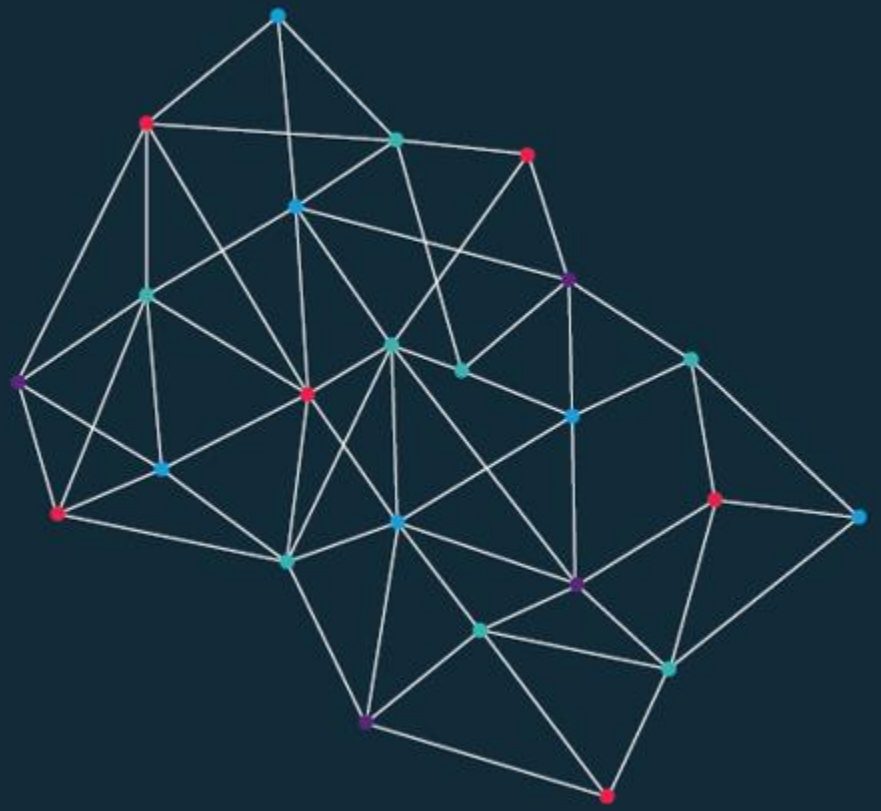
- Britain sends £350 million a week to the EU
  - 47% true; 39% false
- UK households will lose £4,300 a year and will be made permanently poorer
  - 17% true; 70% false

(IPSOS Mori poll)

Reflections

- What is your audience/ aim?
  - Comprehension/ persuasion/ manipulation
- Focus, engage and simplify applies to communication of numbers
  - Killer stats can be very powerful
- Trust is important

Improving Public Understanding of Economic Statistics: Presenting Labour Market Statistics to the Public



Improving Public Understanding of Economic Statistics: Presenting Labour Market Statistics to the Public (ESCoE DP 2022-26) - ESCoE : ESCoE

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Labour market overview, UK: September 2021

Estimates of employment, unemployment, economic inactivity and other employment-related statistics for the UK.

Comments?

The most recent data show the labour market continuing to recover.

The number of payroll employees showed another monthly increase, up 241,000 to 29.1 million in August 2021, returning to pre-coronavirus (COVID-19) pandemic (February 2020) levels. All regions except London, Scotland and South East are now above pre-pandemic levels.

Following a period of employment growth and low unemployment, since the start of the pandemic the employment rate has generally decreased, and the unemployment rate has increased. However, since the end of 2020, both have shown signs of recovery. In the latest period (May to July 2021), there was a quarterly increase in the employment rate of 0.5 percentage points, to 75.2%, and a decrease in the unemployment rate of 0.3 percentage points, to 4.6%. The economic inactivity rate is down 0.3 percentage points on the previous quarter, to 21.1%.

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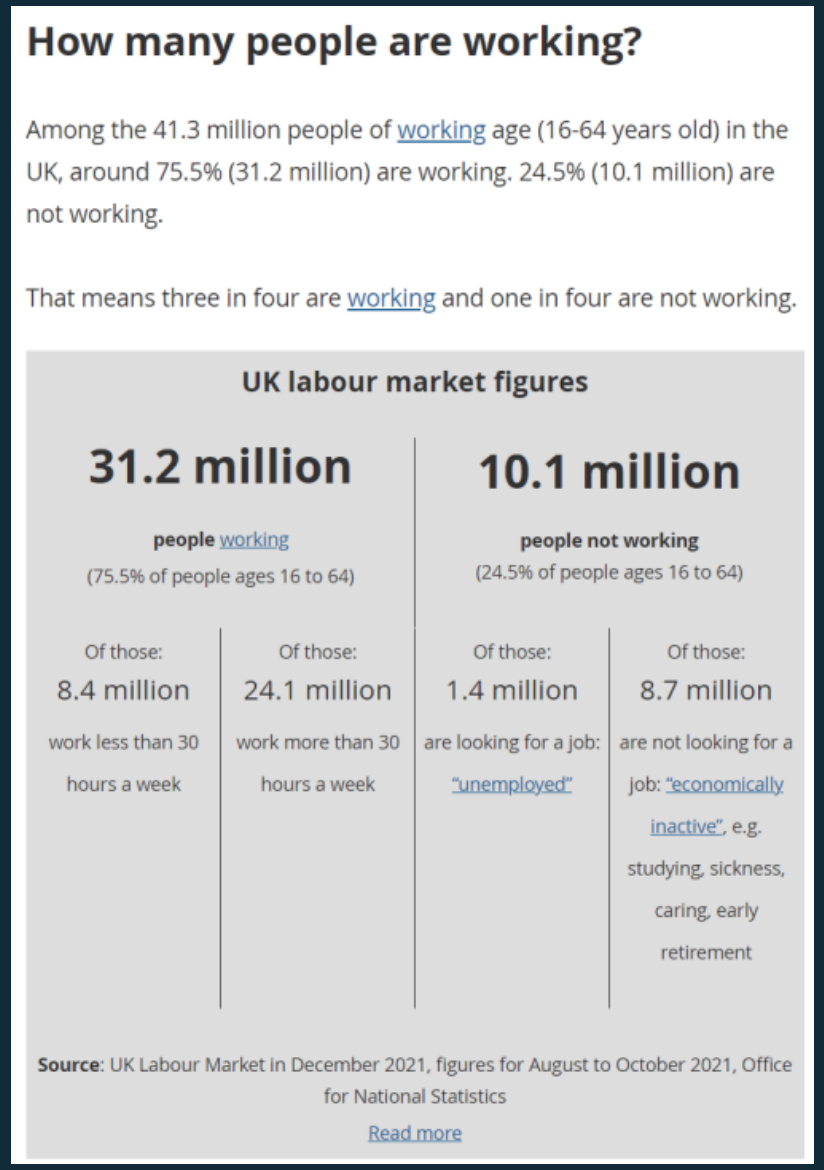


How many people are working?

Among the 41.3 million people of working age (16-64 years old) in the UK, around 75.5% (31.2 million) are working. 24.5% (10.1 million) are not working.

That means three in four are working and one in four are not working.

UK labour market figures

31.2 million		10.1 million	
people working (75.5% of people ages 16 to 64)		**people not working** (24.5% of people ages 16 to 64)	
Of those: 8.4 million work less than 30 hours a week	Of those: 24.1 million work more than 30 hours a week	Of those: 1.4 million are looking for a job: "unemployed"	Of those: 8.7 million are not looking for a job: "economically inactive", e.g. studying, sickness, caring, early retirement

Source: UK Labour Market in December 2021, figures for August to October 2021, Office for National Statistics

Read more

The **structure** helps to make things clearer

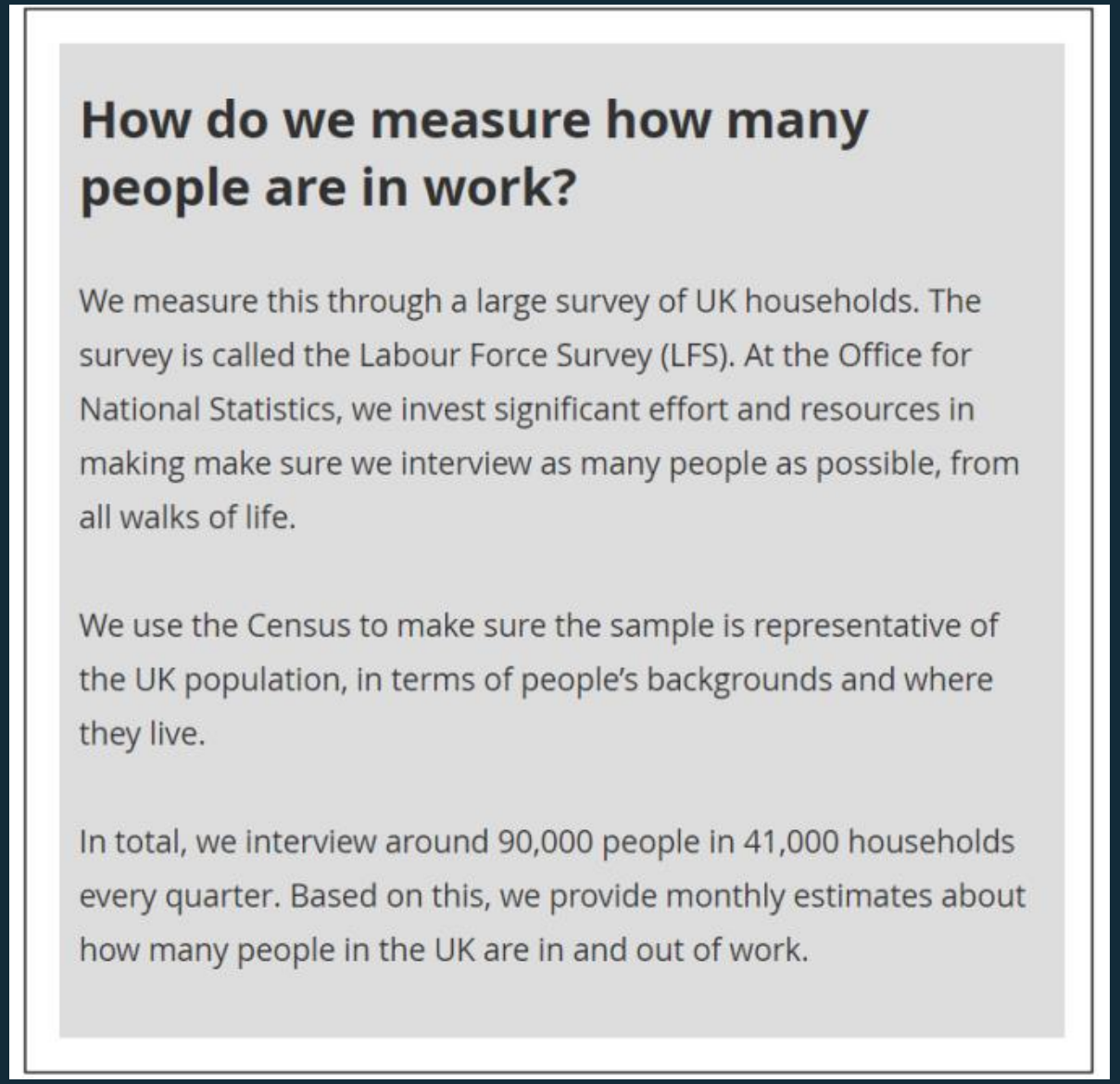
Meets the audience half-way

- Economists use three categories - Employed, Unemployed, Economically Inactive
- Here, there are two categories – working and not working – corresponding to the way the public thinks about the world

Replaces (some) economic terms with everyday terms (employed → working). Defines remaining economic terms (economically inactive)

Presents the same data in different ways

Economics Observatory.



How do we measure how many people are in work?

We measure this through a large survey of UK households. The survey is called the Labour Force Survey (LFS). At the Office for National Statistics, we invest significant effort and resources in making make sure we interview as many people as possible, from all walks of life.

We use the Census to make sure the sample is representative of the UK population, in terms of people's backgrounds and where they live.

In total, we interview around 90,000 people in 41,000 households every quarter. Based on this, we provide monthly estimates about how many people in the UK are in and out of work.

Provide background on methodology…
… Using inclusive language (we)

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Table 2: Performance by arm on three headline measures, comprehension, engagement, and trust.
Green shading indicates values statistically significantly higher than the control arm at the 5% significance level

	Control, (N=588)	Simplified (N=589)	Simplified + Structure (N=591)	Methodology (N=569)	Relatable (N=626)	Personas (N=607)
Comprehension score (primary outcome) The percentage of 14 questions that respondents answered correctly	65%	66%	69%	69%	69%	69%
Engagement score (secondary outcome) The percentage of respondents that reported finding the information in the summary interesting and/or important	62%	67%	69%	70%	67%	69%
Trust score (secondary outcome) The percentage of respondents thinking the information was accurate, free from political influence, and/or reflected experience of themselves or friends/family	62%	65%	67%	67%	64%	65%

The numbers in the above table represent descriptive statistics for the average outcome in each group. The bar charts for each of these outcomes, included below, show the predicted treatment effect relative to the control arm; this means there are minor differences between the two.

Figure 8: Main findings from online experiment

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Relatable summary

Home > Employment and labour market > People in work > Employment and employee types > Labour market overview, UK

What's happening with jobs in the UK?

You can use this month's Labour Market Summary to see the most recent official job figures and to learn about how many people are in and out of work and how it has changed over time.

- 76% of adults aged 16-64 have jobs, according to the latest data for August to October 2021.
- The number of people with jobs has gone up recently, but the number of people with jobs still is not as high as it was before the pandemic.
- Employers are advertising more job openings than usual.

How many people have jobs?

According to the latest data for August to October 2021, of the

41.3 million

people aged 16-64 in the UK

15 in 20 have a job *(31.2m, 75.5%)*

5 in 20 do NOT have a job *(10.1m, 24.5%,)*

Personas

Case study: Esme & Oliver

Neither **Esme** nor **Oliver** are working at the moment. There are 10.1m other people in the UK who are not working like them.

Esme was recently laid off from her job at a bank and is in the process of looking for a new one. Because Esme is not working and is actively searching for a new job, we refer to her as unemployed. Approximately 1.4m people in the UK are unemployed.

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Making numbers meaningful: Big (and not so big) numbers

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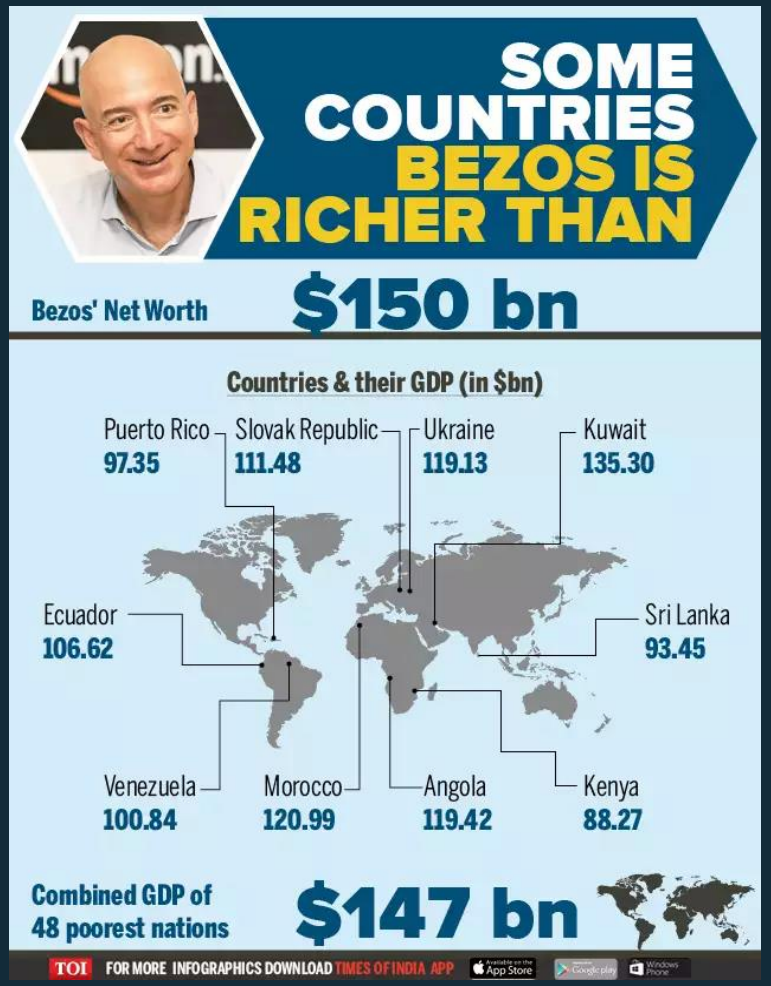
IF ONE MILLION SECONDS IS 11 DAYS, HOW LONG IS 1 BILLION SECONDS?

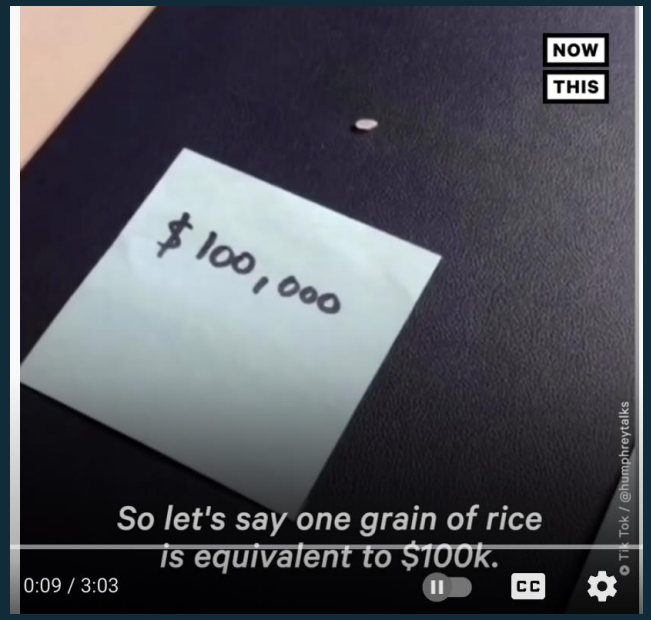
Humans are born with a number line in their head but that number line “may look less like an evenly segmented ruler and more like a logarithmic slide rule on which the distance between two numbers represents their ratio (when divided) rather than their difference (when subtracted)”.

Working with an Amazonian culture with little exposure to maths, neuroscientists found that they tended to group large numbers (hard to count dots) closer together at the top of the scale – the “compression effect”

Science, May 2008

Conveying billionaires' wealth





WATCH:
https://www.youtube.com/watch?v=qSOVBiEotaw

Conveying aggregate statistics

Benefit fraud in the UK hits record levels after false claims rose to £2.3billion last year

By Jason Groves Political Editor For The Daily Mail
02:06 28 Jun 2019, updated 07:33 28 Jun 2019

~1% total benefit spending. About the same amount was underpaid in error

Panic buying

£1 billion extra on food in a week

(£18 million extra on toilet roll)

Is this a big number?

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How much do households usually spend?

How many households are there in the UK?

- 10 million
- 30 million
- 50 million

How much does each household spend on food each week?

- £60
- £100
- £160

Rough estimate of household weekly food spending
30m x £60 = £1.8 billion
£1 billion = four days' worth

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FERMI ESTIMATION

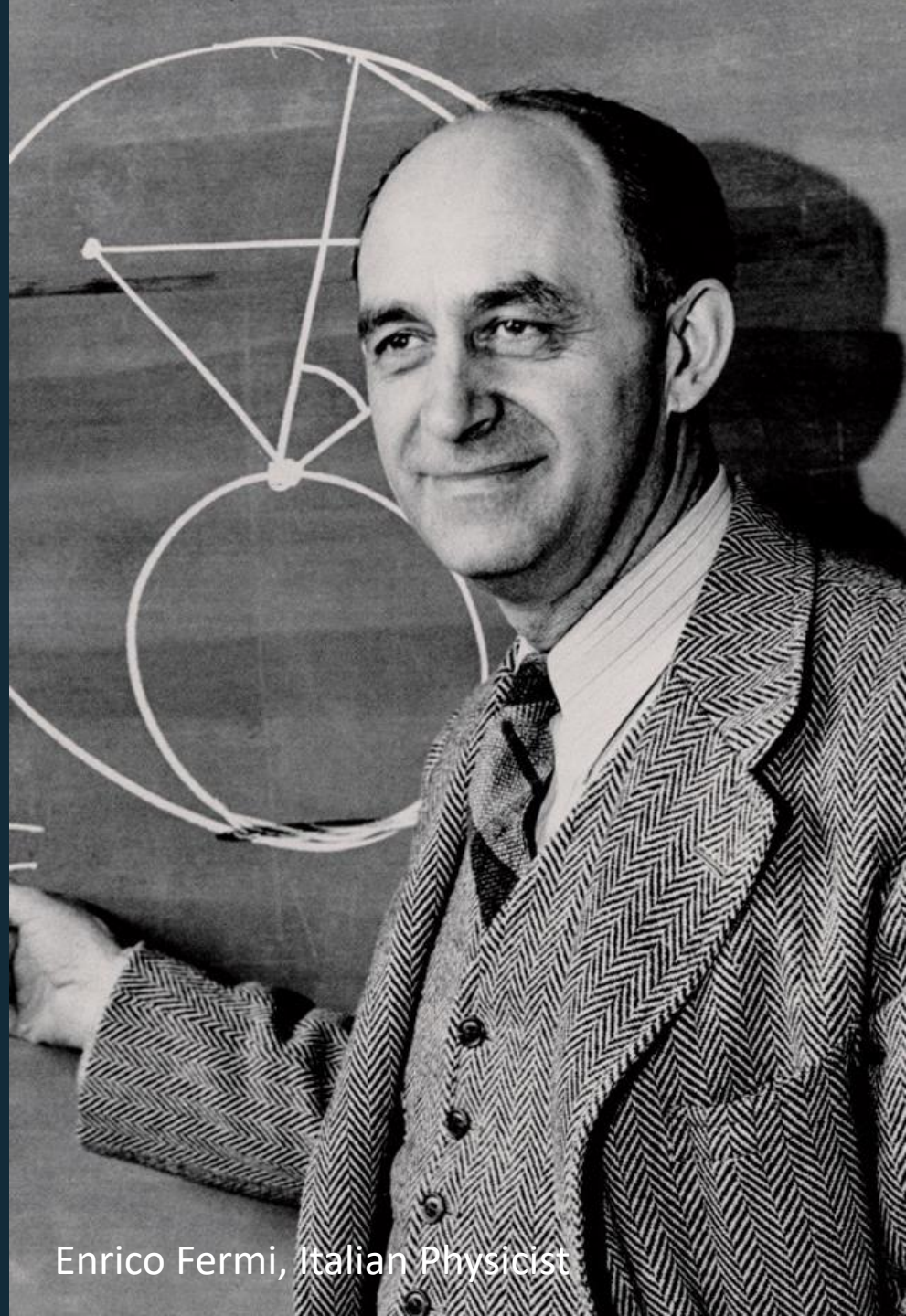
- Use limited information about things that you know/ can sensibly guess in order to estimate the order of magnitude of large numbers that you don't know

- Things you (might) know
  - How many people/ households there are in the UK
  - How much people spend on food/ toilet roll each week

- How many petrol stations are there in the UK?
- How many piano tuners are there in New York?
- What's the annual value of the toothpaste market in the UK?
- How many pies are eaten at premier league matches each week?

Find out more: https://www.youtube.com/watch?v=EMQd-AYb1fs

Diane Abbott has several numbers on police costs – sadly they are all wrong | John Crace | The Guardian



Enrico Fermi, Italian Physicist

Research findings

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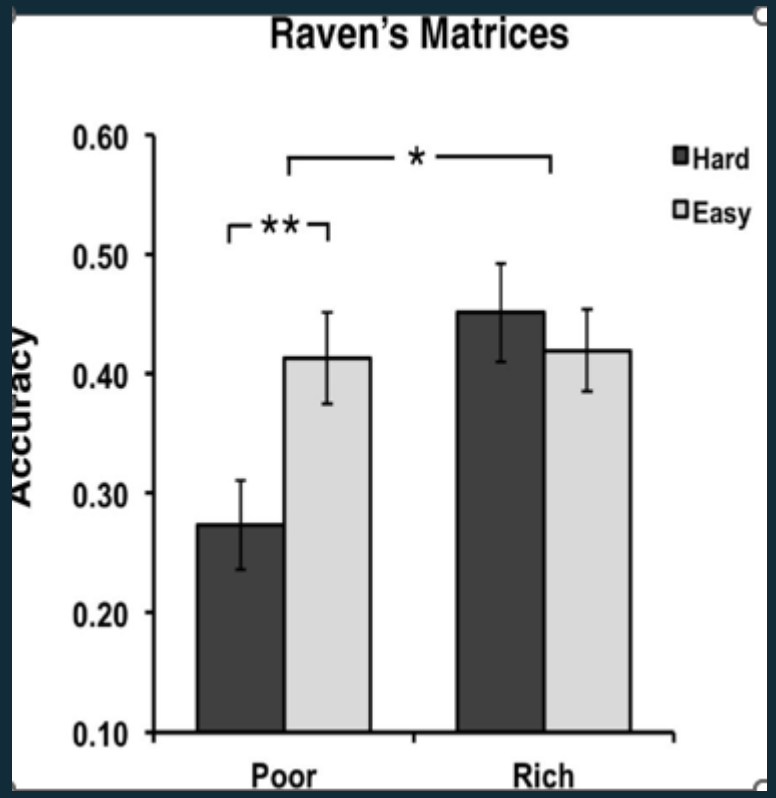
Does poverty affect cognitive functioning?

https://science.sciencemag.org/content/341/6149/976

Shopping mall experiment

- Shoppers asked about their income → classified as rich or poor
- Then primed to think about financial situation with a hypothetical scenario
  - *Suppose that your car is having some trouble that could cost up to $X to fix. What would you do – pay in full, get a loan or ignore the problem?*
  - X = 1500 (“Hard”) or X = 150 (“Easy”). X is randomly varied.
- Then asked to do tests of cognitive functioning (Raven’s Matrices)



Scenario
Hard = car cost £1500 to fix
Easy = car cost £150 to fix

What does the chart show?
Primed with a small financial worry, poor and rich people perform the same in the tests
Primed with a big financial worry, poor people perform worse in the tests
compared to being primed with a small financial worry
compared to rich people being primed with a big financial worry

Takeaway: Being poor and facing big financial worries reduces cognitive functioning

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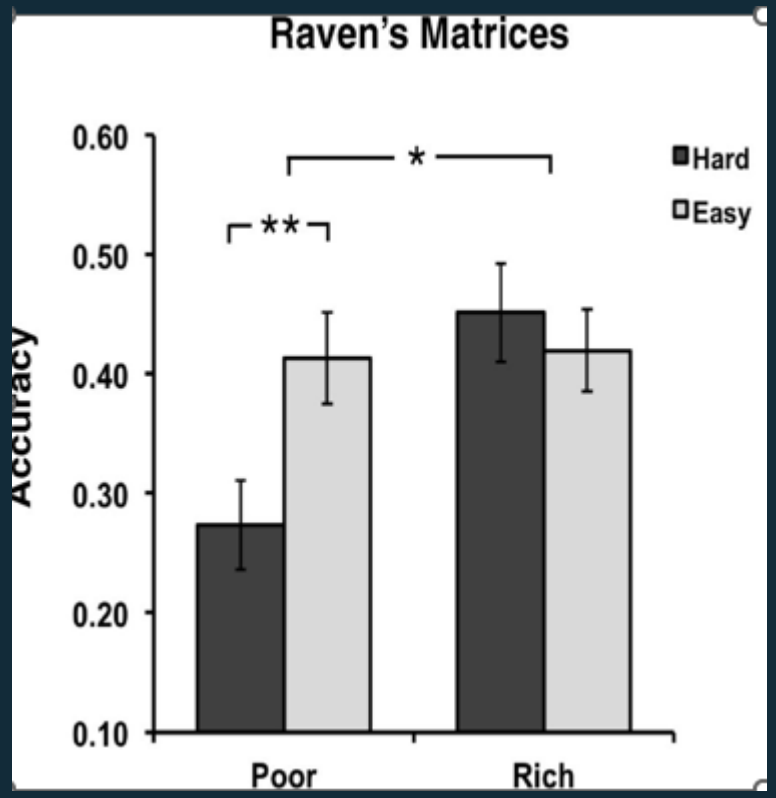

Scenario
Hard = car cost £1500 to fix
Easy = car cost £150 to fix

Is this a significant effect?

- Statistically significant (can reject that the effect is zero)
- But is it economically significant – is it a big/small effect
- -0.13 on the Raven's Matrices scale. What does that mean??
- ~33 per cent reduction. Reduces cognitive functioning by one-third.

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Find other ways to put the magnitude in perspective.
By using a standardized test to measure cognitive functioning, the researchers were able to compare the magnitude of the effect with results from other studies

> **"Poverty is the equivalent of pulling an all-nighter. Picture yourself after an all-nighter. Being poor is like that every day."**
> *Harvard Economist Sandhil Mullainathan*

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Who is more opinionated – male or female economists?

Chicago Booth Expert Economist Panel
(economists from top US/ European unis)

Approx twice a month, they are asked to give their opinion on a topical issue

- EG If the federal minimum wage is raised gradually to $15-per-hour, the employment rate for low-wage US workers will be substantially lower than it would be under the status quo.

Possible responses: Agree/Disagree/DK

Is there a gender difference in who gives an opinion (i.e. doesn't say DK)?

Pictures from https://www.igmchicago.org/panelists/

Who is more opinionated? Male or female economists

$$Opinion_{iq} = a + b_1\, Male_i + b_2\, AreaOfExpertise_{iq} + \mu_q + u_{iq}$$

OLS regression results
Dependent variable (0/1) = Opinion = Expert i gives an opinion (i.e. agrees/ disagrees rather than DK) on topic q

	(1)
	Opinion
Male (b_1)	0.110^{***}
	(0.016)
Area of expertise (b_2)	0.053^{***}
	(0.008)
Constant	0.488^{***}
	(0.037)
N	18990

Step 1: Interpret the coefficient

Binary outcome → OLS coefficients are expressed in percentage points

Male economists are 11 ppts more likely to express an opinion

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N	18990

Step 2: Look at whether it is statistically significant

Do you need to report statistical significance in your policy report?

Stating a positive/ negative effect implies statistical significance

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Who is more opinionated? Male or female economists

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N	18990

Step 3: How big is the effect?

Is 11 percentage points big or small?

The constant tells you the share of female economists giving an opinion

→ male economists are 20 per cent more likely to give an opinion than female economists

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Who is more opinionated? Male or female economists

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Step 3: How big is the effect?

Compared to a topic being in the expert's area of expertise

The effect of being a man is twice as big as the effect of being an expert on a topic

A male economist is more likely to give an opinion on a topic he knows very little about than a female economist is on a topic she is an expert on

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Take-aways

Carefully interpret the magnitude of the key coefficients

Then find ways to make them meaningful to your audience

- Appropriate baselines
- Examples
- Population quantities, e.g. if a policy reduces unemployment, think about how many more people get jobs

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Questions?

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