

What graduate skills do employers seek?

-- Work in Progress --

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[Iris View Profile \(ucl.ac.uk\)](https://iris.ucl.ac.uk/iris/view/10001/10001)

The Research Questions

- What are the major trends in the graduate labour market? How well, if at all, can those trends be understood through a demand side analysis?
 1. How much have qualification requirements changed during the mass expansion of higher education?
 2. What job tasks predict degree requirements. How much of the changes in degree requirements is *task-warranted*?
 3. What is the importance of task-warranted degree requirements for graduate wages?

Literature:

- Vast literature on the graduate wage premium (e.g., Britton et al., 2020). Focused on supply side and programme characteristics. While insightful, job destinations receive little attention.
- Large ‘overeducation’ literature. Finds an almost universal pay penalty (e.g., Green and Henseke, 2021), but with mixed evidence on trends. Graduates are split into a group of matched and mismatched graduates; usually with little regard for job content.
- Van der Velden and Bijlsma (2019) argue skills won’t become productive unless used on the job.

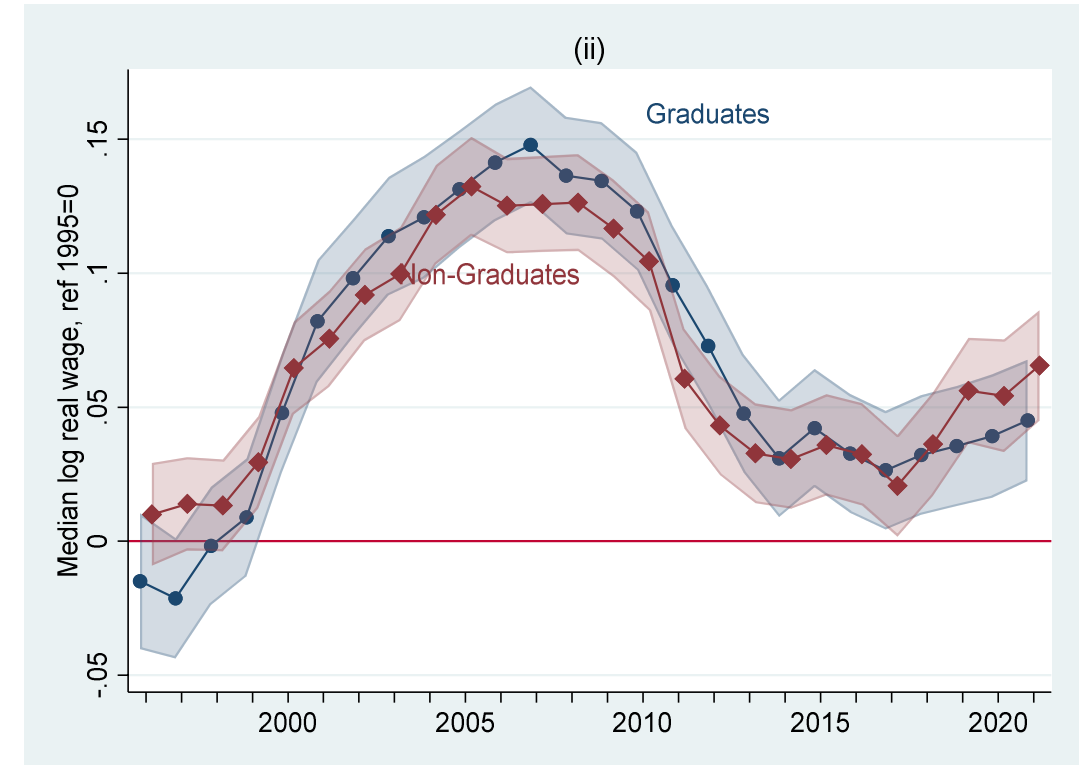
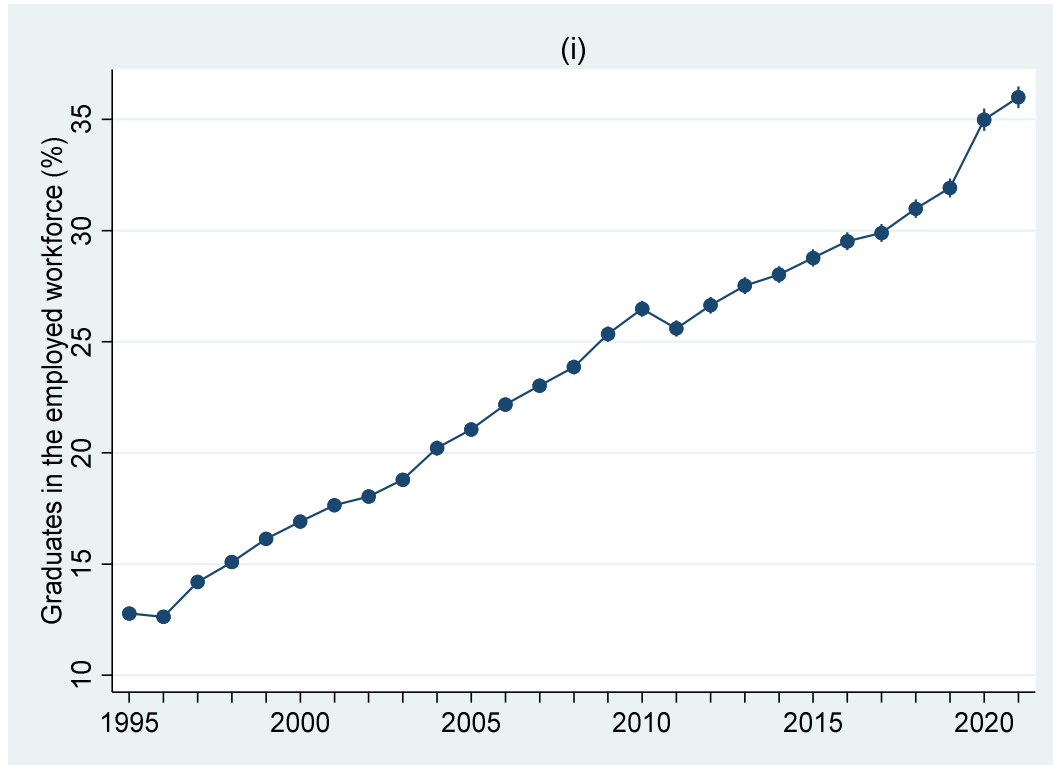
The 'Task approach' (Acemoglu and Autor, 2011): Outline

- Jobs are conceived as bundles of tasks.
- A *task* is “a unit of work activity that produces output (goods and services)”.
- A *skill* is “a worker’s endowment of capabilities for performing various tasks”.
- There is no one-to-one mapping of skills to tasks. Skills determine how many tasks a worker can carry out per unit of time (e.g., per hour).
- Digitalisation is contributing to the replacement of labour in tasks that can be made sufficiently routine for automation.
- By contrast, digitalisation complements high-skilled, usually university-educated workers in carrying out: “problem-solving and complex communication activities”.

The “Task approach” (Acemoglu and Autor, 2011): Predictions

1. Job task profiles shifted towards cognitive and interpersonal tasks thus driving up skills and qualification requirements.
2. As digitalisation complements graduate skills, graduates became more productive in a wider range of tasks including in previously non-graduate jobs.
3. The demand and thus pay for university-educated rose in relative and absolute terms.
4. In the absence of skill-biased technological change, graduates extend their range of tasks (i.e. move into non-graduate jobs) but with downward pressure on graduates’ pay and the pay of others.

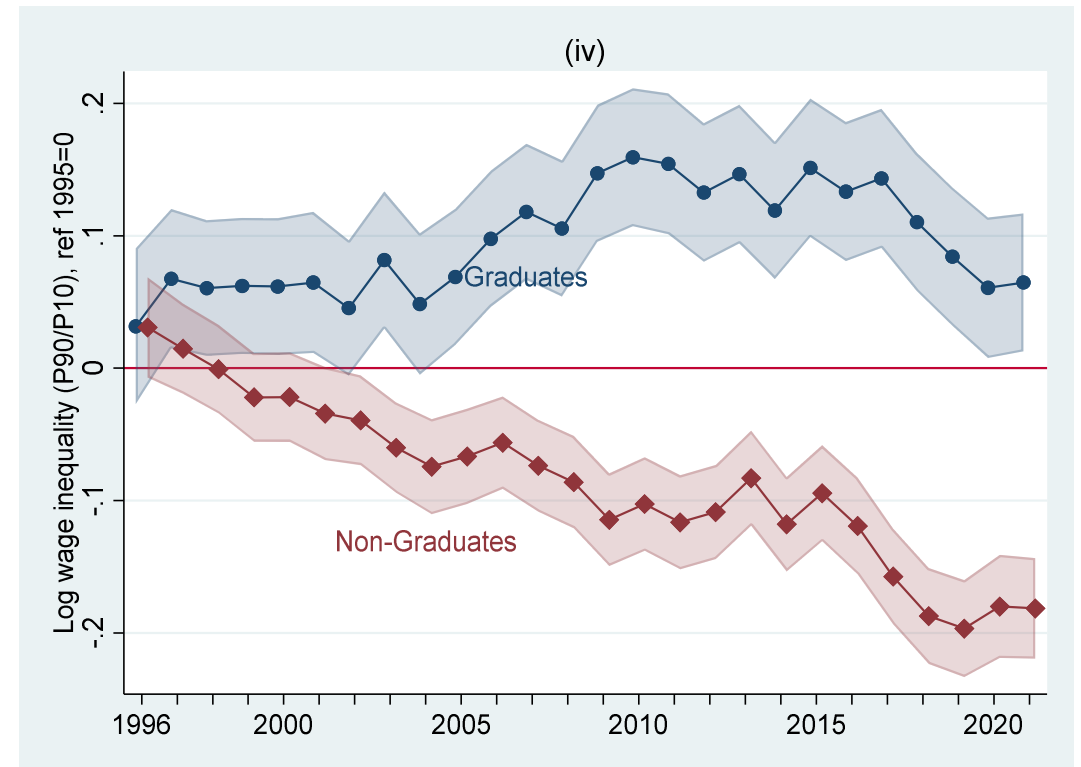
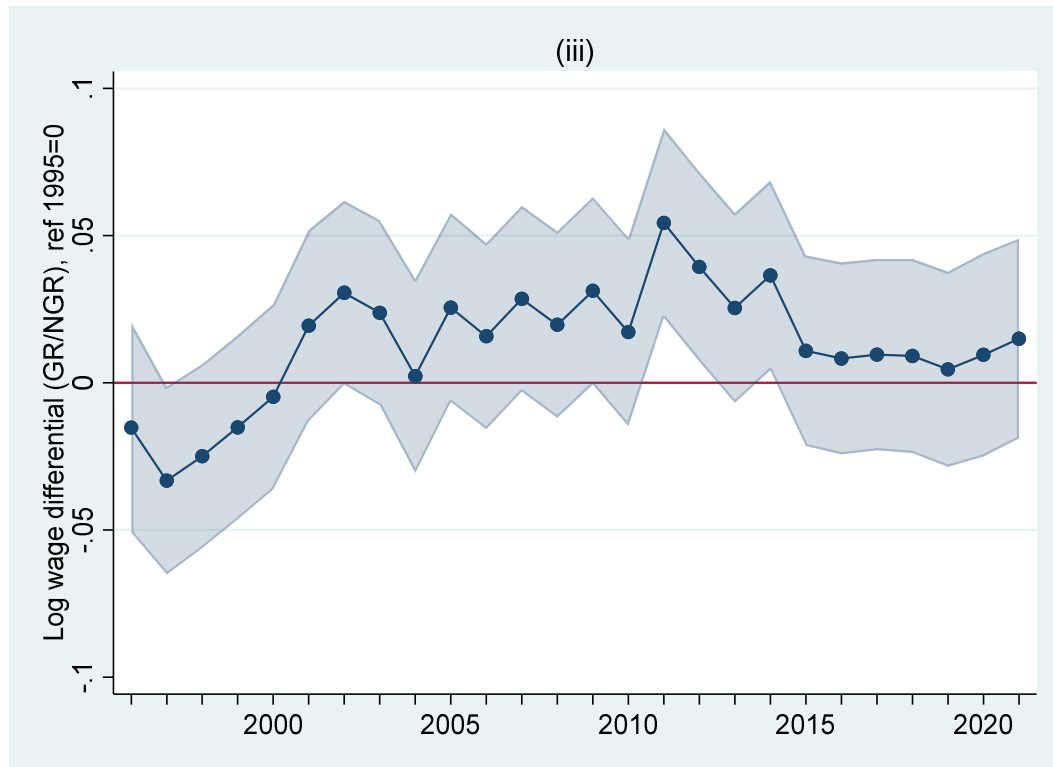
UK graduate labour market 1995-2021: University attainment and wages



Source: [UK LFS 1995Q1-2021Q4](https://www.uklfs.ac.uk/)

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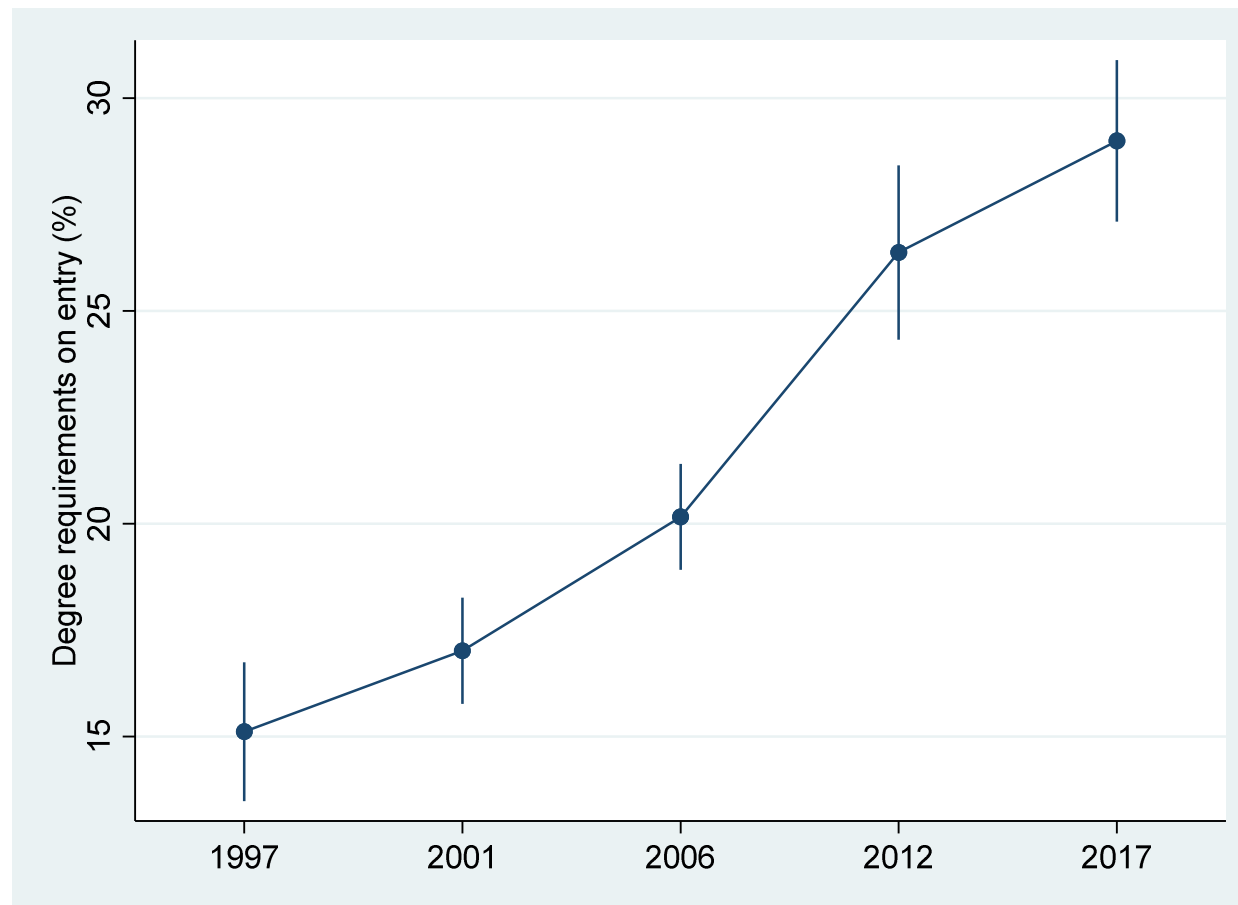
UK graduate labour market 1995-2021 : University pay premium and pay inequality



Source: [UK LFS 1995Q1-2021Q4](https://www.lfs.gov.uk/)

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Rising degree requirements



Source: [Skills and Employment Survey Series 1997, 2001, 2006, 2012, 2017](#)

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Which job tasks predicted degree requirements 1997-2017?

Positive predictors:

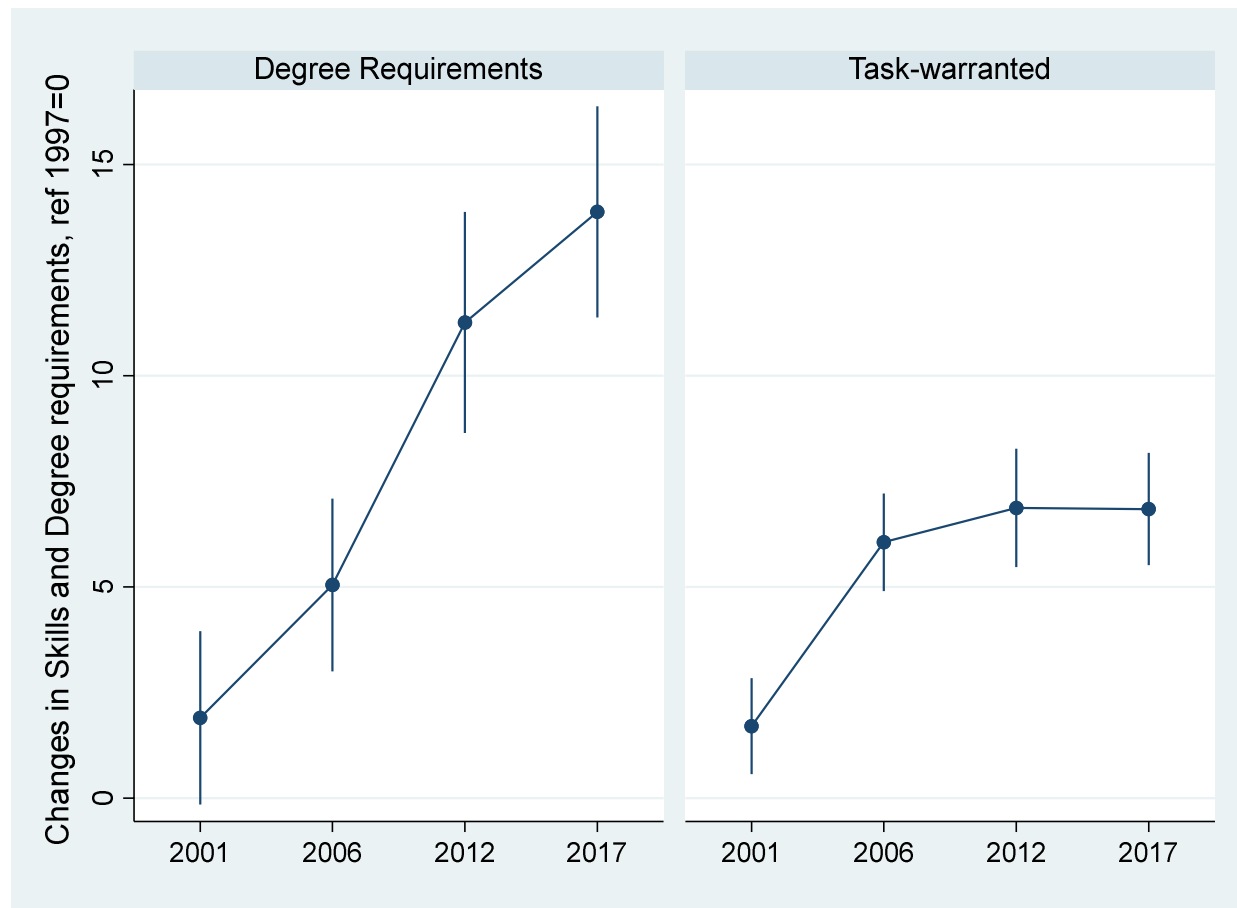
- Computer use
- Professional communication
- Task variety
- Specialist knowledge
- Information processing
- Literacy
- Self-planning
- Problem-solving

→ Mix of non-routine cognitive and interpersonal tasks as well as knowledge requirements.

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Rising degree requirements: Predictions from job task profiles

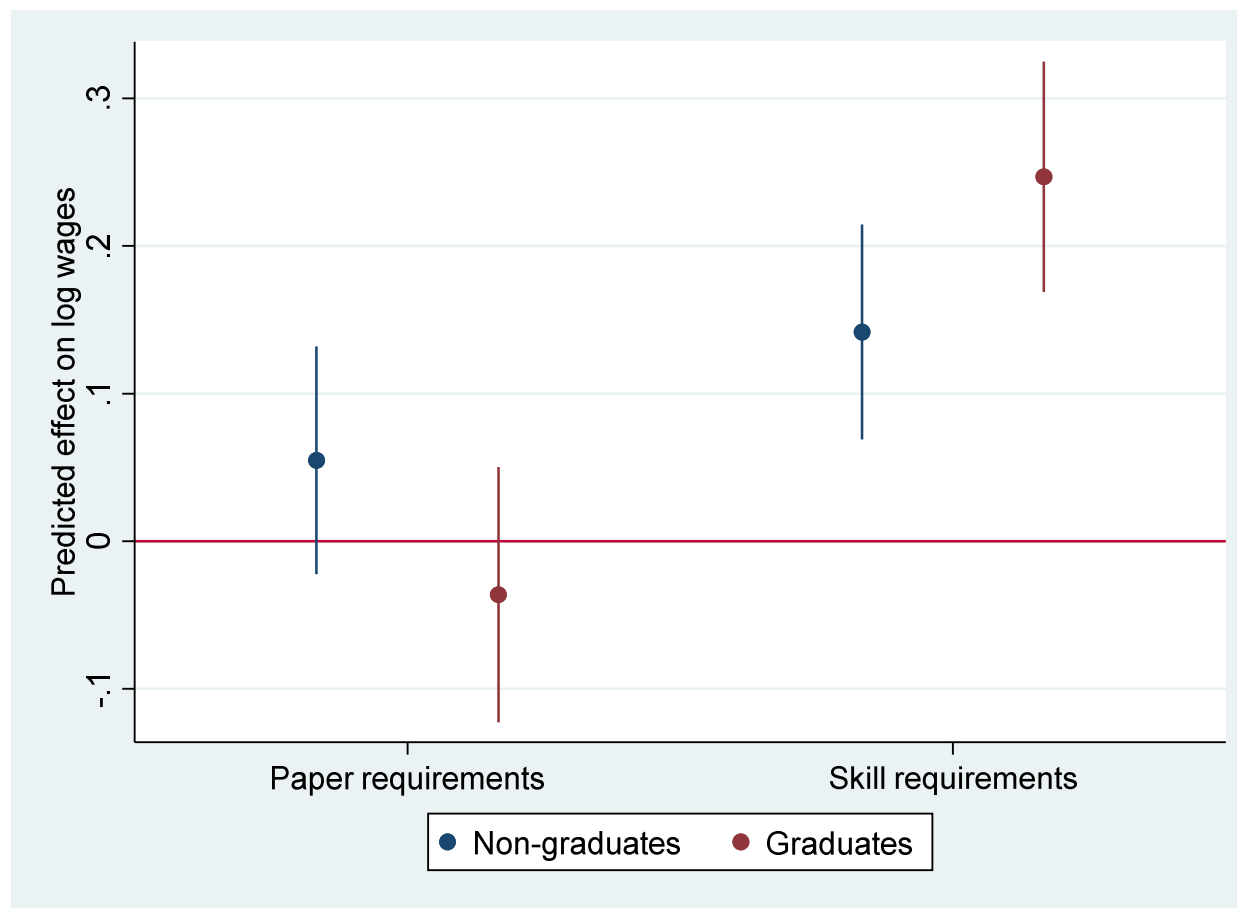
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Paper requirements or job skills: What matters for pay?

Source: [UK LFS 1995Q1-2021Q4](https://www.uklfs.ac.uk/)

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Conclusions

- Ongoing expansion of university attainment. Stable pay premium due to parallel trends in graduate and non-graduate pay. Graduate wage inequality has started to fall.
- Decoupling of degree requirements from job task content. After 2006, degree requirements rose in otherwise identical jobs as far as we can observe.
- Evidence for graduate skill-task complementarities. Graduate skills become productive as they are deployed to carry out ‘high-skill’ tasks. Task-unwarranted paper requirements ‘hurt’ graduate pay.
- Task and degree requirements explain 36% of graduate wage growth 1997-2006 and 21% of the drop in real pay 2006-2017.
- Next steps: Revisit paper and graduate skills requirements in job vacancy data

References

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- Britton, J., Dearden, L., van der Erve, L., & Waltmann, B. (2020). The impact of undergraduate degrees on lifetime earnings: Research report, February 2020.
- Delaney, J., McGuinness, S., Pouliakas, K., & Redmond, P. (2020). Educational expansion and overeducation of young graduates: A comparative analysis of 30 European countries. *Oxford Review of Education*, 46(1), 10-29.
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Universities and Regions: confronting the levelling up agenda

Michael Shattock and Aniko Horvath

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The Project

- Universities and Regions: The impact of locality and region on university governance and strategies—Shattock and Horvath
- 12 universities—Russell Group, other pre-1992, post-1992, post-post-1992 drawn from England Scotland and Wales
- 3 comparator European countries—Norway, Ireland (Ellen Hazelkorn) and Germany (Jurgen Enders) selected for the contrasts they offer in respect to regional governance

Levelling up

- Regional inequality--McCann 2019, IPPR North 2022, Levelling Up White Paper 2022
- The 10 top performing localities are in London and peripheral towns, the lowest are 2 in SW, 4 in WM and 1 in NW (UK Competitive Index)
- Of 317 Local Authority Districts 260 have at least one of the 20% most deprived areas (English Indices of Deprivation); four of these areas contain universities in this study

University differentiation and its relationship with regional inequalities

- 41% of publicly funded R&D spent in the 'Golden Triangle' of Oxford, Cambridge and London
- 63% of QR funding goes to the 24 members of the Russell Group; 10% receive 48%; 63 teaching-led universities receive 13%
- 63% of QR funding goes to the South, 22.5% goes to North and 13% to West Midlands

Students, regions and universities

Percentage of students from university home regions* and of graduates retained in home regions

[*Regions defined by the individual institutions]

| | Regions → universities | | Graduates → home regions | |
|---------------|------------------------|----|--------------------------|------|
| | | % | | % |
| Russell Group | A | 14 | | 33.7 |
| | B | 24 | | 34.6 |
| Other pre-92 | C | 27 | | 31.5 |
| | D | 24 | | 24 |
| Post-92 | E | 71 | | 71 |
| | F | 78 | | 59 |
| | G | 63 | | 54.7 |
| | H | 76 | | - |
| Post-post-92 | I | 79 | | 54.7 |
| | J | 56 | | 31 |
| | K | 67 | | 76 |
| | L | 76 | | 71.3 |

Graduate retention in deprived areas

- Schuller, T *et al* (2004) *The Benefits of Learning* Routledge
- Social capital, civic engagement, SME enterprise, public service
- Need for parity of esteem for ‘levelling up’ between innovation hubs in inner cities and reinforcing economic and social networks in deprived areas

The FE/HE interface

- 89% of colleges, on a return rate of 45%, had formal programme partnerships with universities; more than 50% of universities involved (Shattock and Hunt 'Intersectoral relationships within higher education: the FE/HE interface' CGHE Working Paper No 70, 2021)
- The role of FE colleges in reaching communities
- The evidence from college/ university networks
- The case for a tertiary system

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Centralisation and decentralisation: ‘levelling up’ and the implications for organisational change—the research findings

- Restructure FE and HE in England to a tertiary education system (Wales has already gone tertiary, Scotland is anticipating doing so)
- Recognise the success of decentralisation and devolution of HE to Scotland and Wales as being applicable in England
- Decentralise FE and HE in England to regions, retaining research as a UK central function
- Utilise the metro mayor/ Combined Authorities as the vehicles for the decentralisation of governance responsibilities to regions; protect institutional autonomy by requiring each region to establish a policy and governance committee for the tertiary system in their region and to facilitate improved regional coordination