

CENTREPIECE



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Philippe Aghion, Nobel laureate

Women in economics

Immigration policy

Property taxes

Youth crime

Rare earths



Degrees of choice



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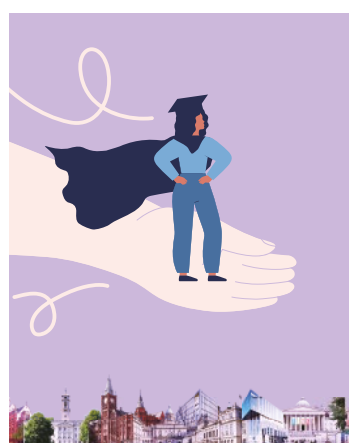
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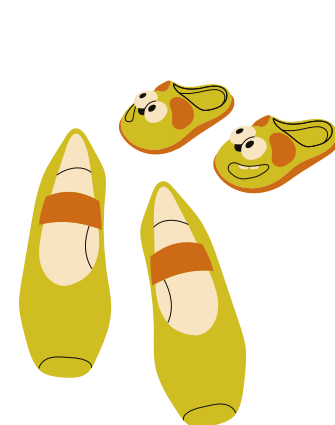
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HONOURS FOR WADSWORTH

Jonathan Wadsworth, professor of economics at Royal Holloway, University of London and a long-time member of CEP's labour programme, has been awarded a CBE in the New Year Honours List for services to economics and to public service. His research interests are in issues of wages, employment, health, immigration and workless households – the concept and measurement of which he co-developed.



CEP EVIDENCE IN PARLIAMENT

The Lords Social Mobility Policy Committee drew on submissions from Aadya Bahl, Richard Layard, Stephen Machin, Lee Elliot Major and Sandra McNally in its recent report *Social Mobility: Local Roots, Lasting Change*. At the Lords Justice and Home Affairs Committee's inquiry into settlement, citizenship and integration, Alan Manning presented evidence from his research to answer questions on migration policy and the government proposal of earned settlement.

FESTIVAL THEME REVEALED

This year's LSE Festival theme is "How to save the planet". As the world faces the challenges of climate change, global conflict and the rising prominence of artificial intelligence, speakers will examine how individuals and government systems can address these issues. The festival will take place from Monday 15 June to Saturday 20 June.



THE NOBEL LAUREATE LECTURE

Philippe Aghion, a co-recipient of the 2025 Nobel Memorial Prize in Economic Sciences, will be delivering the Nobel laureate lecture at LSE on 24 February 2026. Aghion, a College de France, LSE and INSEAD professor, and a research associate in CEP's growth programme, will talk about creative destruction, artificial intelligence and European economic recovery.



NOVY TAKES UP NEW ROLE

Dennis Novy, professor of economics at the University of Warwick and a research associate in CEP's trade programme, has been appointed chief economist and director of analysis at the Foreign, Commonwealth and Development Office. He will be drawing on his expertise in macroeconomics and international trade.

Editorial

Causes, consequences and creativity

As Eminem memorably noted about the experience of growing up in deprivation in Detroit, "success is my only **** option, failure's not".

The rapper – with more than 220 million record sales – is undoubtedly an exceptional example of social mobility. And as our cover story confirms, he's also correct to imply that having the option to fail is an advantage.

Gill Wyness and colleagues show that pupils at private schools approach university applications differently from those with the same grades in the state sector. Privately educated teenagers select fewer "safe" options, suggesting that their willingness to risk failure helps them to access better university courses than they might otherwise expect.

In a related piece, Maria Ventura unpicks the "nepo baby" strand of social mobility, perhaps better known in economics as occupational persistence. Using data from lottery-based admissions to Dutch medical schools, she discovers that doctors who have picked up the stethoscope from their parents earn more than others.

Both pieces show how the benefits of background can be invisible. On the surface, people may have the same grades or the same job, but their outcomes are different. For policymakers, such evidence demonstrates that while academic achievement matters, the wider support, advice and information that schools offer is crucial – perhaps we can move away from a culture where youngsters only get one shot at opportunity.

In 2025, CEP research associate Philippe Aghion became a Nobel laureate for his work on sustained growth through creative destruction. He shared the prize in economics with his co-author Peter Howitt and with economic historian Joel Mokyr. John Van Reenen, now Ronald Coase professor of economics at LSE, was a graduate student when he first met Aghion more than 30 years ago – here, he explains why Aghion's work is so innovative.

Helen Ward, Editor
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John Van Reenen

Philippe Aghion: explaining sustained growth through creative destruction

How the study of innovation and competition has been transformed

My first thought on hearing that my friend and co-author Philippe Aghion had won the Nobel Prize in Economic Sciences was “well, it’s about time”.

Philippe has deservedly received just about every other prestigious economics prize: from the Yrjö Jahnsson Award in 2001 to the BBVA Foundation Frontiers of Knowledge Award in Economics in 2020. Now, he is co-recipient of the 2025 Sveriges Riksbank Prize in Economic Sciences in memory of Alfred Nobel, together with Peter Howitt, of Brown University, and Joel Mokyr, of Northwestern University.

As the full Nobel citation elegantly describes, his 1992 paper, jointly written with Howitt: “A model of growth through creative destruction” – lays the modern analytical foundation for understanding economic growth.

There are two key building blocks. First, non-rival research and development (R&D) spills over to other firms. Future innovators “stand on the shoulders of giants”, using past knowledge to generate new ideas. This positive intertemporal externality means that the original inventor only captures a small fraction of the total social benefit of innovation. As Gustave Flaubert said in his *Dictionnaire des idées reçues*: “Inventors – All die in the poor house. Someone else profits from their discoveries, it is not fair.” This indicates that society can benefit from subsidising R&D.

The second building block – and pulling somewhat in the opposite direction – is the fact that when competition is imperfect, innovations by successful entrepreneurs create profits for their company while their rivals see profits drop, a process known as “business stealing”. This makes the process of innovation inherently disruptive, as it creates losers as well as winners.

The 1992 paper combined these forces in an elegant general equilibrium model, which provided a manageable way of addressing questions on growth.

Protection versus competition

The decentralised market economy will not generate socially optimal levels of innovation. Knowledge spillovers will generally lead to underinvestment, but business stealing



will push towards overinvestment. Which effect dominates is ultimately an empirical issue, although the evidence tends to show that there is too little R&D investment, with social returns outstripping private returns by a considerable margin.

Crucially, modern endogenous growth theory breaks with the traditional view that total factor productivity (TFP) growth is “manna from heaven”. Governments can and do influence the rate of growth through changing the rate (and direction) of technical change for both good and ill.

This is important for current debates. Productivity growth in the UK and elsewhere has slowed down precipitously since the global financial crisis of 2007-09, but we do not have to accept this as inevitable. Better policies and institutions can make a difference. Philippe himself has been deeply immersed in these policy debates as a commentator and adviser to governments.

The battle over the rents from innovation creates incentives for more R&D. But it also incentivises incumbents to create barriers to make it harder for new entrants to displace them. This could be in the form of lobbying and business practices. A successful society must embrace the dynamism of creative destruction and provide ballast against incumbents exploiting market power to entrench their positions.

The precise forms of policy interventions are often subtle, as the theory gives reasons for why there may be too much destructive innovation due to business stealing. Innovation creates losers and can therefore widen inequality. But the key aspect is to

remove barriers to potential inventors and entrepreneurs, for example, through improving access to quality education and training to those from less well-off backgrounds.

From macro theory to micro empirics

The Aghion-Howitt paradigm bridged macroeconomic growth theory with microeconomic insights from industrial organisation. The paper coincided with the opening up of rich seams of panel data on firms from administrative, accounting and survey sources. These increasingly matched information on productivity, jobs and innovation measures, such as patents and R&D. These data enabled both rigorous testing of models with more credible methods, and the

subsequent refinement and development of growth theory.

One example of the interplay of data and theory is work on the relationship between product market competition and innovation. Models of endogenous growth without creative destruction generally predict that competition reduces the incentives for innovation, because it erodes the temporary product market rents that flow from new ideas. This prediction is in tension with much firm-level panel work from the 1990s onwards, which found that competition tended to increase innovation.

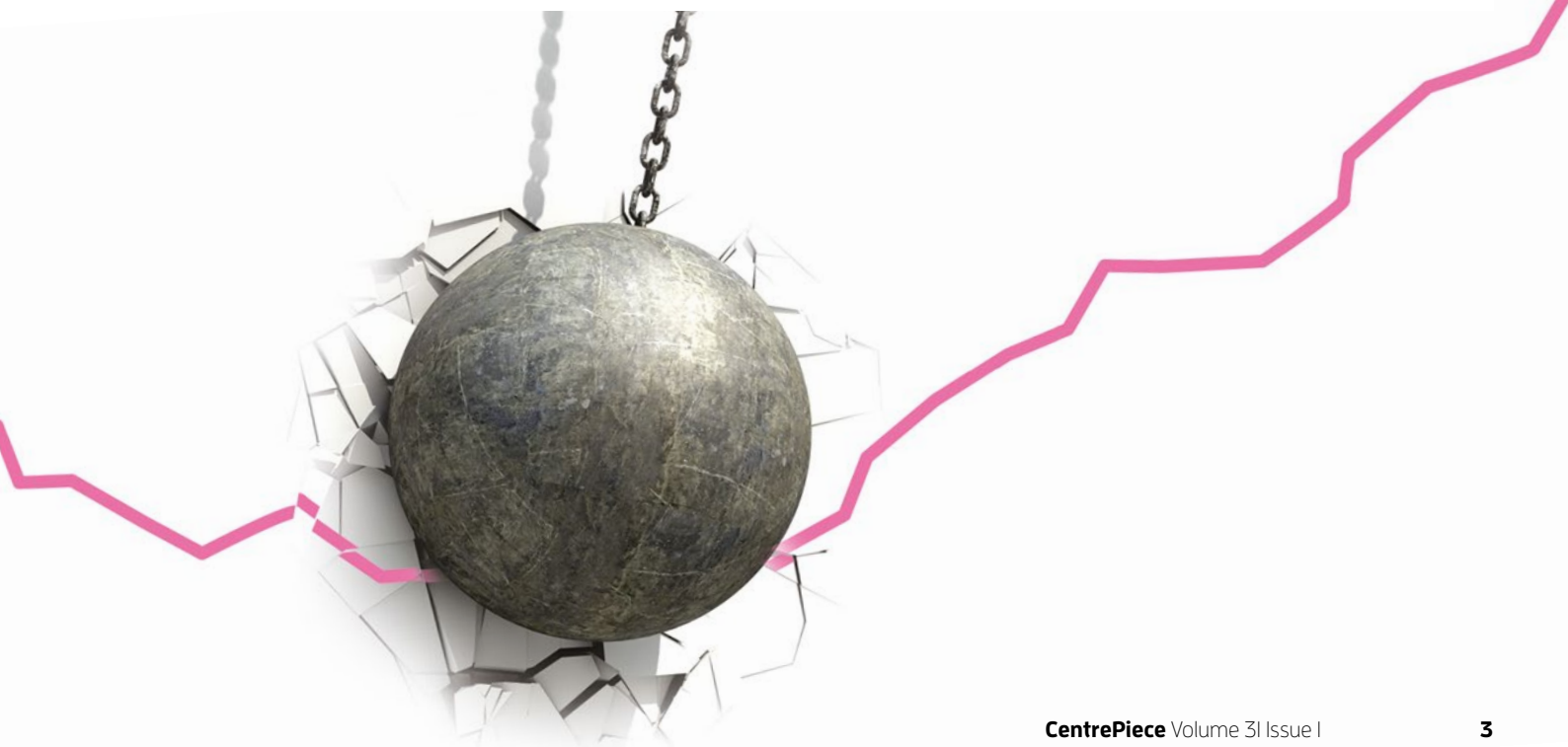
Aghion-Howitt suggested a “step-by-step innovation” extension to the basic growth model that allowed firms to have different positions on the innovation ladder and undid the simplistic Schumpeterian prediction. In this model, when firms are neck and neck, rather than too far ahead or behind, there are strong incentives to innovate to escape competition. Consequently, the impact of competition depends on the specific context.

At the macro level, these offsetting forces can generate an “inverted U” relationship, where stronger competition generally increases innovation, but can reduce it when rivalry is already very intense.

A second example is the explosion of work on firm dynamics. The entry and exit process is fundamental to the spread of innovation in Aghion-Howitt and the new firm micro data enabled a detailed documentation of firm turnover and its relationship to productivity growth.

Research shows that about 10% of US firms enter or exit each year. This turnover is mainly within quite specific industries, so it is more

A successful society must embrace the dynamism of creative destruction and provide ballast against incumbents exploiting market power



than a structural transformation across sectors. Higher turnover is associated with greater productivity and reallocation of resources between firms (and within firms), which accounts for a substantial fraction of aggregate TFP growth.

An innovative life

Almost three decades after the Aghion-Howitt paper, I helped to organise a four-day conference in Paris to map out the impact of their work on the profession. Hundreds of scholars, many Nobel laureates and even the French president discussed the work. The publication that came out of this event documented Philippe's profound influence not only on growth and industrial organisation, but also on fields as diverse as trade, labour, taxation, the environment, political economy, finance and organisational economics.

What's striking is not just Philippe's intellectual influence on the profession, but also how he has co-authored with so many other scholars to advance knowledge. He is generous in offering his time to young researchers. He is an innovator par excellence, never content to rest on his laurels and always hungry for the next challenge and the next big idea.

On a personal level, one of the wonderful things about Philippe is his boundless enthusiasm. In research, he is always brimming with ideas and unceasingly restless to explore new avenues and approaches. Working with him on papers has been a wonderful experience and the highlight of my professional life.

Philippe is also engaged with the fundamental policy questions of the day – on inequality, taxation, monetary and fiscal policy, and artificial intelligence. He is generous in engaging with policymakers. In teaching and presenting, he captivates an audience with both content and performance, often bouncing around a stage – and often in serious danger of falling off.

So, although he himself is teetotal, I hope you will all join me in raising a virtual glass to our new Nobel laureate, Philippe Aghion.

A version of this article was first published by the European Economic Association (<https://www.eeassoc.org/news/2025-nobel-laureate-philippe-aghion>).

John Van Reenen is the Ronald Coase Chair in Economics and School Professor at LSE, former CEP director and director of the Programme on Innovation and Diffusion.

Discover Philippe Aghion's recommendation for a must-read paper on **page 28**.

When Philippe met Peter, in their own words

Giving his Nobel prize ceremony lecture in Stockholm, Philippe Aghion explained how he was set on the path that would lead to the award by failing a test.

As a student at Harvard, he said, his dream had been to enter the Harvard Society of Fellows, a prestigious post-doctoral programme – well paid and including a weekly Monday dinner with thinkers such as Amartya Sen and Bob Solow. But he failed the oral test and so ended up at MIT, which he acknowledged was “not the worst fall back”. It was there that he met his co-author and fellow Nobel laureate Peter Howitt, who was visiting from Western Ontario for the year.

“We started to talk to each other,” Aghion told the audience – which included his fellow Nobel prize winner Howitt, “and one day, I think I came to your office Peter, and we said together why don't we try to write from scratch a model that would encompass Schumpeter's notion of creative destruction.

“Now I ask myself ‘My god! Imagine that I had passed this oral exam for the Harvard Society of Fellows, I would not be here today!’ Of course, you never know the counterfactual – but I'm pretty sure that I would not be here today. So that's why failure, or seeming failure (because MIT is not really a failure), but what you think is a failure in life can prove to be your revival, your saviour. Voilà!”

Giving his lecture at the ceremony, Howitt also recalled how the joint work on creative destruction began. He had arrived at MIT with plans to work on search theory and the theory of unemployment, but his talks with Aghion persuaded him that growth theory was more interesting. As the years passed, Howitt explained, he would sometimes try to do other things, at which point his wife, Pat, would get phone calls from Aghion urging her to persuade Howitt to return to growth theory. “Pat was smart enough to realise that Philippe was right,” said Howitt, “and so it's as much because of her as it is Philippe that I continued to do what I'm sure is the best work of my life. Thank you, both of you.”

One of the wonderful things about Philippe is his boundless enthusiasm



Aadya Bahl

A version of this article first appeared on *Economics Observatory* (<https://www.economicsobservatory.com/the-uk-new-industrial-strategy-what-does-it-mean-for-manchester>).

Aadya Bahl is a policy officer at CEP.

Geographical thinking

Making the industrial strategy work in Manchester



An industrial strategy cannot be everything to everyone. At its core, it is a plan that the government uses to focus support on the development of specific industries in the economy. But its success depends on ensuring that the chosen sectors thrive in the right places. The UK economy needs places like Greater Manchester to grow. And places like Manchester need support to grow by becoming more productive, better connected and more attractive to businesses and workers.

The UK's latest industrial strategy identifies eight priority sectors – advanced manufacturing, creative industries, life sciences, clean energy, defence, digital and technologies, professional and business services, and financial services – that offer the highest potential for national growth. It aims to be “unashamedly place-based” by recognising that regional growth is critical to national growth, and signals that government support will be concentrated in areas where clusters already exist or could emerge.

The strategy recognises Greater Manchester as a key city-region. It promises to move more civil service jobs to Manchester, to improve intra-city connectivity and to relocate the Industrial Strategy Council's headquarters to the city from 2026.

How can the strategy empower city-regions?

Whether the new industrial strategy improves productivity depends on how well its different parts fit together. There is a concern that while the strategy uses place-based language, it remains sector-first in its orientation. In practice, this risks making place an afterthought rather than an organising principle.

Understanding how firms operate shows why place matters. The sectors identified in the strategy benefit from agglomeration. They rely on

dense labour markets, shared infrastructure and supply chains, and opportunities for collaborative learning and innovation. These advantages are easier to realise in cities where firms locate near each other and benefit from economies of scale.

But many major cities are home to clusters that cut across multiple sectors. A Centre for Cities briefing finds that around 10% of firms operate across at least two of the strategy's eight sectors. The notion that sectors are distinct and separate is not reflected in how firms behave on the ground, which implies that interventions to support one sector are likely to spill over to others due to co-location and shared inputs.

If sectoral planning happens in silos, it risks missing these interdependencies. What's more, if local economic strategies are too

narrowly focused on a handful of sectors, they may miss the bigger opportunity: making the city-region a more productive place to do business across the board.

For example, the BBC's relocation from London to Salford, starting in 2011, triggered a substantial increase in creative industry activity in Greater Manchester. CEP research finds that for every three BBC jobs moved to Salford in 2012, one additional creative job was created; and by 2017, this had risen to one additional job for every two BBC jobs. But there was little impact beyond the creative sector. Adjacent industries such as technology and professional services barely changed, and overall employment in Salford did not rise significantly.

Fixing the foundations of the city economy

Greater Manchester has been relatively successful in shifting employment to tradable services sectors. But despite this transition, corresponding improvements in productivity have not materialised.

The real challenge lies not in which sectors are present in a place, but in how well they perform. This, in turn, depends on the functioning of the wider city economy.

Bridging the productivity gap is about land use, as well as scaling up investment in intra-city transport and addressing housing affordability. These investments, while not sector-specific, are critical to making the region attractive to firms in any of the priority sectors.

To enable this transformation, cities need joined-up investment. This goes beyond headline announcements or one-off projects. It requires coordinated action across transport, housing, skills, digital infrastructure and public services. This means devolving not just responsibility to cities but also control over the tools to get the job done.

If local economic strategies are too narrowly focused on a handful of sectors, they may miss the bigger opportunity





**Jo Blanden, Oliver Cassagneau-Francis,
Lindsey Macmillan and Gill Wyness**

Degrees of choice

Bolder applications mean that private school pupils end up at better universities than their exam results predict

The university that young people attend and the subject they study can shape their entire future. Research from the UK (Britton et al, 2019) and the United States (Chetty et al, 2020) shows that these choices play a major role in the earnings differences among those from richer and poorer families, making higher education a powerful driver of social mobility. Yet, access to the most prestigious university courses remains unequal, and one key factor behind this is the type of school a young person attends before university.

Despite making up just 7% of the pupil population at age 16, the alumni of private fee-paying schools dominate elite professions (Hecht et al, 2020). These schools are known to bestow important advantages on their pupils, such as enhanced academic preparation, advice

on future pathways and increased social capital (Cattan et al, 2022).

Grammar schools, which are state-funded, also offer their pupils advantages in the labour market due to their selective nature and high academic standards. Together, these elite institutions help to shape who gets into top university courses and, by extension, who gets ahead in life.

Our research examines how pupils from private and grammar schools access university courses, compared with those from non-selective state schools and further education (FE) colleges – not just through exam results, but through the choices that these young people make.

Mismatching academic abilities and university courses

To explore these issues, we use our “mismatch” framework developed in previous work (Campbell et al, 2022). This looks at whether young people attend university courses that match their academic ability.

Ideally, someone with high grades should attend a highly selective university course. But in reality, many end up at less selective institutions than their grades would suggest, especially those from disadvantaged backgrounds – an outcome known as “undermatch”. Conversely, “overmatch” occurs

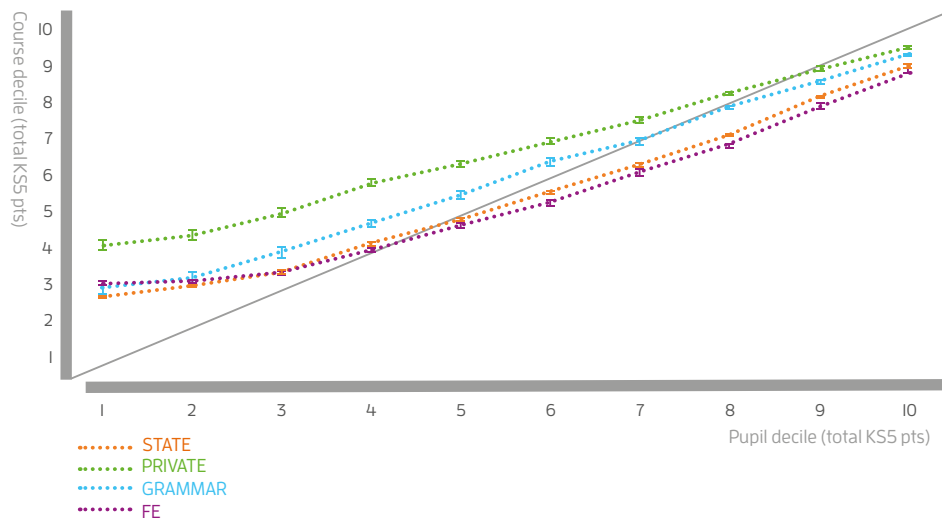
when young people attend more selective courses than expected based on their grades.

Our research shows that young people from private and (to a lesser extent) grammar schools are significantly more likely to overmatch and less likely to undermatch compared with their peers from the non-selective state sector.

This pattern holds across the achievement distribution – not just among top achievers. Indeed, the most striking disparities occur among pupils in the lower half of the attainment range. For example, privately educated young people in the 30th to 50th percentile of academic performance at age 18 attend university courses ranked up to 15 percentiles higher than their state school counterparts (see Figure 1).

Many pupils from disadvantaged backgrounds end up at less selective institutions than their grades would suggest

Figure 1: **School type mismatch by pupil achievement and course quality**



Source: National Pupil Database and Higher Education Statistics Agency.

Notes: The 45-degree line represents perfect matching throughout the achievement distribution. Pupils are ranked by their total key stage 5 (KS5) points. Courses are ranked by the median pupil's total KS5 points. Error bars represent 95% confidence intervals.

We can also look at the extent to which these mismatch gaps change when we take account of other characteristics including prior academic attainment. The advantage enjoyed by grammar school pupils compared with those attending other state school provision seems to come almost entirely through their high academic attainment at GCSE level. After taking this into account, grammar school pupils look similar in terms of enrolment match to their counterparts in state schools and FE colleges.

This is not the case for private school pupils; even when we control for academic achievement at both age 16 and age 18, private school pupils still attend much higher ranked university courses than their peers of similar achievement.

Ambition versus risk aversion

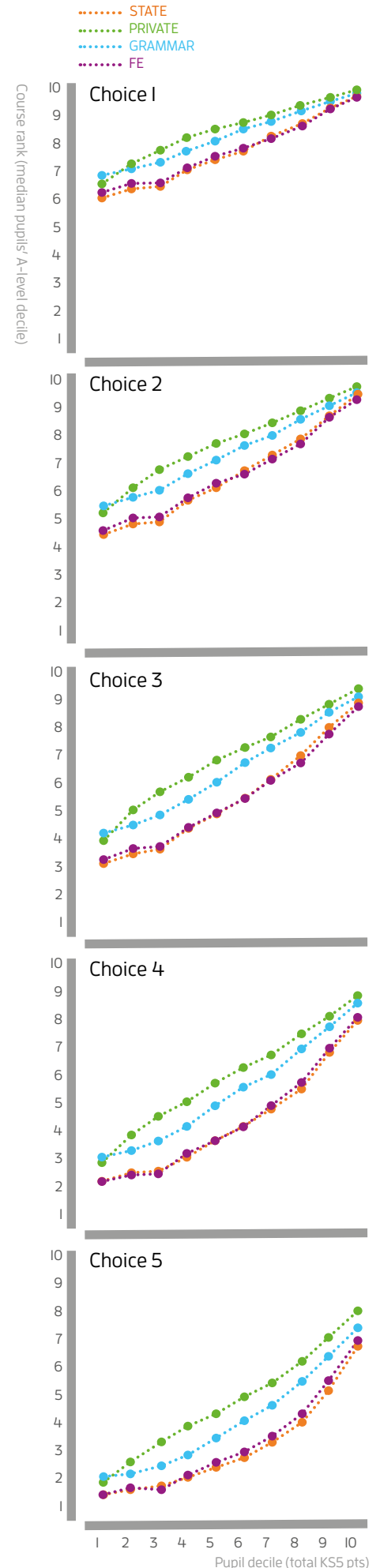
We show that pupils' applications strategies are a major driver of these gaps (see Figure 2). In the UK, young people submit up to five applications through a centralised system called UCAS. Private school pupils make a larger number of ambitious choices, applying to "reach" or "matched" courses for most of their choices, and selecting fewer "safe" options. Pupils at state schools and FE colleges are much more risk-averse in their choices.

While we cannot observe the mechanisms through which these gaps occur, comparing these mismatch patterns of pupils from private schools to other school types allow us to speculate about the reasons these inequalities may be occurring. Bearing in mind that grammar schools applications seem to fall in between state and private schools, it is useful to compare the patterns of private and grammar

Source: Grading and Admissions Dataset for England.

Notes: Here we reproduce the pupil decile-course decile plot from figure 1 for the universities applied to (rather than enrolled in). Pupils can make at most five choices through UCAS (the applications portal in the UK). They do not rank their choices, so we have ranked their choices in the same way we rank courses for our mismatch measure, presented in panels labelled correspondingly (from "Choice 1" through to "Choice 5"). Only pupils who made four or five choices are included in the sample for this figure.

Figure 2: **Mismatch in degree applications**



If access to top universities is shaped not just by ability but by school type, then efforts to widen participation must start earlier

Private school pupils are less likely to include 'safe' choices within their five applications, implying they may be more willing to take risks



school pupils. Since these school types have much in common, this helps us to rule out potential explanations.

For example, financial resources or a culture of post-school progression to elite universities may provide the explanation. Private schools are likely to have a strong culture of progression to higher education. But grammar schools also send high proportions of pupils to university, including highly selective institutions (Montacute and Cullinane, 2018), suggesting the difference is not only about a general culture of university aspiration within the school. Similarly, we would expect grammar school pupils to have similar levels of academic preparation and ambition, as well as parental motivation or know-how, suggesting that these factors can't fully explain the differences either. Lower risk aversion (perhaps through increased confidence), coupled with school (and parental) financial resources may provide more compelling explanations. Private school pupils are less likely to make "safety school" applications, implying that they may simply be more willing to take risks.

The greater financial safety net enjoyed by private school pupils may also lessen the impact of making bolder applications. Similarly, the high degree of social capital generated through networks, relationships and access to opportunities that pupils gain through their attendance at private schools may play a role. Ultimately, however, we can only speculate on the mechanisms through which the differences

between pupils from different school types are occurring.

These findings raise important questions for policymakers. If access to top universities is shaped not just by ability but by systematic differences across school types, then efforts to widen participation must start earlier in the educational pipeline. It's not enough to focus on university admissions alone: we need to look at how pupils are supported in making choices, how they feel about the risk of making ambitious choices, and what information they have about their options.

Ensuring that all young people – regardless of background – understand the application process, feel confident in their choices and have access to high-quality advice is essential. Addressing these disparities could unlock talent and improve both equity and efficiency in higher education.

The most striking disparities between grades achieved and course attended occur among lower-attaining pupils

This article summarises "Private highs: investigating university overmatch among students from elite schools", CEP Discussion Paper No. 2115. An earlier version first appeared on *LSE British Politics and Policy* (<https://blogs.lse.ac.uk/politicsandpolicy/elite-school-students-end-up-in-better-universities-than-expected-based-on-their-grades/>).

Jo Blanden is a professor of economics at the University of Surrey, a research associate in CEP's education programme and a research affiliate at the University College London (UCL) Centre for Education Policy and Equalising Opportunities (CEPEO). **Oliver Cassagneau-Francis** is a senior research fellow at CEPEO. **Lindsey Macmillan** is a professor of economics at UCL and the founding director of CEPEO. **Gill Wyness** is a professor of economics at UCL, deputy director of CEPEO and a research associate in CEP's education programme.

Further reading

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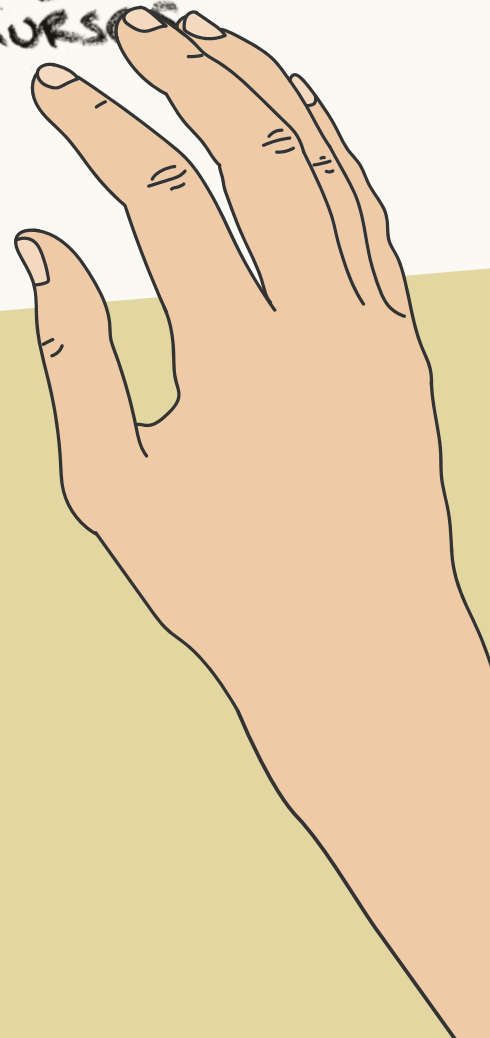
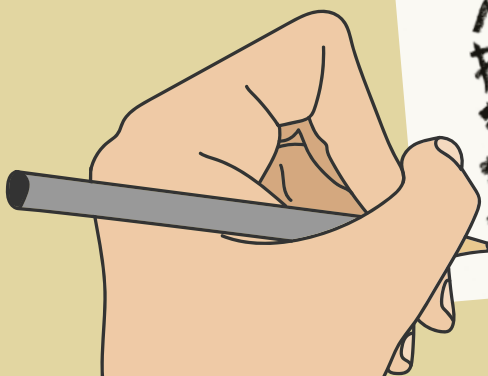
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ACCOUNTANTS
AGED CARE NURSES
AUDITORS
BRICKLAYERS
BUSINESS ANALYSTS
CARE WORKERS
CHEFS
CHEMICAL ENGINEERS
CIVIL ENGINEERS
CLEANERS
COOKS
CYBERSECURITY ADMINISTRATORS
DATABASE ADMINISTRATORS
DOCTORS
ELECTRICAL ENGINEERS
ELECTRICAL FITTERS
ELECTRICIANS
FARM WORKERS
FINANCE ADVISERS
HOMECAREERS
HOUSEKEEPERS
~~IMMIGRANTS~~
INVESTMENT ANALYSTS
IT SUPPORT TECHNICIANS
MANAGEMENT CONSULTANTS
MECHANICAL ENGINEERS
MENTAL HEALTH NURSES
PHARMACISTS
PLUMBERS
PROGRAMMERS
P



Make immigration boring again

A polarised debate ignores the trade-offs involved,
we can do better

Why is immigration policy hard? In my book *Why Immigration Policy is Hard And How to Make it Better*, I set out two reasons. The first is that our world is very unequal so many more people want to move to a high-income country like the UK than are going to be admitted and that leads to what I call the “infernial circle”. Countries like the UK put controls on immigration. People who would like to migrate seek to circumnavigate these barriers. That then leads the residents to perceive a loss of control over migration, so they put on more controls. And then there are ever more elaborate attempts to evade and avoid controls. And so, we go round and round that infernial circle.

The second reason is that migration policy requires making choices – saying “yes” to some people who want to migrate and “no” to others. That’s it. While it sounds easy, this can involve very difficult trade-offs about who we care about. And those trade-offs for many are so uncomfortable that we try to pretend they don’t really exist.

Immigration policy is hard, but we make it much harder than it needs to be because the discussions around it at the moment are too binary – is immigration good or is immigration bad? And too polarised – the view that it is very good or very bad. The right often dehumanises and demonises migrants, but the left also sometimes dehumanises migrants, by portraying them

as almost superhuman. Both these ways of dehumanising migrants are just not helpful for getting us to a better policy.

What do we need to do to get to a better policy?

To make immigration policy better, I have five suggestions:

- First, we need to acknowledge that we are going to have immigration, and we are going to have controls on immigration.
- Second, make immigration policy boring. At the end of the day, immigration is just about changing the size of your population and changing the mix of your population in age, skill or some other way.
- Third, I think we should give less power to lobby groups in setting migration policy. We’ve been just too accepting of business claims that the economy needs migrants. When employers say they can’t find workers, we need to ask more often whether this is because of poor pay and conditions.
- Fourth, I think we need to recognise that immigration policy actually is hard. Don’t pretend that you can solve the infernial circle, but don’t ignore it either. We need to face up to the difficult, uncomfortable trade-offs that are sometimes there.
- Fifth, I think we need to be more long-term. I think too often short-sighted governments have used higher immigration as a way to avoid dealing with longer-run problems.

The trade-offs in immigration policy
can be so uncomfortable that we try
to pretend they don’t really exist

Looking at the whole picture

In this extract from his new book Alan Manning explains how economists think about immigration

The non-economist's view

Some people I met thought it self-evident that immigration has benefits for those in the receiving country. If you are cared for by a migrant nurse, or served a meal by a migrant waiter, the benefit is literally right there in front of you. If that migrant had not been allowed into the country, your illness would not have been treated nor your meal served. It is obvious that immigration has benefits and should be encouraged.

For others, it is equally self-evident that immigration reduces opportunities for those in receiving countries. They see a migrant in a job they covet and think immediately that the job could have been theirs if only the migrant had not been admitted. If you see a migrant in a house when affordable housing is hard to find you think that the house could have been yours.

Both of these views are understandable, but I think they are both the wrong way to think about the impact of immigration on the destination country. And even though they express opposing views about the impact of immigration, they are both wrong in the same way: they only look at part of the picture.

The person seeing the migrant working for them is seeing themselves as a consumer and the migrant as a worker doing things for them. That is part of the picture. But the migrant is also a consumer, with people doing things for them that they might have done for a local. That is seen by the person who sees the migrant as competing for housing, but they are neglecting that the migrant living in that house may also be working providing goods and services for others. Our economy is a giant web of people doing things for each other. Some do more for others than others do for them; those people are a net benefit to society. Others get more out than they put in. Migrants may put in more than they take out, but it is their net contribution that we need to assess.

The economist's view

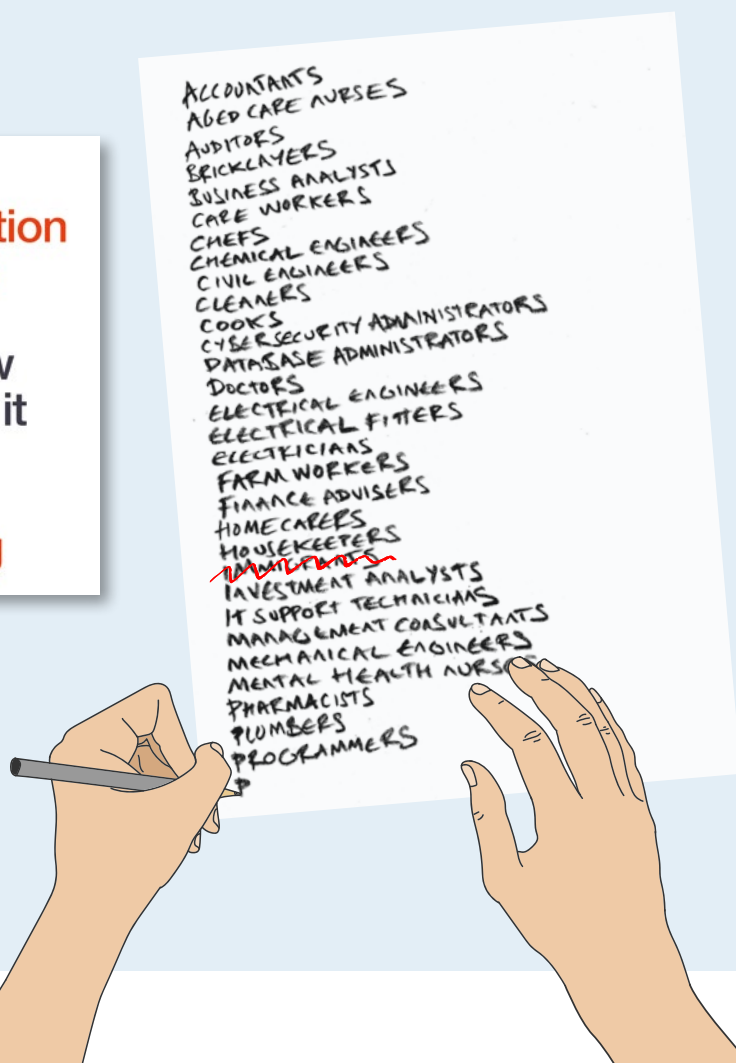
Economists have a different way of thinking about the impact of immigration on locals.

Immigration may affect your material standard of living: whether you have a job, how much it pays and what you can buy with those earnings; and, if you own a business, how your profits; and how your taxes and public services are affected. For economists, the effects of immigration on material standards of living can only come through the impact on incomes, prices, taxes and public services. Compared to the non-economist's view, the economist's approach says that what matters is not whether the individual serving you a meal or living in a house is a migrant; it is, rather, how migration overall affects restaurant prices and housing costs. It depersonalizes the impact of migration. Whether or not the particular waiter serving you is a migrant is irrelevant.

To convince you that the economist's approach is better, consider the following story. Suppose we noticed that the waiter serving us is left-handed. Would we conclude that we need more left-handed people? Or we see that the person living in a house is left-handed. Should we then want fewer left-handed people to free up the availability of housing? Both arguments sound absurd, but if we replace the left-handed with immigrants, the arguments sound convincing to many people. The economist's approach would be to consider what the impact of left-handed people (which includes me) is on wages and prices. Any effect is likely to be tiny, and we should then come to the correct conclusion: we should be indifferent about whether we have more or fewer left-handed people.

**Why
Immigration
Policy is
Hard
And How
to Make it
Better
Alan
Manning**

This is an extract from *Why Immigration Policy is Hard And How to Make It Better* by Alan Manning, published by Polity Press. (https://www.politybooks.com/bookdetail?book_slug=why-immigration-policy-is-hard-and-how-to-make-it-better--9781509563654).



We need to acknowledge that we are going to have immigration and we are going to have controls on immigration

What would this mean for current UK migration policy?

On the managed part of migration: work, family and study – I recommend a period of stability, no more big changes like the rollercoaster of liberalisation and restriction we have had in recent years.

Perhaps the hardest part of migration policy, is what to do about asylum and refugee migration. Asylum-seekers attract more attention than their numbers warrant, but I would also warn against trivialising the numbers. Asylum-seekers made up only 5% of the immigration inflow a few years ago but for the year ending June 2025, they made up around 16% of the migrant inflow. If you look at the numbers actually granted settlement over 20% came through humanitarian routes. Those numbers matter because there is a cost to the taxpayer of humanitarian migration – not just the cost of hotels while claiming asylum, but

because many refugees subsequently have low employment rates and low earnings.

You might take the view that our generosity towards refugees should have nothing to do with the costs of the system as a whole but we really don't take that approach in most other areas of policy. I think home secretary Shabana Mahmood is right to say that we need policies aimed at reducing numbers and, what is probably not discussed as much as it should be, we need policies to improve outcomes for refugees.

The home secretary's strategy is to reduce inflows by making the UK a less attractive destination. And by linking settlement to contribution, I think she hopes to provide incentives to improve outcomes. She also wants to increase outflows by offering temporary protection more frequently than permanent protection. I don't think that there's any guarantee that the

government policies will work, but I also don't think they're definitely going to fail. Our evidence base is very mixed. At least the government is serious in attempting to think about the issue – more than people who are just saying "detain and deport" which is an immoral and impractical policy, and those who simply say, "safe and legal routes". Small-scale safe and legal routes aren't going to deal with small boats unless the people coming in small boats are eligible for the scheme. Large-scale safe and legal routes potentially mean much higher numbers arriving than currently do so and the cost would be correspondingly larger. Both these slogans are avoiding having to deal with what is a very difficult policy area.

There is a risk that more restrictive migration policies validate the narratives of the populist right. But if you let the existence of ethno-nationalistic rhetoric push you to a position of ignoring problems, you may also strengthen the populist right. It is hard to navigate a path between alarmism and complacency. But, as the second part of my book title says, I am optimistic we can have better immigration policies – they won't be perfect, they won't banish injustice, but they will be a lot better than the present mess.

I think home secretary Shabana Mahmood is right to say that we need policies aimed at reducing numbers and, what is probably not discussed as much as it should be, we need policies to improve outcomes for refugees





The complex relationship between education and criminal activity

Reducing crime starts with both school attendance and conflict resolution

There is a widely held belief that education helps to reduce youth crime by “keeping kids off the streets” (Machin and Sandi, 2025). Being at school provides young people with activities, guidance and support in the hours that might otherwise be filled with boredom, idleness or trouble. But what happens when schools are closed on an ordinary weekday – times when the rest of the world carries on as normal, and parents perhaps haven’t made provision for teenagers enjoying a day out of school?

Our new study offers one of the most detailed answers to date. Using term schedules for state-maintained secondary schools in England between 2010 and 2019, matched to police and juvenile court data, we examine the effects of short breaks from school on youth crime. While the results partly confirm the common view that education does keep kids off the streets, our findings suggest a more nuanced interpretation of the overall impact of school attendance.

Weekday school closures do indeed change youth crime rates, but the effect is not

uniform. While serious violent offences and property crime increase, interpersonal violence decreases. It appears that attending school does not simply reduce juvenile crime overall but instead shifts the type and severity of offences that young people commit.

Schools as institutions of crime control

Secondary schools in England set their half-term breaks and teacher training days, commonly known as in-service training (“inset”) days, independently. This creates what economists call a natural experiment: within one town, one secondary school could be closed on a particular date for an inset day, while a neighbouring secondary school remains in session on that day.

This creates variation in which young people from the school closed for an inset day represent the “treatment” group and those in the neighbouring school with no inset day are the “control” group in an experiment. Thanks to the random scheduling of inset days, we can observe changes in youth crime rates

related specifically to our treatment group. In the following week, the pattern of school closures could be reversed, and we would observe changes in juvenile crime due to a new treatment group.

This variation allows us to build a school-by-day panel: we collected closure data for almost 3,300 schools over a 10-year period. While all school closures are scheduled in advance, we were particularly interested in half-term breaks and inset days, as parents are less likely to plan supervised activities for their adolescents during these shorter breaks. By looking at the same school on a weekday when it is closed compared to a weekday when it is open, we can isolate the crime-specific effect of school attendance.

Our dataset, which has more than 11 million school-day observations, allows us to distinguish between two common effects of school attendance. First, school has an incapacitation effect, as young people cannot commit crimes when they are physically attending school. But second, attendance could also exhibit a concentration effect, as putting a

Attending school prevents pupils from committing robberies but raises the likelihood of schoolyard brawls

large group of teenagers together in one place can lead to frictions that could boil over into physical violence.

Juvenile property crime spikes during school closures

When a school is closed on a weekday, the risk that pupils from that school will commit a property crime (compared to not committing such a crime) increases by 12%-13%. And the total number of property crimes committed by pupils at that school increases by 14%-23%, driven by indictable property crimes. Indictable property crimes, which include theft, fraud, criminal damage, arson and burglary, are considered more serious in nature and are tried in the crown court. Less severe "summary" offences include fare dodging and cycle theft.

Because the nature of these school closures means that most young people are in school and just a few are not, it might simply be easier for the police to clear crime on those particular dates. To ensure that our results reflect a genuine spike in property crime instead of increased crime clearance by the police, we analyse changes in the likelihood of a guilty verdict obtained in court. When school is not

in session, juveniles from that school are 13%-14% more likely to be found guilty in court of committing a crime on that date, an effect commensurate in size with the probability of being involved in property crime.

This provides compelling evidence for school attendance having an important incapacitation effect on youth crime. By engaging adolescents in productive and structured activities, education acts as an effective large-scale crime-prevention mechanism.

The effect on violent crime is more nuanced

For violent crime, the school effect changes depending on the severity of the crime. We distinguish between indictable crimes and summary offences. Indictable violent offences include such crimes as robbery, rape, manslaughter and murder. Summary offences are considered less severe. They are heard and decided in a magistrates' court without a jury. Minor assault, threatening behaviour and intentional harassment are examples of summary violent offences.

On weekdays when schools are closed, the risk that a pupil at that school will commit

a serious violent crime (compared to not committing such a crime) increases by 14% and the number of violent crimes rises by 20%-23%, an effect also reflected in court conviction data.

Remarkably, minor violent crime like minor assault, appears to decline on weekdays when school is not in session. The risk of summary violence drops by 19%-22% and the number of guilty convictions for summary offences falls by a similar margin. Much of this decline is due to "assaults against the person" – these are the types of fights, scuffles or minor altercations that are typical of school environments.

Put simply, attending school prevents pupils from committing robberies, but increases the likelihood of being involved in schoolyard brawls.

What explains this divergence?

Two mechanisms seem to explain these contrasting effects. Attending school has an incapacitation effect on serious crime: by attending classes, young people who might otherwise be on the streets during peak hours have fewer opportunities to commit serious violent or property crimes. But when school is in

When school is closed on a weekday, the probability of a property crime involving the pupils at that school increases



Staggering half-term breaks and inset days across neighbouring schools can reduce the risk of compounding opportunistic crime

session, it has a concentration effect on minor crime: bringing a large group of adolescents together in sustained contact fuels micro-conflicts that can boil over into quarrels, bullying or minor assaults.

These dual effects underpin a subtle but important point: the impact of school on juvenile crime is not only a question of whether crime happens, but also about what kind of crime is prevented or displaced.

What are the key takeaways for policy?

Our research suggests some important implications for crime prevention and education policy.

First, schools are a crucial incapacitation mechanism. By providing a positive environment with structured activities, school

is a powerful deterrent to property crime and serious violent offences.

Following the Covid-19 pandemic, chronic absenteeism continues to be a persistent issue for schools in England (Department for Education, 2025). Since these young people are at higher risk of committing or encountering crime, school personnel and education policymakers should reinforce the importance of regular attendance policies.

But there are important costs to the concentration effect. Adolescents packed together in a school environment can lead to frictions that result in bullying, quarrels or minor assault. These skirmishes could, in turn, affect the learning experience and wellbeing of other pupils in class. Increasingly, policymakers will need to consider providing support services within schools to support wellbeing and provide ways to resolve conflict and prevent bullying.

We also find that scheduling matters. Policymakers in the local education authority should coordinate school closures within their jurisdiction. Ensuring half-term breaks and inset days at neighbouring schools are not scheduled simultaneously can reduce the risk of compounding opportunistic crime, though some overlap in school closures is likely in local authorities with many secondary schools, particularly in big cities like Birmingham and London.

Finally, the same dynamics at work in schools will also apply to other youth services such as summer camps, sports facilities or recreation centres. There is clearly scope for schools to develop coordinated programmes with such institutions to run enrichment programmes and recreational activities during these breaks. Designing these facilities to maximise the incapacitation effect and minimise the frictions associated with the concentration effect will require policymakers to work closely with schools and youth support services.

This article summarises “Youth crime and delinquency in and out of school” by Janine Boshoff, Stephen Machin and Matteo Sandi, CEP Discussion Paper No. 2092. An earlier version first appeared on *LSE British Politics and Policy* (<https://blogs.lse.ac.uk/politicsandpolicy/what-can-we-learn-about-youth-crime-from-weekday-school-closures/>).

Janine Boshoff is a PhD student at the University of Manchester. **Stephen Machin** is a professor of economics at LSE and director of CEP. **Matteo Sandi** is an assistant professor of economics at the Catholic University of Milan and a CEP visiting fellow.



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Cleaner energy, higher risk?

Why critical materials are central to global strategic partnerships

The shift to clean energy and advanced technologies is redrawing the map of global economic power. As nations and firms race to secure critical minerals, rare earths – small in trade value but high in strategic impact – have emerged as chokepoints for sectors from electric vehicles and wind power to defence and artificial intelligence (AI), due to China's dominance which has the potential to transform global supply chains.

Critical minerals are foundational to the green energy transition, AI-driven digitalisation and the global wave of rearmament. Yet, at first glance, rare earths seem economically marginal. In 2021, the total global export value of rare earths was only about \$0.59bn – a fraction of the \$1.5bn market for lithium, the \$4.2bn market for nickel and the \$91bn market for copper (IRENA, 2023). Compared with the \$951bn global petroleum trade, rare earths look like a footnote rather than a strategic fulcrum.

The reality is more complex. Despite their name, rare-earth elements are not geologically scarce. They are found in many countries and could, in principle,

be mined more widely, especially where environmental regulations are less stringent. China is currently the world's largest rare-earth miner, but its exports account for only about one-third of global annual demand. This suggests that other nations could readily diversify supply.

The real source of vulnerability lies not in the volume or geology of rare earths, but in the structure of the value chain. Over three decades, Beijing has built dominance across nearly every stage of rare-earth production – with particularly tight control in the later, higher-value phases.

China accounts for roughly 60% of global mining output, 91% of global production and a striking 94% of permanent magnet manufacturing, especially of neodymium-iron-boron magnets (IEA, 2025a; Kim et al, 2025). These magnets are vital for electric vehicles, wind turbines, advanced electronics and defence applications.

China has leveraged its resources and capabilities in the early part of the value chain to attract ever more businesses and components of the value chain to relocate

to China, due to the abundant resources, low-cost material and a concentration of capabilities. This has left Western firms exposed as capabilities have been lost.

Visiting Inner Mongolia in 1992, the late Chinese leader Deng Xiaoping said famously: "The Middle East has oil and China has rare earths". His prescience about the importance of this resource has been leveraged by China to build a capability on which the world is now reliant.

The power and threat of the 0.1% rule

In October 2025, Beijing introduced new rules requiring foreign companies to obtain Chinese government approval to export any product containing more than 0.1% rare earths by weight and to declare their intended use. Officially described as administrative management, the measure gives China a powerful tracing tool and, potentially, a lever for future export restrictions.

According to the OECD, the number of export restrictions on critical materials has increased more than fivefold between 2009

Having ceded much of their rare-earth magnet manufacturing capacity, Western economies now face a steep relearning curve



and 2023. In 2023 alone, over 500 new raw material products were added to the list of products with at least one restriction, with 94% of these net additions originating from just seven countries and China playing the largest role. Even if not framed as an outright ban, such controls allow Beijing to shape market access.

From grams to great power: illustrative leverage

In 2024, China mined approximately 270,000 metric tonnes of rare-earth oxides (REO) equivalent – the largest share of global production (US Geological Survey, 2025). Yet, the strategic leverage lies not in the raw tonnage alone, but in China's dominance over the value chain and the licencing rule.

If we assume that most high-tech products (electric vehicle motors, wind turbines, ICT devices, green technologies and defence equipment) contain about 1%-2% REO by weight, then the 270,000 tonnes of REO could be embedded in 13.5-27 million tonnes of downstream product.

Processed rare-earth materials are dozens of times more expensive than raw REO. Assuming an average value of roughly \$10,000 per tonne for these final goods, the 0.1% rule gives China potential influence over an estimated \$135bn-\$270bn worth of high-tech products, far exceeding the value of the raw materials.

Technology, capabilities and dependency

China's control extends beyond materials. It also maintains tight restrictions on rare-earth

The resilience of emerging technologies will depend not only on innovation but also on the ability to manage and mitigate resource dependencies

processing and refining technologies, making it harder for other countries to build diversified supply chains. Over decades, China has accumulated deep technical expertise covering not just the processing of rare earths but also the equipment, tooling and tacit know-how essential for large-scale production.

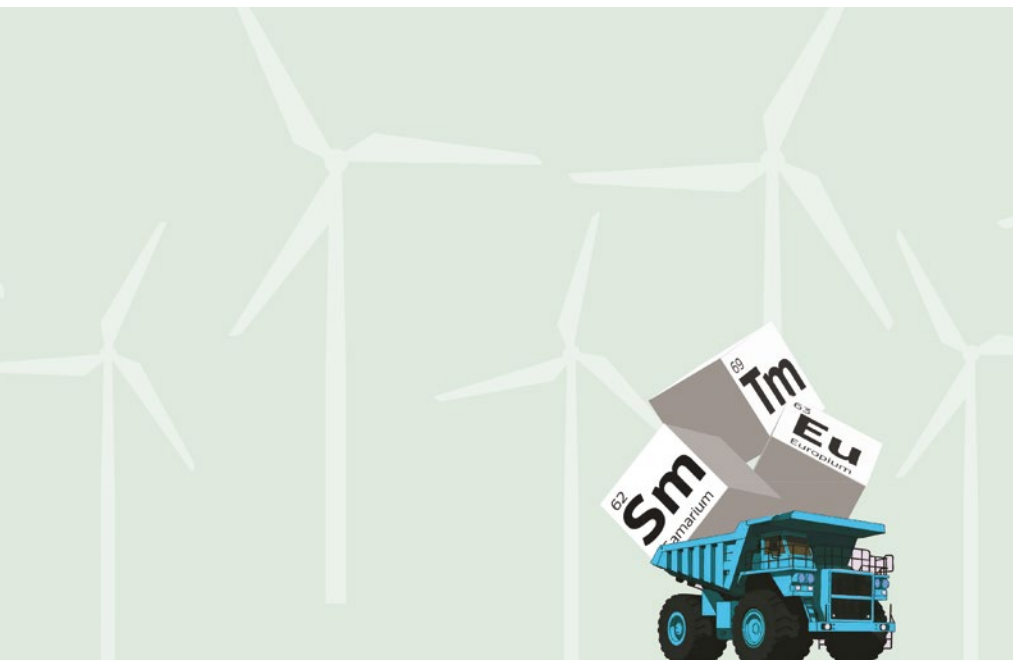
For those in the West seeking to export Chinese-made equipment for processing rare earths, data are collected on the intended use of the equipment and who it will supply, further strengthening China's understanding of the use and applications of its products, and understanding of the supply chain.

Western economies, having ceded much of their rare-earth magnet manufacturing capacity, now face a steep relearning curve. Rebuilding technological capabilities will take time and significant investment, all while competing with China's entrenched cost and scale advantages. This highlights a critical dimension of resilience: supply security is not just about material access, but

also about technological capability and innovation capacity.

Empirical evidence reflects this strategic exposure. Risks linked to critical minerals – including rare earths – have increasingly been flagged by listed companies worldwide. This is shown in an analysis of how businesses are responding to uncertainty surrounding critical minerals, carried out by combining firm-level data from nearly 14,000 publicly listed companies across more than 90 countries with textual analysis of transcripts from around 280,000 earnings conference calls – the calls in which company managers provide an evaluation of the firm's quarterly performance and then answer questions (Nguyen-Tien, 2025).

The analysis suggests that exposure to some risks has been associated with lower revenue growth, particularly in clean tech sectors. Classic profit-uncertainty models suggest that price volatility reduces expected returns, prompting firms to scale back output and investment – and underlining why



building resilience through innovation, diversification and strategic stockpiling is increasingly essential.

Resources wars, trade wars and the G2 truce

The wave of US-China trade tensions during Trump's first presidency was bilateral, driven by reciprocal tariffs targeting specific sectors. The current wave is far broader, reflecting global fragmentation of trade and technology.

Where US tariffs operate on the demand side, China's rare-earth strategy works on the supply side, controlling key upstream inputs. This asymmetry gives Beijing leverage over global technology supply chains, amplifying geopolitical risks. Even limited disruptions could cascade through clean energy, electronics and defence sectors.

In response, the second Trump administration has pursued a series of initiatives to secure alternative rare earth supplies – most notably, a \$8.5bn deal with Australia promising industrial cooperation and joint investment to build rare-earth processing capacity outside China. In addition, Washington has reached agreements with Cambodia, Japan, Malaysia, Thailand and Vietnam aimed at diversifying supply chains and strengthening industrial collaboration in the region.

Yet, establishing a complex rare-earth supply chain takes years – not to mention raising questions about the economic viability of such projects without supportive industrial policies. In the meantime, buying time matters. In October 2025, at a "G2" meeting, Trump and Xi reached a one-year rare-earth trade truce, which postpones China's export controls on the

materials, alongside other measures, including selective tariff reductions.

While the truce may be extendable, it remains a short-term tactic amid deepening geopolitical competition. For US allies and partners beyond the G2, securing reliable rare-earth supplies will remain critical for the manufacture and deployment of next-generation technologies.

Beyond rare earths

Rare earths are not the only critical minerals over which China holds structural advantages. There are similar patterns of dominance for lithium, cobalt, graphite, magnesium, tungsten, gallium and germanium, among others, reflecting a broader geopolitical strategy that leverages resource control for economic and strategic influence.

As global demand for critical minerals accelerates, the intersection between resource security, technological sovereignty and geopolitical rivalry is becoming a defining feature of the 21st century economy. The resilience of emerging technologies will depend not only on innovation, but also on the ability to manage and mitigate resource dependencies.

This is the new era of strategic interdependence: control over even a small fraction of a material can influence entire industries. Building resilience – through diversification, technological innovation and cooperative frameworks – will be central to navigating this evolving global landscape. Collaboration across governments, firms and research institutions will be essential to develop adaptive strategies, anticipate risks and sustain innovation in critical technologies.

An earlier version of this article first appeared on *LSE USA Politics and Policy* (<https://blogs.lse.ac.uk/usappblog/2025/10/31/the-us-china-rare-earths-deal-shows-the-importance-of-critical-materials-in-a-new-era-of-strategic-interdependence/>).

Gavin Harper is a research fellow at the University of Birmingham's Centre for Strategic Elements and Critical Materials.

Viet Nguyen-Tien is a research officer at CEP, contributing to the growth programme, the Programme on Innovation and Diffusion (POID) and the Productive and Inclusive Net Zero research project (PRINZ).

Uncertainty over supply of critical minerals is affecting firms in clean tech sectors

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Janet Henry, Clare Lombardelli and Almudena Sevilla discuss how the profession can do better

A strong argument for greater diversity within economics is, appropriately, an economic one. At its core, economics is about making the best use of scarce resources and talent is a valuable resource.

"As economists, we should be attracting the brightest and best," says Almudena Sevilla, professor of economic and social policy at LSE. "If we don't have a diverse set of voices, then it's problematic and we're not creating the best policies that we can."

Sevilla was one of three leading economists at an LSE public discussion of how to raise the number of women in what another panellist –

Clare Lombardelli, the Bank of England's deputy governor for monetary policy – called a "brilliant" science. They were joined by Janet Henry, global chief economist at HSBC, and the event was moderated by CEP's director Stephen Machin.

Comprehensive policies require diverse voices

Sevilla set out an overview of what women face [see box]. She noted how in academic economics, the proportion of women shrinks with rising seniority – a phenomenon known as the "leaky pipeline". She cited a forthcoming

American Economic Review study which finds that women researchers face more interruptions while presenting their work than men do, and another American Economic Association survey showing that men are consistently more likely to report feeling included and valued in economics than women.

Sevilla recalled that her decision to become an economist was motivated by an interest in inequality: "Economists look at the world in a very different way, understand the world in ways that are very enlightening and very powerful...when I started to study economics I was very certain about my values and

Women economists: progress and prospects

Slow change coming?

Without a diverse set of voices, we're not creating the best economic policies

[interested in] the inequalities that were around me and economics gave me such a powerful tool not just to study and understand them but to actually do something about it."

Sevilla's work in addressing gender inequality has extended from publishing research on women's economic roles and the gender pay gap to organising networking opportunities for young women economists. She helped to set up the Royal Economic Society's UK Women in Economics Network (UK WEN), supporting the careers of UK-based women economists and was awarded the CBE in 2025 for "services to economics and to women in economics". To succeed in a male-dominated field, Sevilla explained, women need "role models, stronger networks and support networks to get to the threshold where things start changing."

The demonstration effect

Henry agreed that being able to follow your interests is a key benefit of a career in economics.

The situation now...

- Around 30% of economics degree students are women, a proportion that has not changed in a decade.
- In 2021/22 women represented just under 30% of academic economists
- Increasing the share of women in economics is likely to affect the problems that economists work on – a study of presenters at a series of economic conferences found the share of women authors across programmes ranged from 7% to 48%.
- In economic seminars, women are interrupted more than men and interruptions that are negative or cut off the presenter mid-sentence increase for women presenters.

And what works to improve it...

- The first step towards tackling a problem is to admit there is a problem. Collect and publish data. Pay gap information can bring about change.
- Mentoring programmes in academia can have a positive effect on the number of publications and grants.
- A diversity action plan introduced by the European Central Bank succeeded in closing the gender promotion gap in the probability of promotion after ten years from 36% to 8%, with many more women being encouraged to apply for promotion.
- Objective assessments covering skill-based tasks and structured interviews, may help to reduce differences in how men and women are rated overall.

Sources: *Understanding trends in the study of economics*, Bank of England (2025). *Report on the status of women in academic economics within the UK*, RES (2023). Chari and Goldsmith-Pinkham (2017). Dupas et al (forthcoming). Gamage et al (2020). Hospido et al (2019). *Reducing the gender pay gap and improving gender equality in organisations: evidence-based actions for employers*, The Behavioural Insights Team (2018).

"I'm very privileged to spend most of my day thinking and talking about what's going on in the world," she said.

She touched on the various paths that people can take towards becoming an economist, noting that there is no "set route". After studying economics at University College London, she had hoped to become a foreign correspondent at the *Financial Times* but

instead joined the Economist Intelligence Unit and then went to work in the banking industry.

She emphasised the importance of including a "storytelling element" when communicating about economics. Economics is not just about working with complicated mathematical models she said, what matters is to think about what makes a specific topic interesting and to know how to communicate it.



Economics is one of those jobs that gives you better life choices and much more control

Henry highlighted the importance of a “demonstration effect” to push through barriers that may prevent women from pursuing certain economic fields. She observed the difference made once one or two women were seen to be successful. “My economics team at HSBC in London is over half women and it started with one,” she explained. “I didn’t say I’m going to hire more women, but more women applied. I’ve hired men, I’ve hired women and I’ve always hired the best person for the job.”

An image challenge

Lombardelli pointed to the steady progress that women have been making in the profession, noting that she is currently one of five women sitting on the nine-member Bank of England’s Monetary Policy Committee.

“In practice, you’ve got a lot of women in senior roles, in the sorts of fields of economics that 10 or 20 years ago you wouldn’t have seen women in, or you’d have had one or two and they would really stand out,” she said.

But she remained concerned about economics’ image problem among the general population: “If you ask someone what they picture when they think of an economist, they generally think of a middle-aged man talking about the stock market. That is not at all what economics is about. But I think we really struggle to get that across to young people.”

A 2025 report about trends in the study of economics published by the Bank of England revealed that about 30% of those studying economics at university are women and this has changed little over time.

Lombardelli suggested that while there were several barriers that needed addressing, it was important to focus on the attractions of the job. “You should want to become an economist, it’s brilliant”, she said. “It’s one of those jobs that gives you better life choices and gives you control over much more of your life.”

A recording of the LSE public lecture “Women in economics: progress, challenges and perspectives” is available. (<https://www.lse.ac.uk/events/women-in-economics-progress-challenges-and-perspectives>).

Lia Bergin is a communications and event assistant at CEP. **Janet Henry** is global chief economist at HSBC. **Clare Lombardelli** is deputy governor for monetary policy at the Bank of England. **Almudena Sevilla** is a professor of economic and social policy at LSE and a research associate in CEP’s education programme.

It’s a privilege to spend most of one’s day thinking and talking about what’s going on in the world



Paul Cheshire

Untangling the council tax knot

Long-term changes are needed to support economic growth

My first reaction to the introduction of four higher council tax bands in the November budget was that this tactical, short term and ad hoc change addressed, but did not resolve, the most egregious failing in the bodged council tax system: its serious regressiveness. The budget ignored the need to abolish our convenient but damaging stamp duty. Worse, it did not just ignore the fundamental problems of our system of local government finance, but it is possible that one feature of the new higher rates of council tax will actually make the problems worse.

Council tax bands are based on the hypothetical market value of the property in 1991. At the time, properties were assessed using a "drive-by" basis as a stop-gap measure before the tax began in 1993. As a result, for the 6.5 million or so houses and conversions constructed since 1993, valuations are based on what the property is estimated to have been worth in 1991. In England and Scotland, the band values have not changed since implementation (there was a revaluation in Wales in 2003), but in that time house prices over

Great Britain as a whole have risen more than five-fold. So those in the most valuable houses in a given local authority have proportionately been paying less – both in respect of their actual house values and relative to their incomes – over time.

That would matter less if house values had risen equally over the last 30 plus years. But house price inflation has also varied greatly across the country. House prices increased by a factor of eight in London but only 3.5 in the north. This means the degree of regressiveness varies greatly across regions, as well as within them.

What the budget's changes missed

Introducing the four new higher bands for houses over £2mn on current valuations does begin to address the terrible regressiveness of council tax but does nothing to address the fact that the valuations

have become increasingly disconnected from changing regional patterns of house values. Having a fixed cutoff of £2mn is essentially a tax on living in London and the south-east. Since productivity is higher in the south-east and highest in London, it is a tax on our most productive regional economies.

In addition, the unreformed stamp duty, paid by those buying a property as a proportion of the property price, is a substantial tax on mobility, penalising people moving to where jobs are more productive, but particularly reducing short-distance downsizing or upsizing, meaning our housing stock is less efficiently used. The case for both merging council tax and stamp duty as one property tax and using modern technology to revalue all properties on a regular basis is very strong indeed. But this would need a long-term, strategic vision: not a short-term fix.

A version of this article was originally published on *LSE British Politics and Policy* (<https://blogs.lse.ac.uk/politicsandpolicy/will-the-budget-improve-property-taxes/>).

Paul Cheshire is emeritus professor of economic geography at LSE and a research associate in CEP's urban and neighbourhoods programmes.

Who will benefit, councils or the Treasury?

The budget changes also leave a question unresolved: who will get the extra revenues from the new council tax bands?

At present, the bulk of local government funding – 70% – comes not from council tax but as block grants for particular purposes, for example, to fund education. This has the unintended consequence that a council doesn't benefit if it permits more houses to be built as it doesn't get the extra funding needed to support the needs of the new residents.

The Treasury's wording on this issue is ambiguous. It may be true that the revenues raised will be used to "support funding for local government services" but perhaps just as a lump of revenue to support existing Treasury funding to local government. Unless it is made absolutely clear that the revenues from the higher council tax bands will go directly to the local councils where the houses are situated, then councils in more prosperous (and productive) places will become even more opposed to development. This will not only make our housing affordability crisis worse, but in the medium term it will make it even harder for the most prosperous places to expand their labour forces. The housing market will price out new labour supply even more thoroughly than it does already.

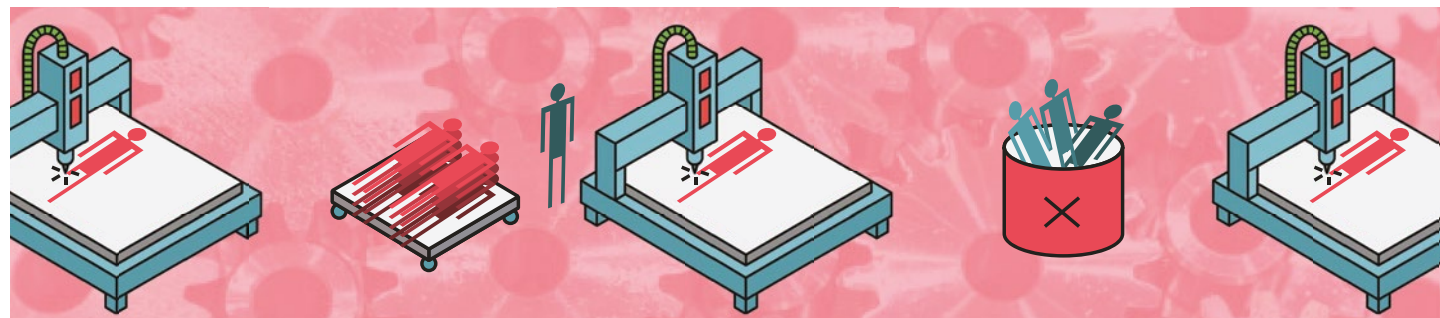
If the government is serious about growth, it should set up a strategic review of both local government funding and property taxes.

In the past 30 years, house prices increased by a factor of eight in London but only 3.5 in the north



In numbers

Anatomy of automation



The effects of automation on employment may be less severe than often feared, but some workers are more at risk.

We analyse how increased use of computer numerical control (CNC) machines affected employment in UK manufacturing plants between 2005 and 2023. CNC machines are programmable tools that cut, drill or shape materials (typically metals) into precisely defined components.

Figure 1 shows that plants adopting CNC machines for the first time increase their total employment by about 6% over the subsequent four years, compared with non-adopting plants in the same industry. For firms already using CNC machines, expanding the number of them is associated with an even larger increase in total plant employment than initial adoption.

Figure 2 illustrates the impact on different types of jobs, plotting the share of manufacturing production workers in total employment across manufacturing production workers, designers and engineers. Initial adoption has little effect on this share, but the expansion of CNC machines leads to a notable decline – of around 8 percentage points after six years. One possible explanation is that as firms gain experience with given technology, they reorganise production processes in more transformative ways.

Read the full paper: Baksy, A., Chandler, D. and Lambert P. (2025) *Anatomy of automation: CNC machines and industrial robots in UK manufacturing, 2005-2023*, CEP Discussion Paper No. 2131 (<https://cep.lse.ac.uk/pubs/download/dp2131.pdf>).

Aniket Baksy is a senior lecturer in economics at the University of Melbourne. **Daniel Chandler** is research director of the Programme on Cohesive Capitalism at LSE and a research associate in CEP's labour programme. **Peter Lambert** is a research fellow at the University of Warwick and a visiting fellow in CEP's growth programme.

Figure 1: Employment effects of adopting or expanding computer numerical control (CNC) machines

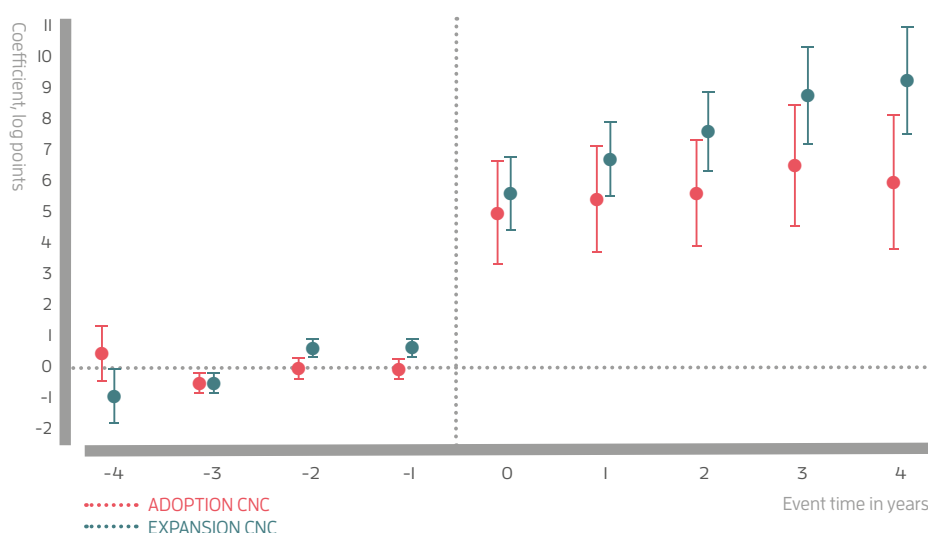
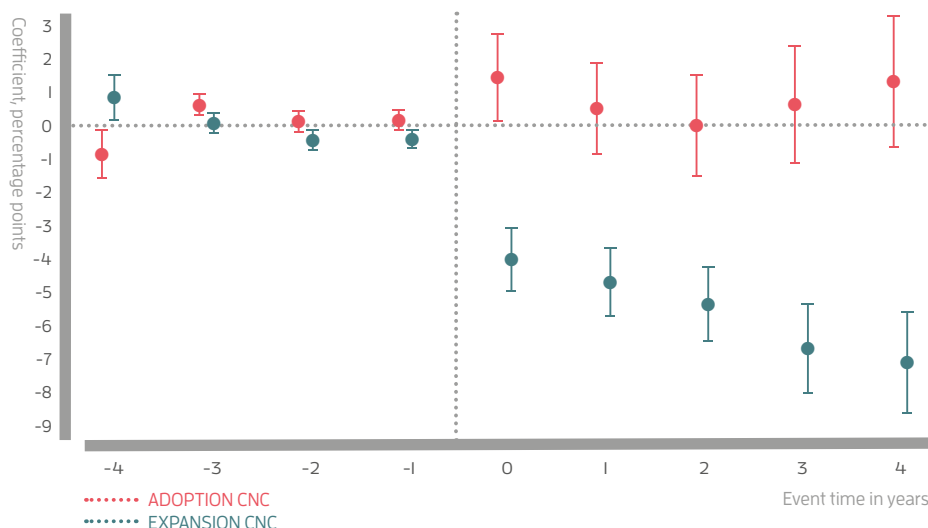


Figure 2: Share of manufacturing employment after adoption or expansion of computer numerical control (CNC) machines



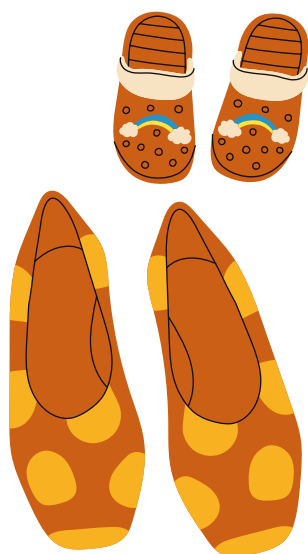
Q&A

Following in your parents' footsteps

From medieval artisans and craftsmen to modern political dynasties and nepo babies, many people choose to go into the same career as their parents. The question is how does that affect broader social mobility – the extent to which everyone's life outcomes are influenced by their family background.

How common is it to follow in your parents' footsteps?

My research shows that on average, children are twice as likely to choose a certain field when one of their parents is in it. This occupational persistence increases sharply as we go up the income scale – with children from the richest families approximately seven times as likely to pick a given field when a parent has done the same.



Children are, on average, twice as likely to choose a certain field when one of their parents is in it



How might this benefit come about?

It could be that children of doctors have certain traits that suit them to becoming doctors, perhaps through having the chance to learn the skills needed at a young age, either through school or through “dinner table learning” conversations at home. Or it could be that once they have entered the profession, they have more insider knowledge and professional connections.

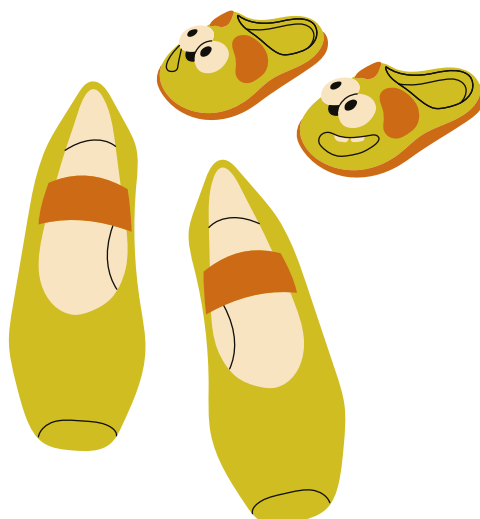
Does it help their career?

Analysing data from lottery-based admissions to medical school in the Netherlands, I compare the children of doctors who are admitted with those children of doctors who are randomly rejected. This allows me to obtain the causal effect of becoming a doctor for children of doctors. Clearly, this estimate alone is not enough to isolate the effect of occupational transmission, as it may only capture the returns from attending medical school, rather than being from a medical family. But by using a double difference design, I can calculate the effect due to occupational persistence. I find that doctor children of doctors earn, on average, 22% more than those who are not doctor children of doctors – a group consisting of both doctors who have non-doctor parents, and all those who are not doctors whatever their background.



What does this mean for social mobility more broadly?

Although my findings are focused on the medical profession, they show how occupational persistence can hamper equality of opportunities by giving some children an advantage that is uncorrelated to their own abilities – a channel through which children of rich parents remain rich.



Read the full paper: Ventura, M. (2025) *Following in the family footsteps: Incidence and returns of occupational persistence*, CEP Discussion Paper No. 2121 (<https://cep.lse.ac.uk/pubs/download/dp2121.pdf>).

Maria Ventura is an assistant professor of economics at the University of Edinburgh and a research associate in CEP's labour programme.

My must-read paper

Philippe Aghion recommends research that asks what AI can do for economics

Innovation is, unsurprisingly, something which the new Nobel laureate Philippe Aghion values – not just when using economics to explain the world, but within economics itself.

"There are several papers which have inspired me, but if I had one recent paper to recommend it would be the work that Xavier Jaravel and Friedrich Geiecke have done on using artificial intelligence for surveys," Aghion said.

"This work is about using large language models – chatbots – to conduct interviews at scale. I like this very much, it is an exciting piece of work. What struck me was the inventiveness and fresh thinking. It was very much about how you can use AI as a researcher – very original and thought-provoking.

"I came across it at the National Bureau of Economic Research Summer Institute in 2025. I attended a number of presentations including Xavier's on 'Conversations at scale: robust AI-led interviews with a simple open-source platform', which was at the innovation group's session on digital economics and artificial intelligence."

The paper addresses the challenges of using AI to conduct interviews as a researcher. Jaravel and Geiecke developed a platform that runs AI-led interviews. This makes it possible to reach thousands of respondents within hours. They then assess its robustness by comparing it to human experts and using respondents' own views on the quality of the interview and check how versatile it is by using it in four different applications.

The authors highlight that AI-led interviews revealed more information than conventional open text fields, with a 142% increase in the number of words that respondents wrote. They also find that when AI was used to ask about the reasons behind electoral choices, participants preferred interacting with a conversational agent perceived as a non-judgmental entity, rather than a human interviewer.

Aghion pointed out that it wasn't just the findings, but also the research questions and approach that were novel: "A lot of the economic research on AI is about its impact on employment, on the environment, on growth. But this was something different,

and that's what I like – it was maybe the start of something else, perhaps a new field, a new topic.

"I have worked with Xavier. He is outstandingly productive. Let me mention, for example, his path-breaking research on shift-share instruments and also his work on inflation inequality, looking at the basket of goods and how there are different inflation rates for the rich and the poor. He did this in a way that nobody had done it before. He's a very inventive guy, a very deep thinker."

Reflecting on changes to his own working life since winning the Nobel Prize in Economic Sciences, Aghion adds: "I am a bit swamped, but it's a fantastic thing. I am blessed. There are a lot of people who deserve it [the Nobel prize] and don't get it, so luck plays a big role. One can only be grateful. I keep doing my research, sometimes I cannot make it to all my zoom meetings, but I try.

"The Christmas break was a chance to have some time off and see friends – but I also took advantage of the time to catch up on papers in a way which was relaxed."

● *Philippe Aghion was talking to Helen Ward.*

Geiecke, F. and Jaravel, X. (2025) 'Conversations at scale: robust AI-led interviews with a simple open-source platform' *NBER Summer Institute 2025: Digital Economics and Artificial Intelligence*. Cambridge, MA. 16–18 July. National Bureau of Economic Research.

Philippe Aghion is professor at the College de France, INSEAD and LSE. He is a research associate in CEP's growth programme. He was co-recipient of the 2025 Nobel Prize in Economic Sciences. Read more about his work on page 2.



PAPER ABSTRACT

The advent of large language models (LLMs) provides an opportunity to conduct qualitative interviews at a large scale, with thousands of respondents, creating a bridge between qualitative and quantitative methods. In this paper, we develop a simple, versatile open-source platform for researchers to run AI-led qualitative interviews. Our approach incorporates established best practices from the sociology literature, uses only a single LLM agent with low latency, and can be adapted to new interview topics almost instantaneously. We assess its robustness by drawing comparisons to human experts and using several respondents-based quality metrics. Its versatility is illustrated through four broad classes of applications: eliciting key factors in decision making, political views, subjective mental states, and mental models of the effects of public policies. High performance ratings are obtained in all of these domains. The platform is easy to use and deploy: we provide detailed explanations and code for researchers to swiftly set up and test their own AI-led interviews. In addition, we develop, validate, and share a simple LLM-based pipeline for textual analysis and coding of large volumes of interview transcripts.



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In this issue

Make immigration boring again



The complex relationship between education and criminal activity



Women economists: progress and prospects



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