

Working on Productivity

Professor Jennifer Rubin

Foundation for Science and Technology, June 2019



- Productivity as a persistent challenge for the UK
- The ESRC, productivity and the new funding landscape
- The Industrial Strategy Council and productivity

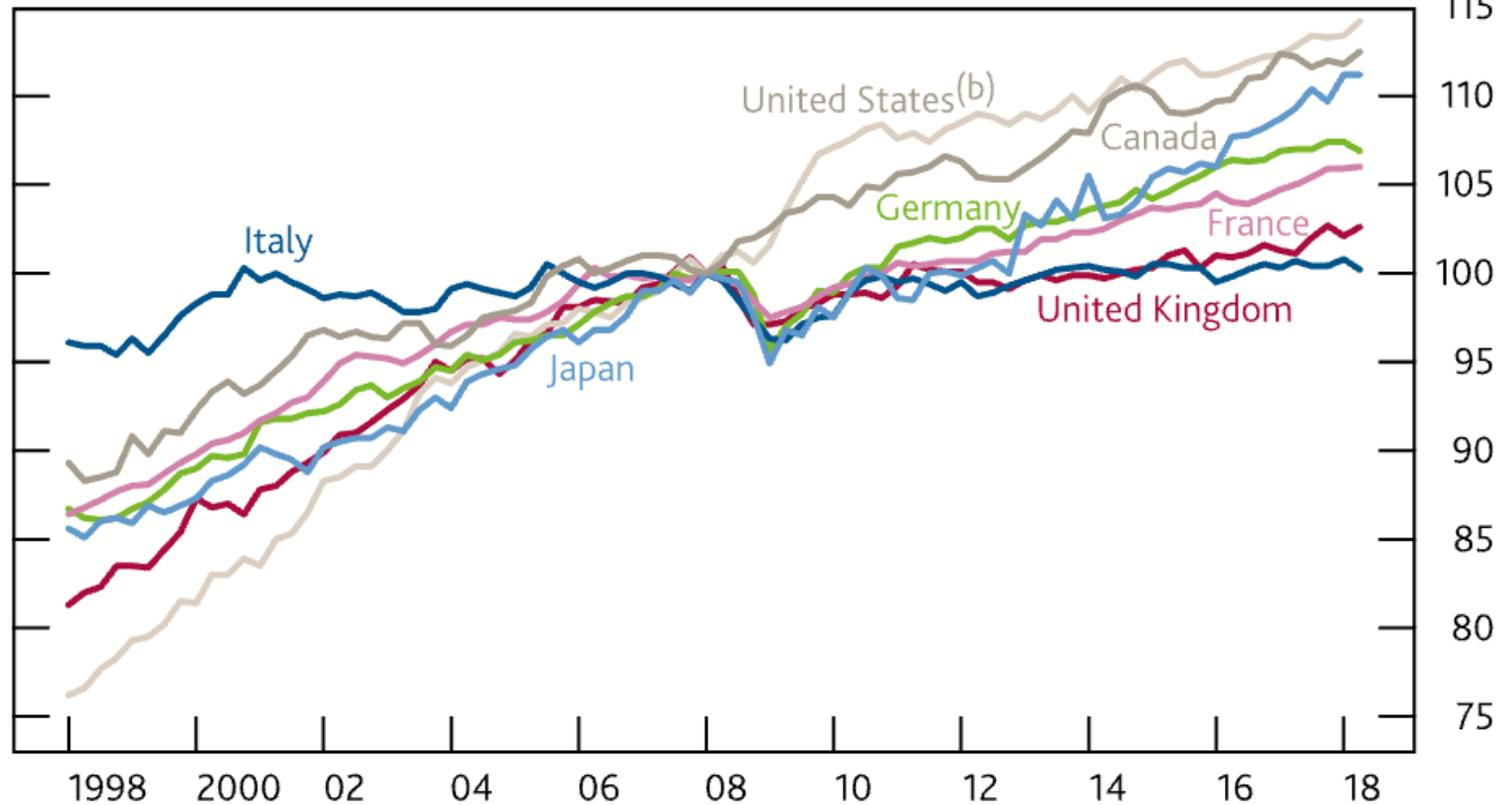


What we mean by productivity

- How much output we produce for a given amount of input
- Output per hour worked is one widely used measure
- High productivity means working less to produce the same amount

Hourly labour productivity in the G7^a

Indices: 2008 Q1 = 100



<https://www.bankofengland.co.uk/inflation-report/2018/november-2018/the-labour-market-and-supply>

Opinion **Global economic growth**

Conventional measures pose the wrong productivity question

Some economists — and the tech community — believe output is being mis-measured

DIANE COYLE

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UK labour productivity

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UK productivity gap narrows with new measure

Britons work fewer hours than official figures suggest, halving gap with France

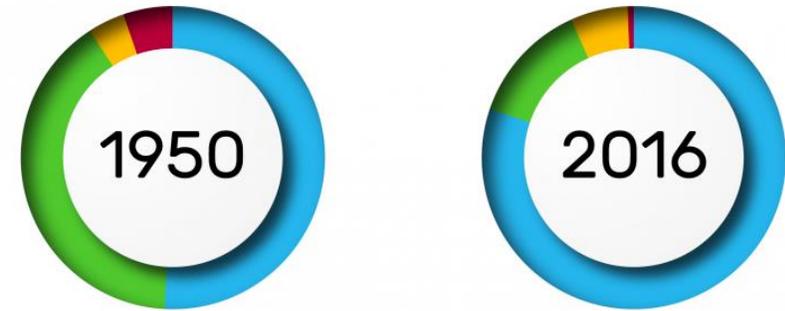
Gavin Jackson in London DECEMBER 10, 2018

Shift in output definition at the heart of the productivity puzzle

From Dr Peter Johnson, University of Oxford, UK



- Management practices: are we a 'nation of David Brents'?
- Technology: Are there lags? Are we counting the right things?
- Education and skills: are we preparing people to work well?
- Long term conditions: is our mental health holding us back?
- How are other countries doing better?
- What policies and practices will help us do better?



● Services ● Manufacturing* ● Construction ● Agriculture

**also includes utilities (electricity, gas and water) and mining, quarrying and extraction*

Stress, anxiety and depression accounts for over half of all lost work days
Proportion of lost working days as a result of stress, anxiety or depression



*No ill health data was collected for 2002/03 and 2012/13

SOURCE: HSE



THE TIMES THURSDAY JUNE 3 1965

The Social Sciences Arrive

The Heyworth committee on social studies found "a remarkable amount of sympathy with the aims of the social sciences" among potential users of social research in industry and public administration and "an appreciation of the benefits to be anticipated from their application". In this it reports a much more favourable response than its predecessor twenty years ago. The earlier committee was embarrassingly conscious of the novelty of the studies going under the name of social science, and shrank from recommending official sponsorship for fear of "a premature crystallization of spurious orthodoxies".

Lord Heyworth's committee found and reflects a more confident attitude. It is not just that social research is...

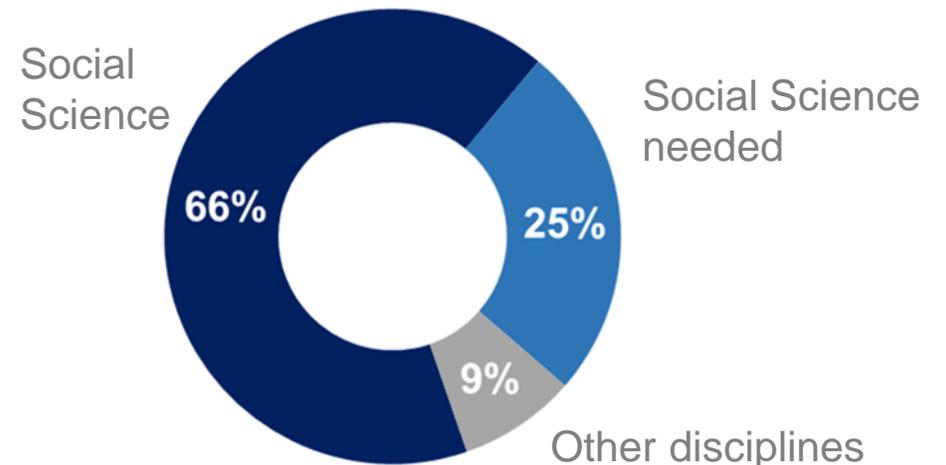
only a fraction of the number made in the natural sciences, has been increased fourfold in the past three or four years. Government departments, public corporations, and large private companies are converting their interest in the possibilities of social research into an active demand for people trained in it. The Heyworth committee has drawn up its recommendations with the intention of giving this general movement a further impulse, and of co-ordinating more closely the scattered centres of initiative. Its chosen instrument is a Social Sciences Research Council. This recommendation the Government have very properly accepted.

Perhaps wisely, the committee did not enter into controversial questions of the lost frontiers,

Areas of Research Interest (ARI's)



66%+ of ARIs are social science



The [ARIs] act as a starting point for a more effective dialogue between policy-makers and researchers both within and beyond government..

BEIS

We need research to better understand: What drives differences in productivity growth within and across UK sectors and regions, and how this compares internationally..Through research we want to deepen our understanding of this area and what can be done to improve outcomes.

DfES

How do skills needs in the national and local economy and qualifications of our labour force match up

DWP

1.1 What are the different ways to define and measure labour market progression and sustainable work? How does this vary between groups and at different times in people's lives; How is the labour market evolving, including the demand for, and supply of, skills, and how should DWP respond to improve outcomes for individuals, employers and the economy? For example, how might the labour market change because of technological changes, economic and demographic trends, leaving the EU, changes in trade and migration, and other policy developments such as the National Living Wage?

These findings highlight the potential of new and administrative sources of data for policy analysis: mobilising more of the UK's data estate to better understand and address the UK's 'productivity puzzles'. (Wales, P. 2019) The Anatomy of UK Labour Productivity: Lessons from New and Existing Data Sources, National Institute Economic Review, 5 February.

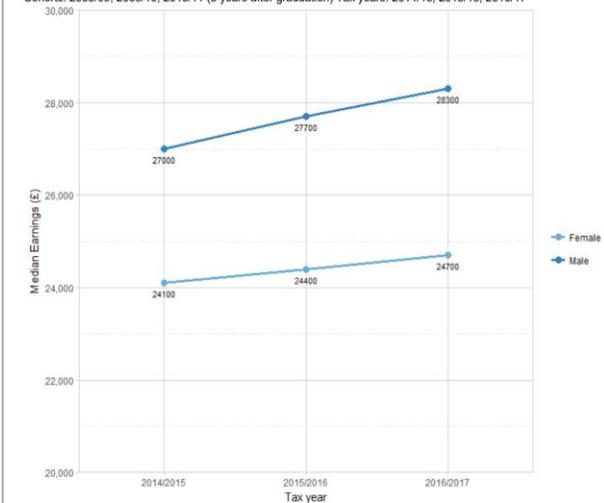
Gender gap in earnings

The gender gap in earnings five years after graduation has increased over time compared with previous tax years. In the 2014/15 tax year male earnings were 12% higher, in 2015/16 they were 14% higher, and in 2016/17 they were 15% higher. Table 7 below shows how earnings for male and female graduates have changed over time.

The figure below shows that five years after graduation, male earnings are increasing more over time than female earnings. The difference in average earnings between the 2014/15 and 2016/17 tax years was more than double for male graduates (£1,300; 5%) than the difference for female graduates (£600; 2%).

Median earnings (£) of male and female graduates five years after graduation, 2014/15, 2015/16 and 2016/17 tax years

Coverage: UK domiciled male and female first degree graduates from English HEIs, APs and FECs
Cohorts: 2008/09, 2009/10, 2010/11 (5 years after graduation) Tax years: 2014/15, 2015/16, 2016/17



¹The inflation rate used is the Consumer Prices Index including owner occupiers' housing costs (CPIH), which is the lead measure of inflation used by the Office for National Statistics.





Industrial Strategy Council

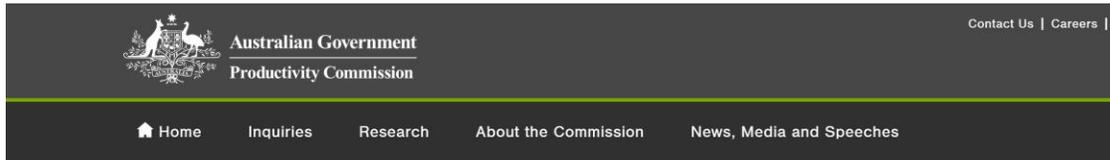


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- ▶ **Professor Jennifer Rubin** – Executive Chair of the Economic and Social Research Council (ESRC), Professor of Public Policy at Kings College London
- ▶ **Rohan Silva** – Co-founder of Second Home, Senior Visiting Fellow at LSE Cities
- ▶ **Matthew Taylor** – Chief Executive, Royal Society for the encouragement of Arts, Manufactures and Commerce (RSA)

Thank you

“Providing independent research and advice to Government on economic, social and environmental issues affecting the welfare of Australians.”



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- Economic Regulation of Airports Draft Report
- Murray-Darling Basin Plan: Five-year Assessment Inquiry Report
- Report on Government Services 2019
- Superannuation: Assessing Efficiency and Competitiveness Inquiry report

WHAT'S NEW

Regulating the Digital Economy
28 Feb 2019

Commissioner Jonathon Coppel delivered a speech to the Regulatory Reform Summit 2019 in Canberra.

VIDEO: A BETTER WAY TO SUPPORT VETERANS



VIDEO: ABOUT THE COMMISSION



on which we seek information and feedback.

Growing the Digital Economy
14 Feb 2019

A joint Australian - New Zealand research report seeks to identify opportunities for Small Medium Enterprises (SMEs).

More Reports >

Upcoming Reports >

KEY DOCUMENTS

Competition in the Australian Financial System
3 August 2018

The report looks at the provision of financial services and the interaction of market participants, issues facing the consumers of financial services and the functions and activities of the regulators.

Productivity Review
24 October 2017

This report is a look out across the landscape of factors and influences that may affect Australia's economic performance over the medium term, in order to offer advice on where our priorities should lie if we are to enhance national welfare.

Rising Inequality? A stocktake of the evidence
28 August 2018

This paper's purpose is to contribute to an informed discussion in Australia

Current Inquiries

- Remote Area Tax Concessions and Payments >
- Mental Health >
- Economic Regulation of Airports >
- Compensation and Rehabilitation for Veterans >

Completed inquiries >

Submissions

The Commission invites interested people and organisations to participate in our current public inquiries and studies.

How to make a submission >

Search all submissions >

- Employment & Education >
- Indigenous >
- Industry & Trade >
- Natural Resources >
- Productivity Analysis >
- Social & Community >

Other Roles of the Commission

- Competitive Neutrality Complaints >
- Monitoring the Performance of Government Services >
- National Indigenous Reform Agreement Performance Assessment >

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“Its role, expressed most simply, is to help governments make better policies, in the long term interest of the Australian community.”

UKRI and the Industrial Strategy



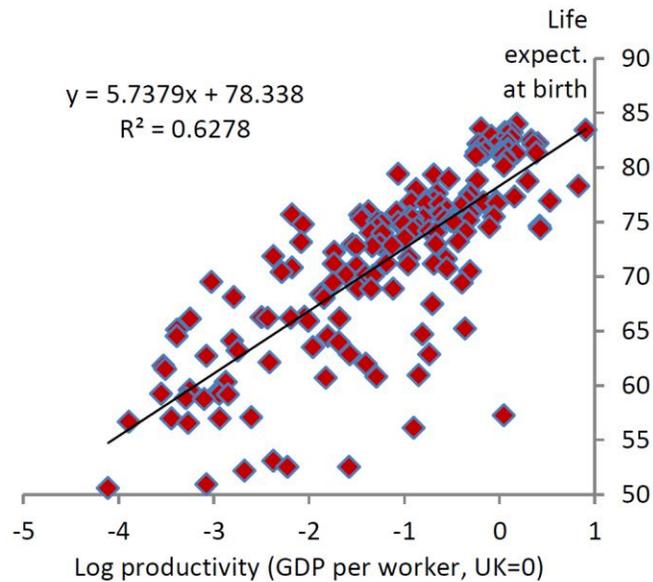
Research has highlighted that there are major and persistent differences in productivity between firms in the same sector

1. The firm in the 90th percentile of the productivity distribution produces roughly twice as much as the firm in the 10th percentile.
2. Moreover, these differences are persistent over time.
3. Firms have a big incentive to increase productivity as its strong associated with survival, for firms its literally a matter of life and death.

In economic theory, as a first approximation, it is assumed that production technology is easy to acquire and exploit. Evidence suggests otherwise. These differences highlight the importance of understanding the distribution of productivity in a nation and its dynamics (firms entering and exiting the market).

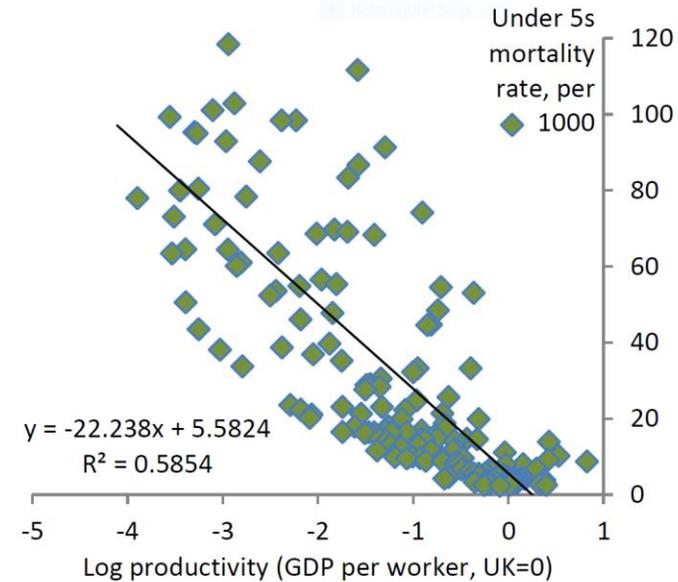
- We are increasingly bringing researchers together with policymakers and practitioners:
 - PIN ECR workshops in 2018 and 2019
 - ESRC Transforming Productivity research development workshop in Feb 2019
- In 2019 we have already awarded £3.8mn across management practices, employee engagement and firm level productivity.
- A co-ordination hub is due to start later this year to promote collaborations between academic, industry and government stakeholders.
- Productivity is one of ESRC's priorities, and we are looking to expand our portfolio.

Chart 8 – Labour productivity and life expectancy across countries, 2014



Sources: Feenstra, Inklaar and Timmer (2015); World Development Indicators, The World Bank; Bank calculations.
Notes: Productivity uses real GDP at current PPPs (2011 \$).

Chart 9 – Labour productivity and child mortality across countries, 2014



Sources: Feenstra, Inklaar and Timmer (2015); World Development Indicators, The World Bank; Bank calculations.
Notes: Productivity uses real GDP at current PPPs (2011 \$).

From speech by Sylvano Telstra, Bank of England <https://www.bankofengland.co.uk/-/media/boe/files/speech/2018/the-fall-in-productivity-growth-causes-and-implications>



Growing the AI & Data-driven Economy

We will put the UK at the forefront of the artificial intelligence (AI) and data revolution



Clean growth

We will maximise the advantages for UK industry from the global shift to clean growth



Ageing society

We will harness the power of innovation to help meet the needs of an ageing society

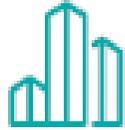


The Future of Mobility

We will become a world leader in the way people, goods and services move



Strengthening the foundations of the UK economy



Building long-term, strategic partnerships with business



Tackling our shared 'Grand Challenges'

So, the question is not new:

“We compare this [input] index with our output index and call any discrepancy ‘productivity’ . . . It is a measure of our ignorance, of the unknown, and of the magnitude of the task that is still ahead of us.” Griliches (1961, 446)

Griliches, Zvi (1961). “Comment on An Appraisal of Long-Term Capital Estimates: Some Reference Notes by Daniel Creamer.” Output, Input, and Productivity Measurement (NBER), pp. 446–9.