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Growth Seminar



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Overview

- Young people's education and labour market choices and experiences matter for growth for at least two reasons:
 - The skills and qualifications they acquire contribute to productivity
 - Youth unemployment/inactivity (which can be affected by short-term macroeconomic conditions) has long-term consequences
- Start by considering what's happened to young people's education and labour market choices over time in the UK
- Examine the causes and consequences of youth unemployment
- Document the demand for skills in the UK, including demand for:
 - Literacy and numeracy skills
 - STEM skills/qualifications
- Conclusions

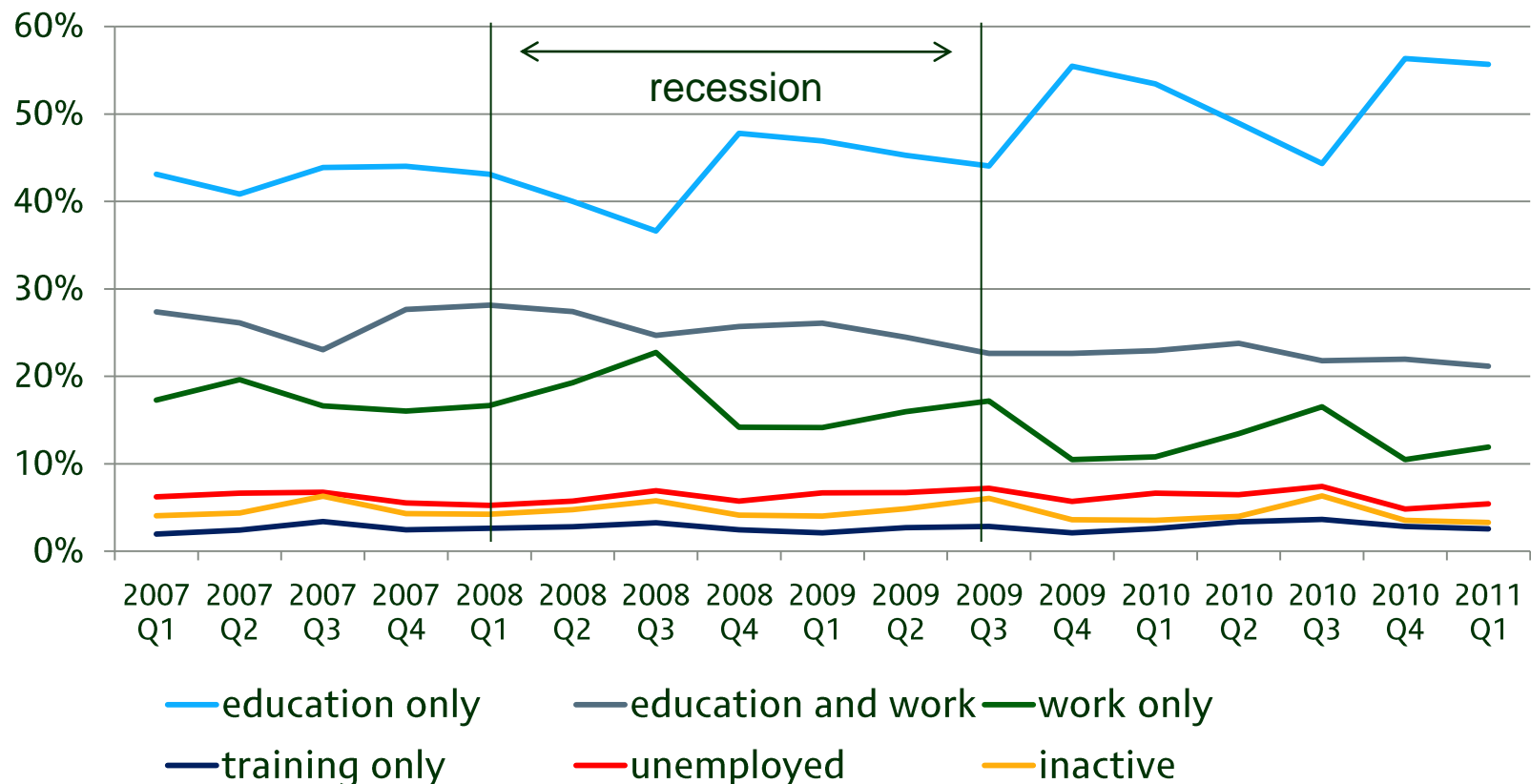
Young people's education and labour market choices

Outline

- How have young people's education and labour market experiences changed in the short-term (i.e. since the recession)?
- Do these patterns differ from the long-term trends?
- How does the UK compare from an international perspective?

Since recession, % of young people aged 16-18 in work has fallen, but % in education has increased by a roughly similar amount, so % unemployed or inactive unchanged

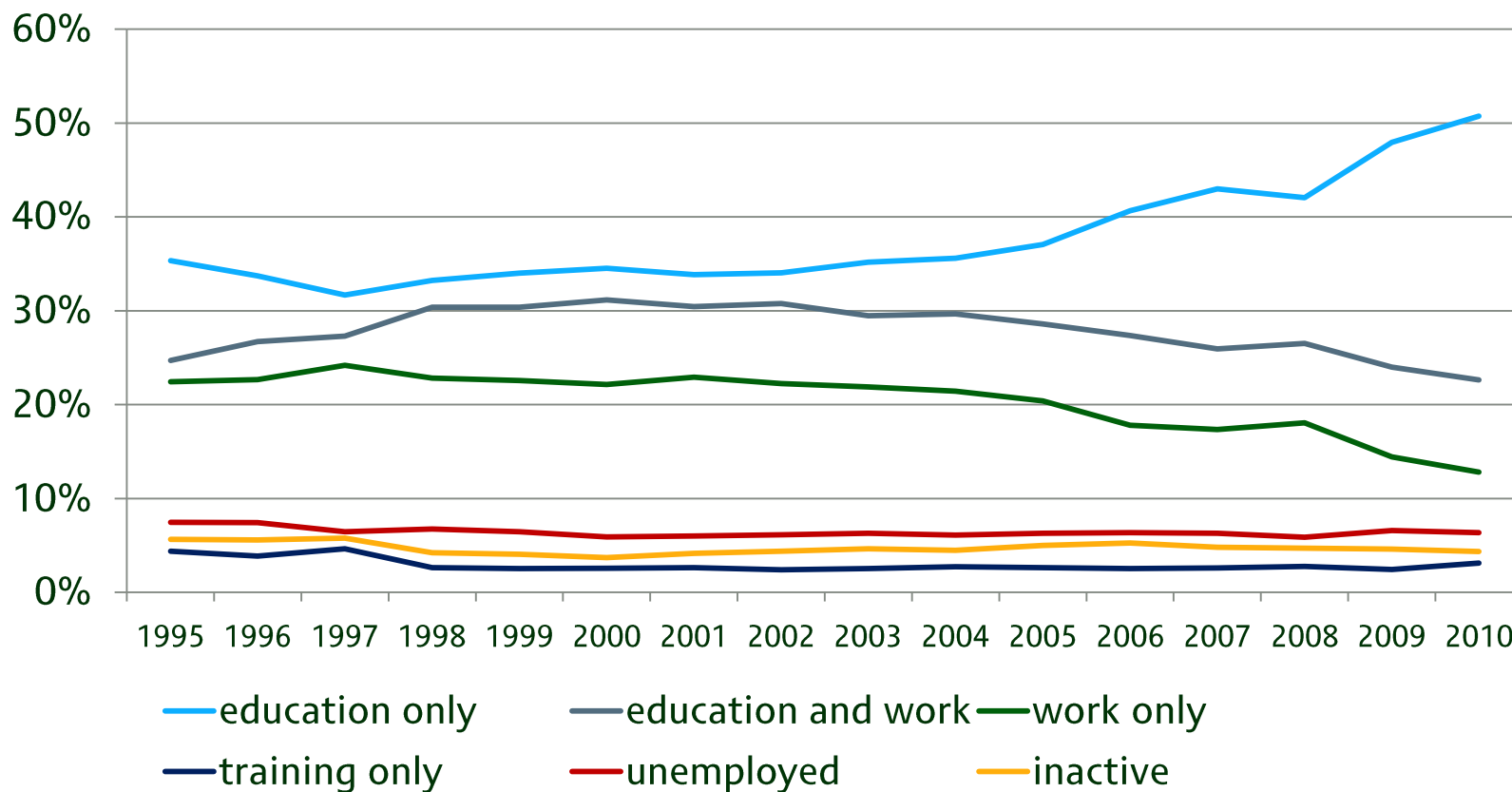
Education and labour market choices of young people aged 16-18 in the UK



Source: Authors' calculations using UK Labour Force Survey.

This pattern has persisted over the longer term

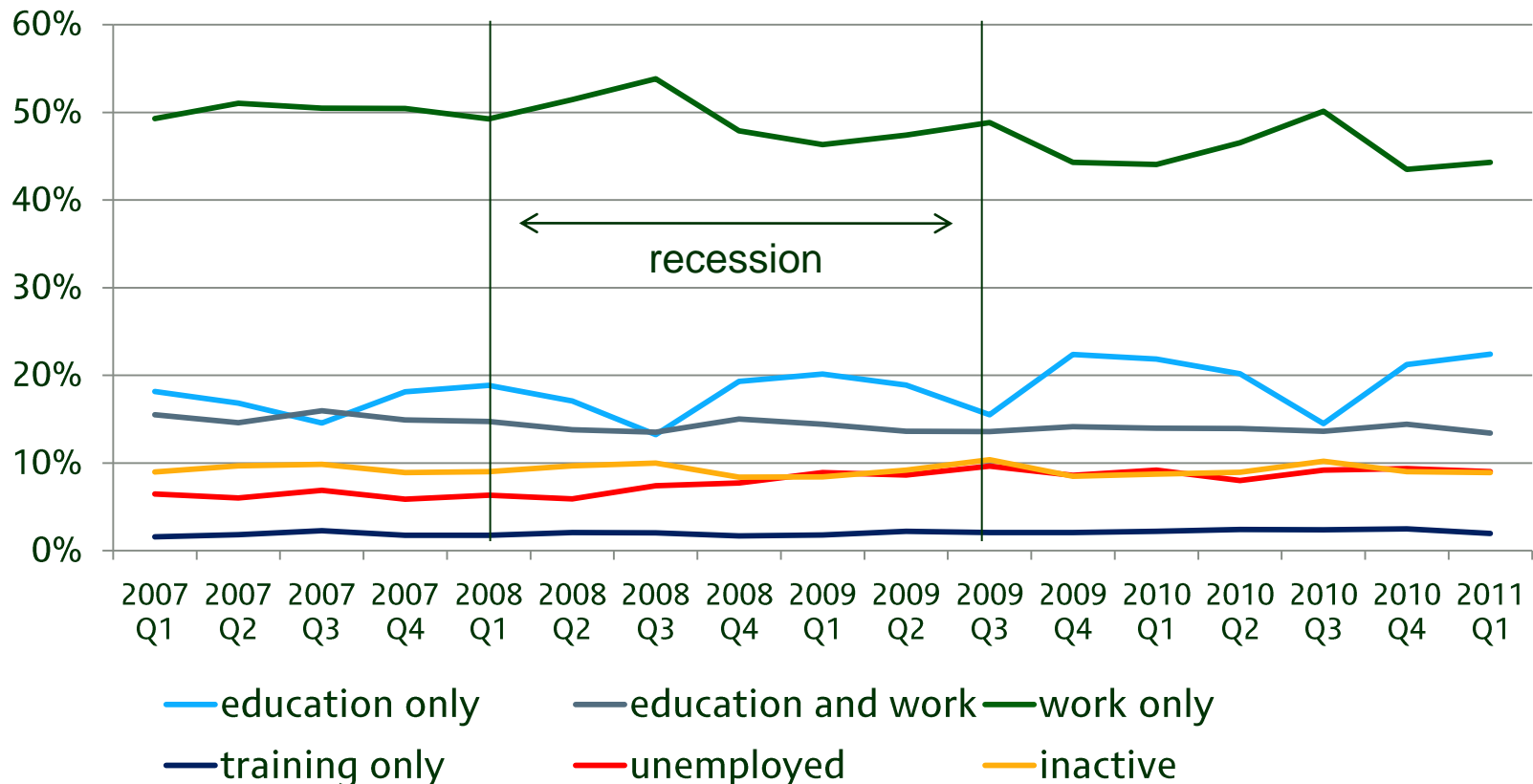
Education and labour market choices of young people aged 16-18 in the UK



Source: Authors' calculations using UK Labour Force Survey.

For those aged 18-24, % in education has increased by less than the % in work has fallen, so % unemployed (but not inactive) has increased as well

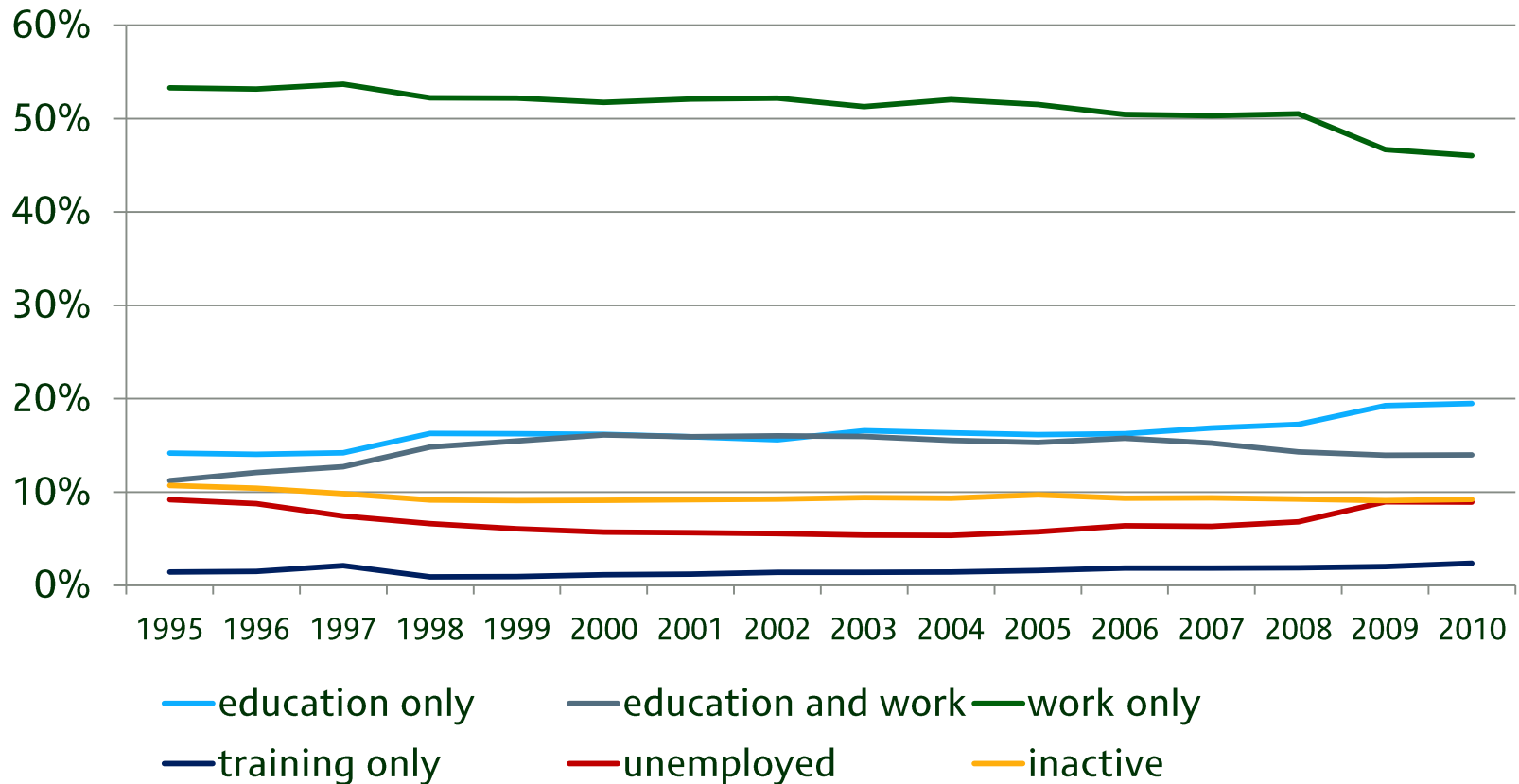
Education and labour market choices of young people aged 18-24 in the UK



Source: Authors' calculations using UK Labour Force Survey.

These patterns have persisted to a lesser extent than for 16-18 year olds over the longer term

Education and labour market choices of young people aged 18-24 in the UK



Source: Authors' calculations using UK Labour Force Survey.

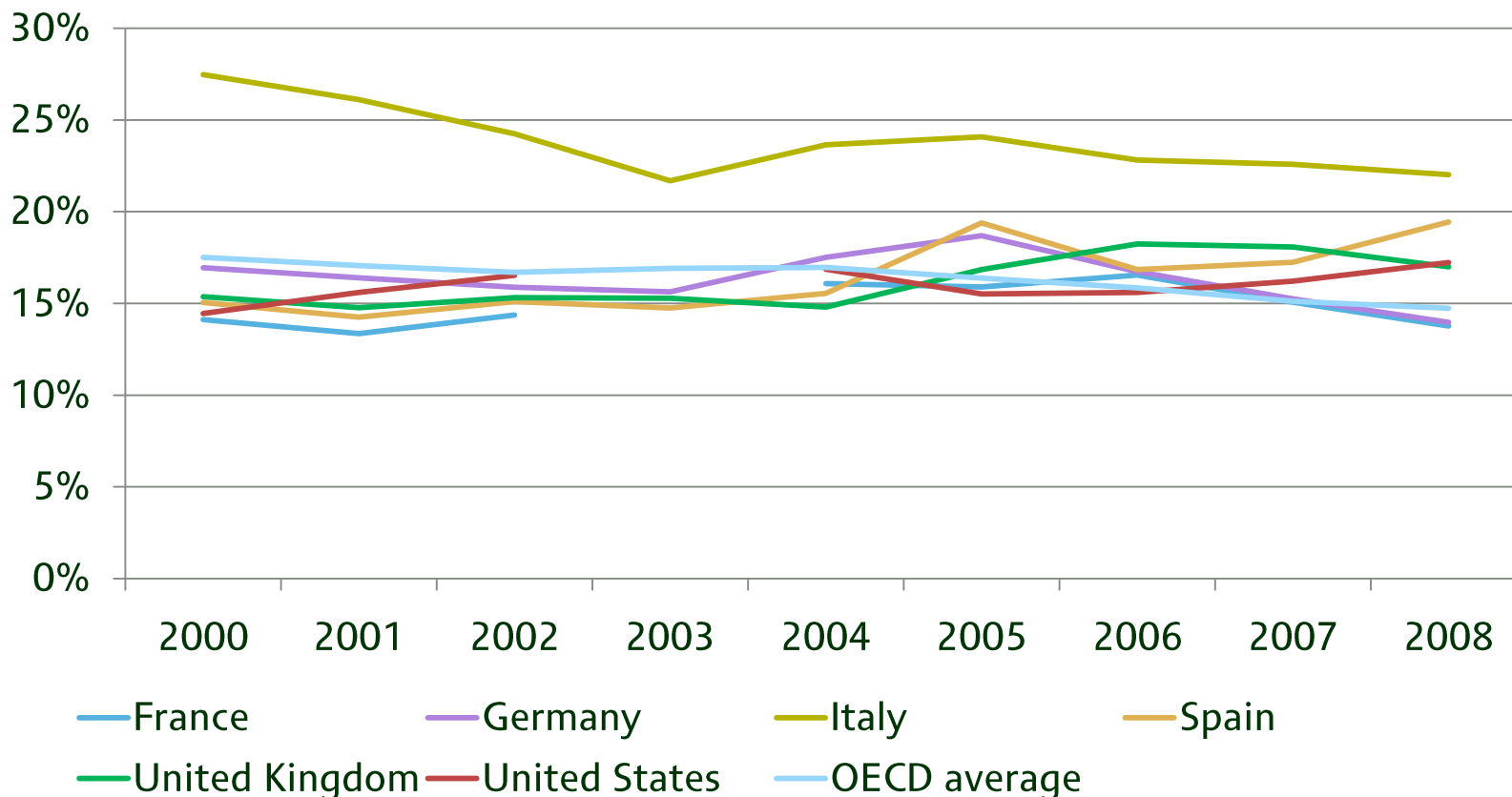
Some evidence that young people have suffered disproportionately as a result of the recession, but this is at least partly to do with the rising cohort size



Source: Bell, D. & D. Blanchflower (2010), UK Unemployment in the Great Recession, *National Institute Economic Review*, Vol. 214, pp. R3-R25.

No evidence that the UK is performing particularly badly from an international perspective in terms of NEET rates for 20-24 year olds

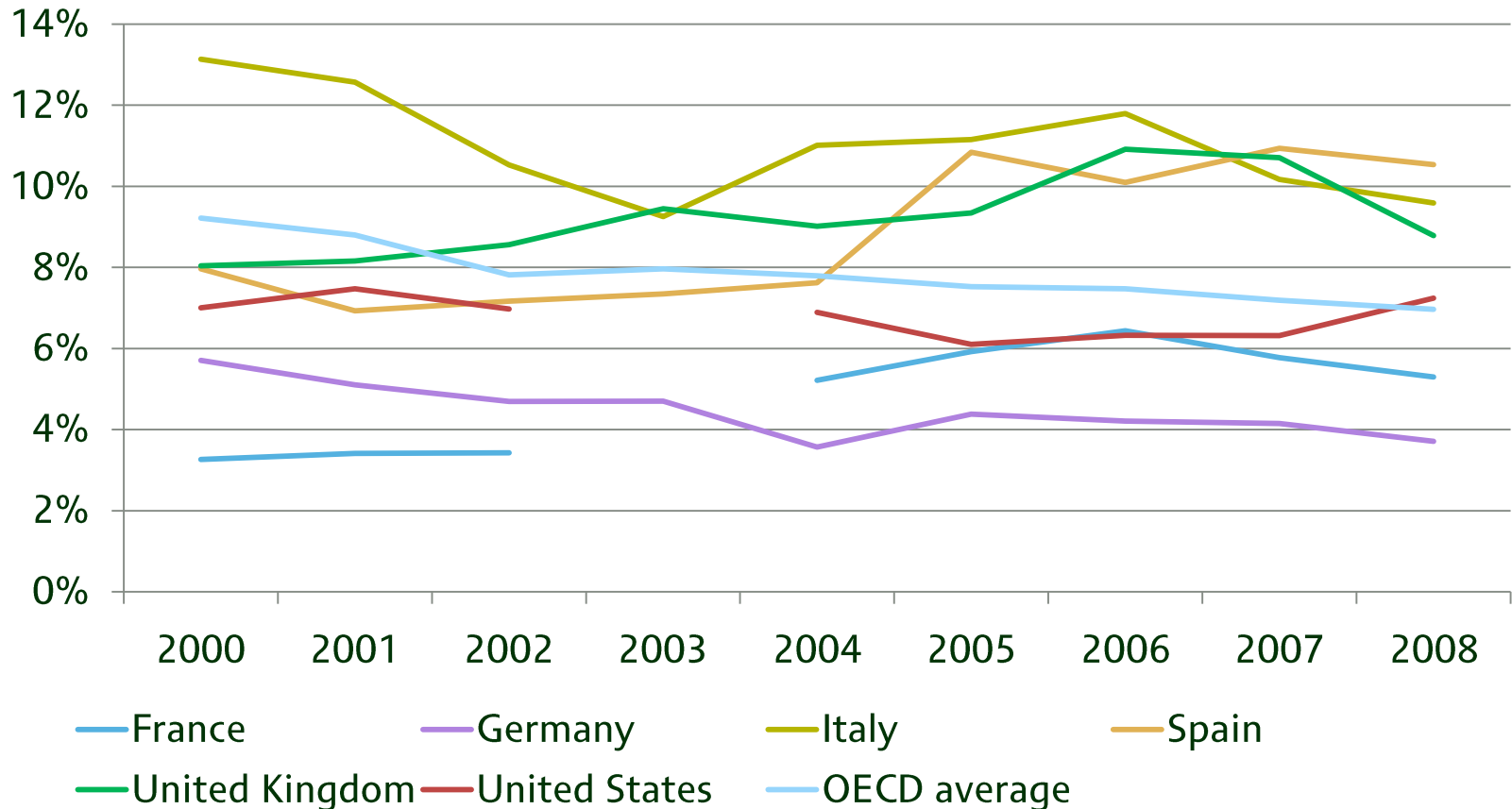
NEET rates for 20-24 year olds in selected OECD countries



Source: OECD Education at a Glance 2010.

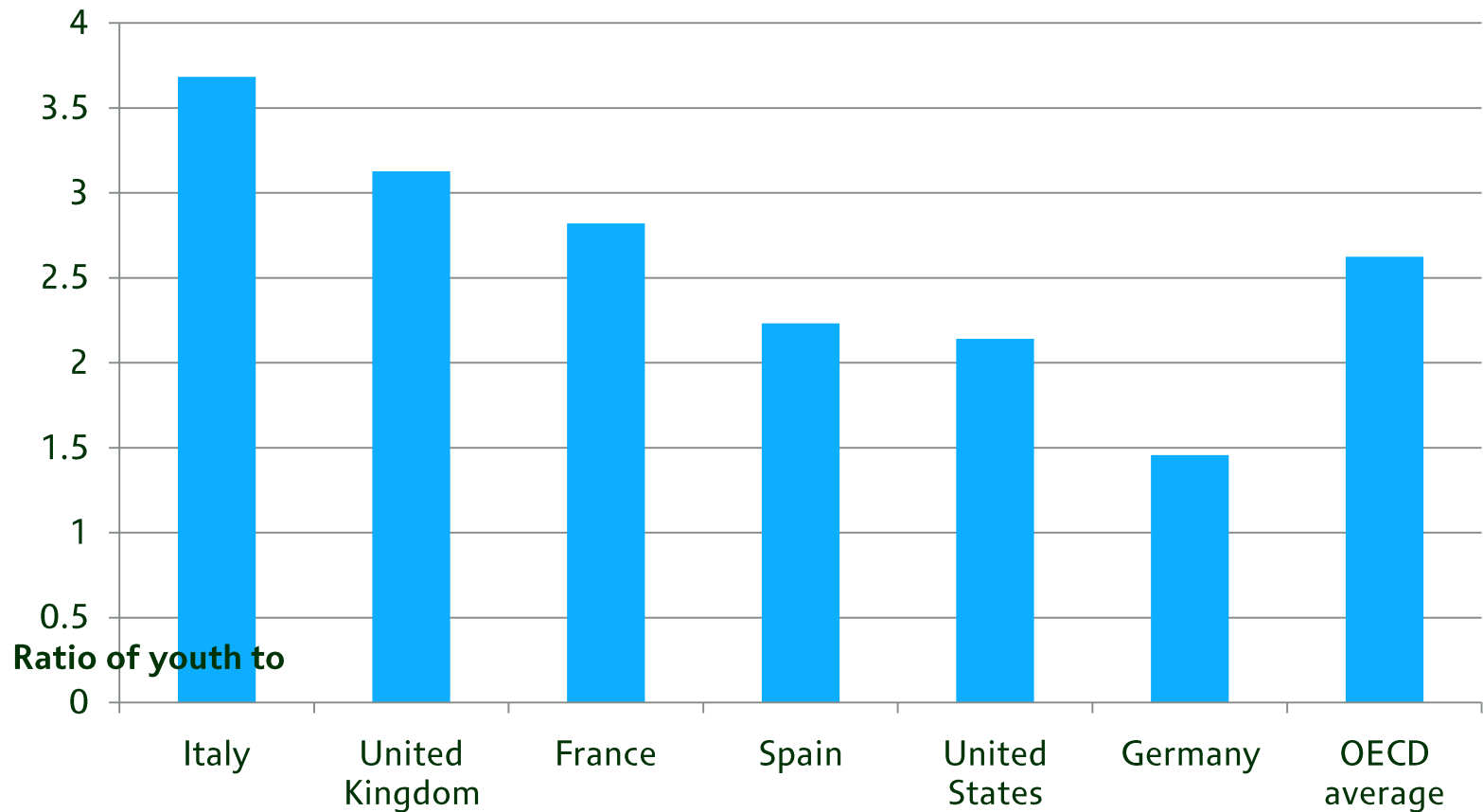
But some evidence that the UK is above the OECD average in terms of NEET rates for 15-19 year olds

NEET rates for 15-19 year olds in selected OECD countries



Source: OECD Education at a Glance 2010.

The ratio between youth and adult unemployment in 2010 was also higher in the UK than in other countries



Source: figures provided courtesy of Sebastien Martin, Employment Analysis and Policy Division, OECD.

Summary

- While there is some evidence that young people have been hit disproportionately hard by the recession, they have experienced only a modest decline in employment and an almost commensurate increase in education participation, continuing a longer-term trend
 - Whether the increase in participation since the recession will provide valuable skills/qualifications, or is simply hidden unemployment, is clearly an important issue; is getting people through the door enough?
- However, the UK youth labour market compares unfavourably along some dimensions (e.g. the 15-19 year old NEET rate; the ratio of youth to adult unemployment) to other OECD countries, suggesting more could be done to ensure smoother transitions

Causes and consequences of youth unemployment

Outline

- Role of macroeconomic conditions in young people's education and labour market choices
- Consequences of youth unemployment for subsequent labour market and other outcomes
- Risk and protective factors associated with being NEET, including the key role of prior attainment
- Evidence on the effectiveness of active labour market policies in reducing youth unemployment

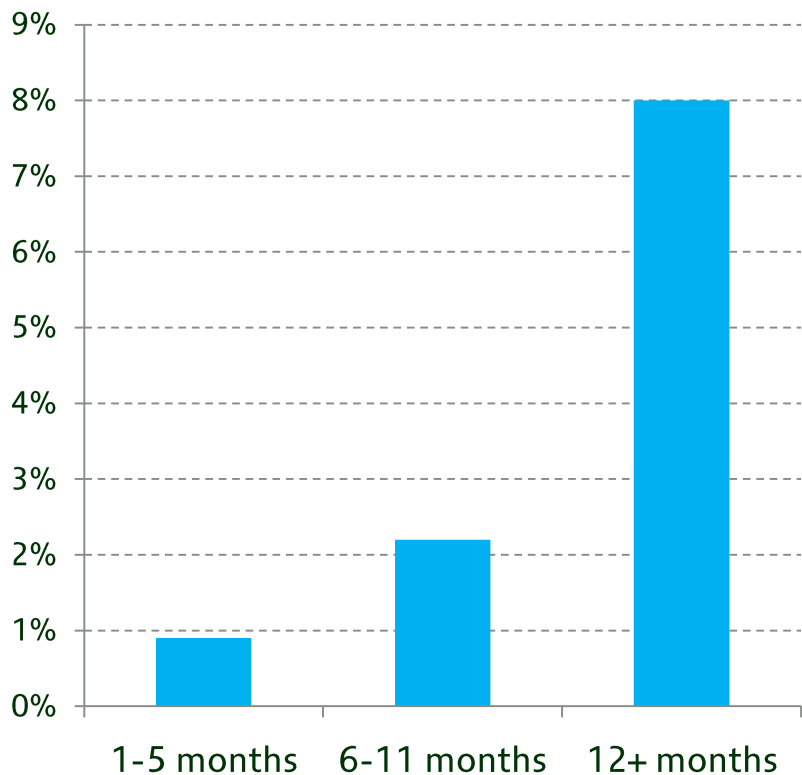
Role of macroeconomic conditions in young people's education and labour market choices

- Young people seem to be disproportionately affected by macroeconomic conditions:
 - Unemployment increases markedly during recessions and falls in booms
 - Participation is affected more than hours
 - Even those graduating from college during recession are badly affected
- Not because young people are pricing themselves out of the market
 - Ratio between youth and adult wages has fallen over time
 - Introduction of minimum wage has not adversely affected youth employment (or education choices) so far

Source: literature summarised in Bell, D. & D. Blanchflower (2010), *Youth Unemployment: Deja Vu?*, IZA Discussion Paper No. 4705.

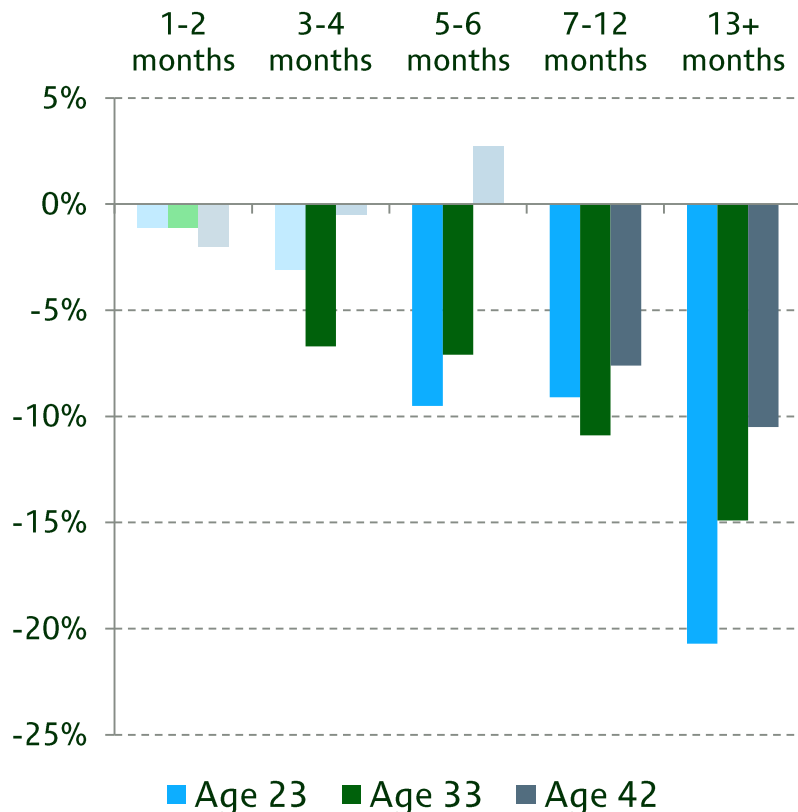
Youth unemployment increases the probability of being unemployed in future and reduces wages

Impact of number of months spent unemployed aged 16-23 on % of time spent unemployed aged 28-33 for men



Source: Gregg, P. (2001), The impact of youth unemployment on adult unemployment in the NCDS, *The Economic Journal*, Vol. 111, No. 475, Features, pp. F626-F653.

Impact of number of months spent unemployed aged 16-23 on wages for men



Source: Gregg, P. & E. Tominey (2005), The wage scar from male youth unemployment, *Labour Economics*, Vol. 12, pp. 487-509.

Long-term consequences of youth unemployment

- Youth unemployment affects other outcomes as well:
 - Increases crime contemporaneously
 - Reduces happiness (now and in future)
 - Increases stress, depression & other mental illnesses (now and in future)
 - Affects individuals' beliefs later in life:
 - Those experiencing a recession aged 18-25 believe that success in life depends more on luck than on effort, support more government redistribution, but have less confidence in public institutions.

Source: literature summarised in Bell, D. & D. Blanchflower (2010), *Youth Unemployment: Deja Vu?*, IZA Discussion Paper No. 4705.

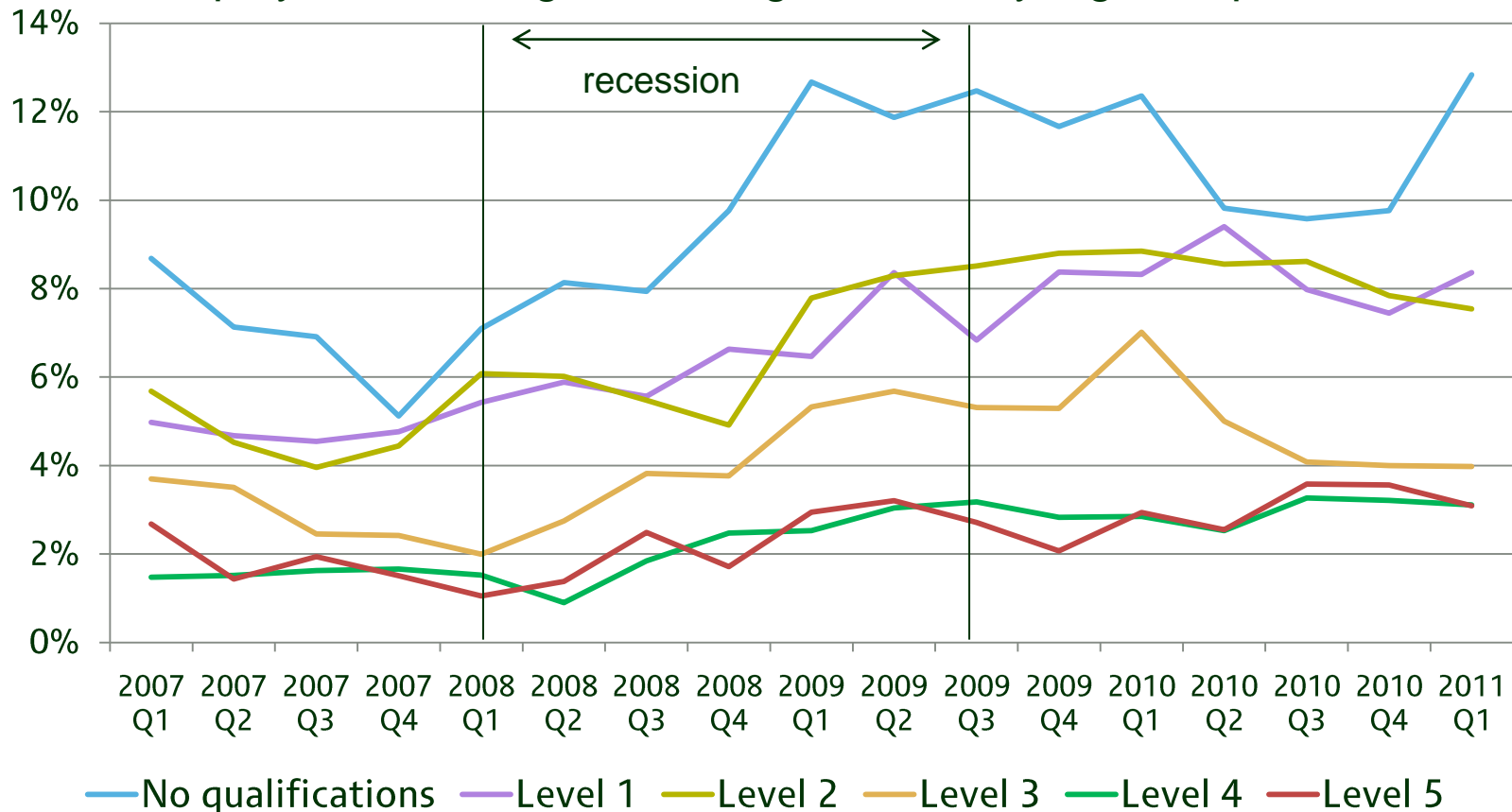
What are the risk factors associated with being NEET?

- Young people are **more** likely to be NEET at age 16/17 if at age 14:
 - They live in a deprived neighbourhood
 - They regularly play truant from school
- Young people are **less** likely to be NEET at age 16/17 if at age 14:
 - They have higher belief in their own ability
 - They enjoy school and find it worthwhile
 - They think they will stay on for further and higher education
 - They participate in positive activities (e.g. playing sport)
- And of course prior attainment is key . . .

Sources: Chowdry, H. C. Crawford & A. Goodman (2009), *Drivers and Barriers to Educational Success: Evidence from the Longitudinal Study of Young People in England*, DCSF Research Report RR102; Crawford, C., K. Duckworth, A. Vignoles & G. Wyness (forthcoming), *Young People's Education and Labour Choices Aged 16/17 to 18/19*, CAYT Research Report

Individuals with lower educational qualifications are more likely to be unemployed; they have also been harder hit by the recession

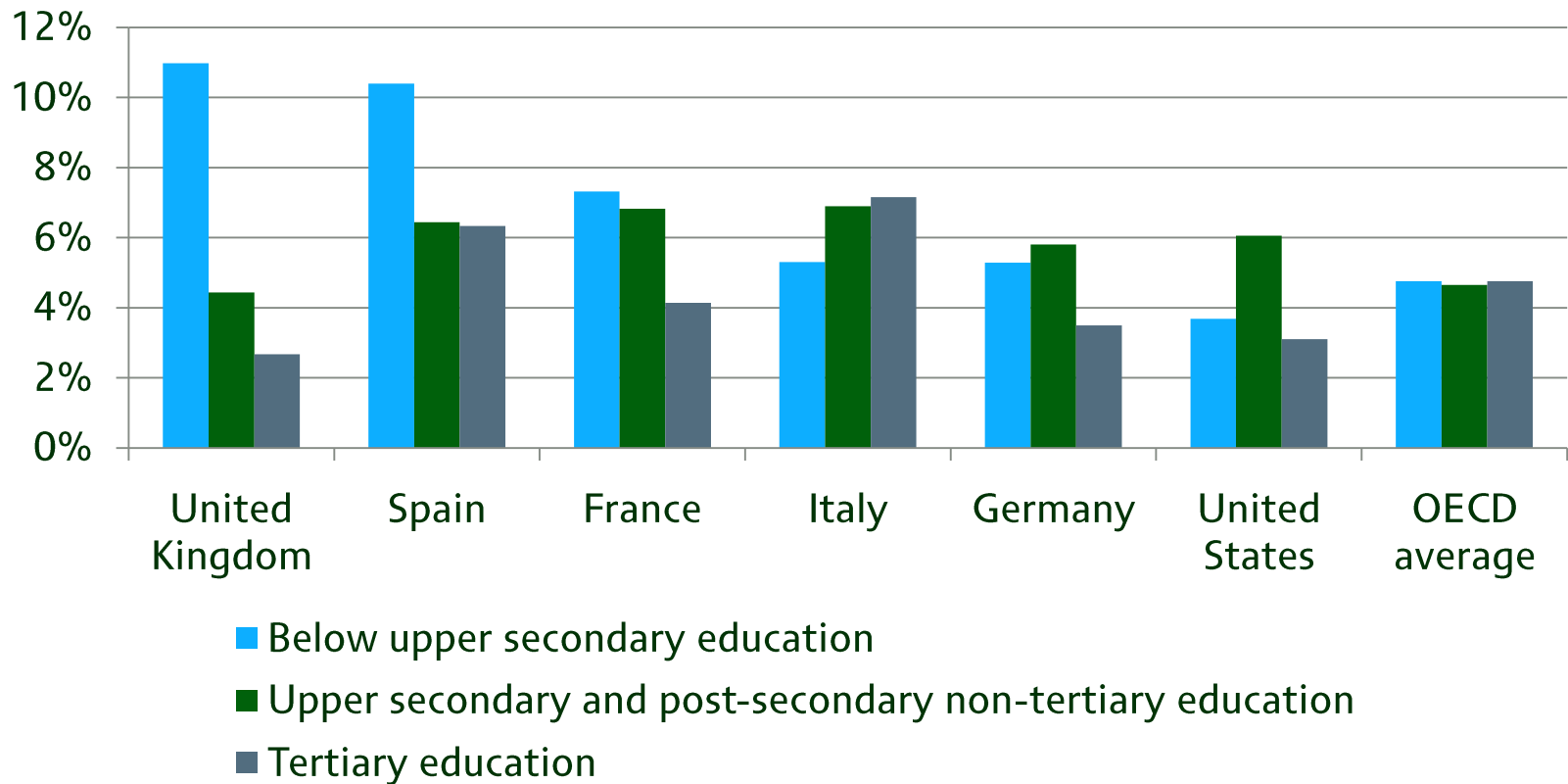
Unemployment amongst those aged 25-29 by highest qualification



Source: Authors' calculations using UK Labour Force Survey.

There is a stronger relationship between education and youth unemployment in the UK than elsewhere

Unemployment rates for 15-29 year olds by qualification level



Source: OECD Education at a Glance 2010.

Can active labour market policies help to reduce youth unemployment?

- The New Deal for Young People has helped young people into work:
 - It increased employment transitions by around 5 percentage points
 - The subsidised employment route seems to be particularly effective
- But:
 - The effects seem to be relatively short-lived
 - Evidence is from a time of labour market prosperity
 - It is more effective in areas with low unemployment rates
- There is relatively little evidence of successful (and cost effective) training and job subsidy programmes in the UK or the US
 - When asked how much training programmes in the US had helped their clientele, James Heckman replied “zero is not a bad number”

Sources: Blundell, R., M. C. Dias, C. Meghir & J. Van Reenan (2004), Evaluating the employment impact of a mandatory job search program, *Journal of the European Economic Association*, Vol. 2, No. 4, pp. 569-606; Dorsett, R. (2006), The New Deal for Young People: effects on the labour market status of young men, *Labour Economics*, Vol. 13, No. 3, pp. 405-422; Podvinsky, J. & D. McVicar (2007), *Does the impact of active labor market programs depend on the state of the labor market? The case of the UK New Deal for Young People*, University of Southampton Discussion Paper 07-04.

Summary

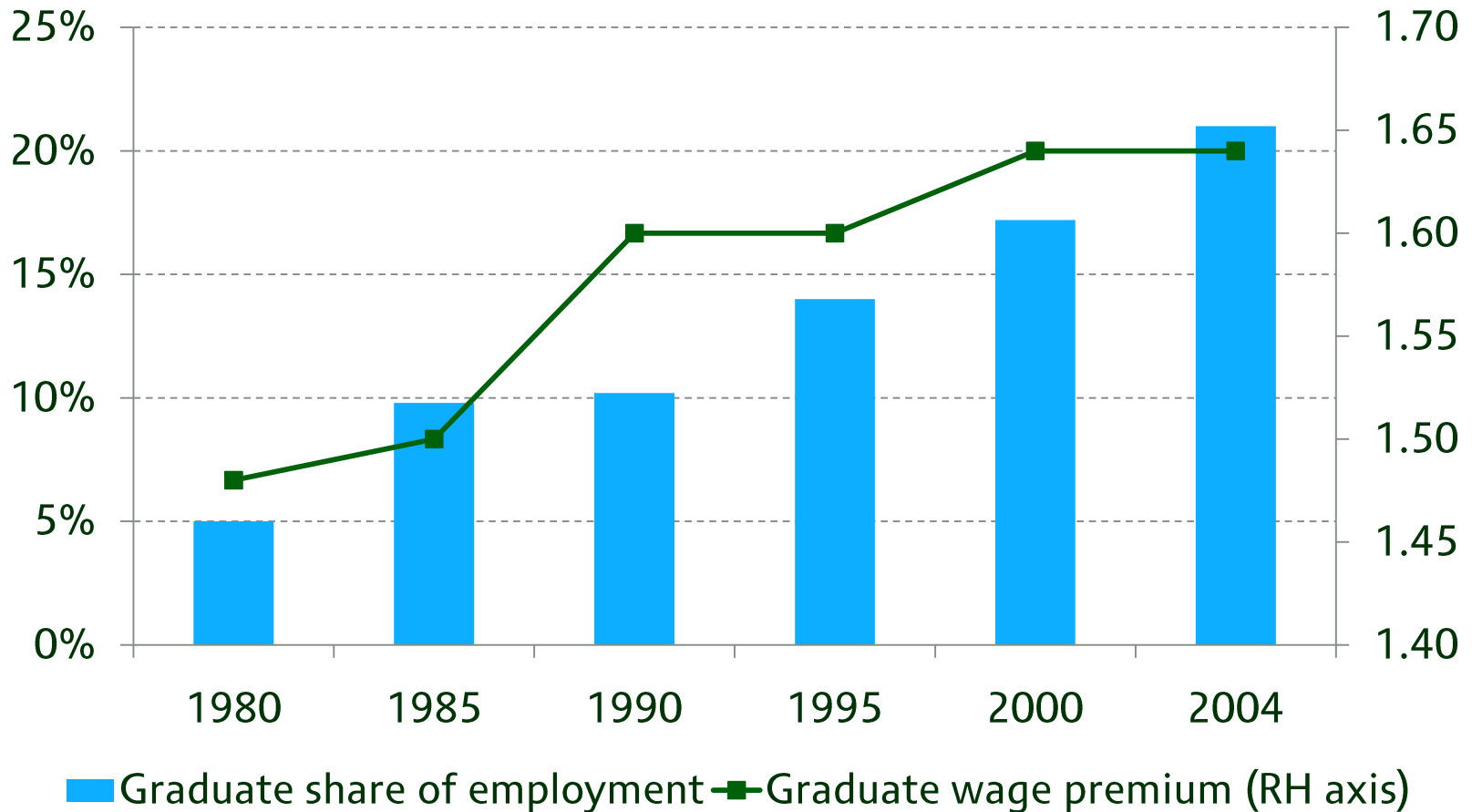
- There is strong evidence that youth unemployment has long term consequences, providing support for interventions that reduce the risk of becoming NEET
- Risk factors include deprivation and disengagement from school; potential protective factors include aspirations for further and higher education, and participation in positive activities
 - But note that this evidence is not causal
 - Pilot interventions would be particularly welcome here
- There is some evidence that NDYP helps young people into work, but relatively little evidence of other successful (and cost effective) training and job subsidy programmes, so way forward is not clear
- But there is a strong link between qualifications and labour market outcomes, highlighting the key role played by education and skills

The demand for skills in the UK

Outline

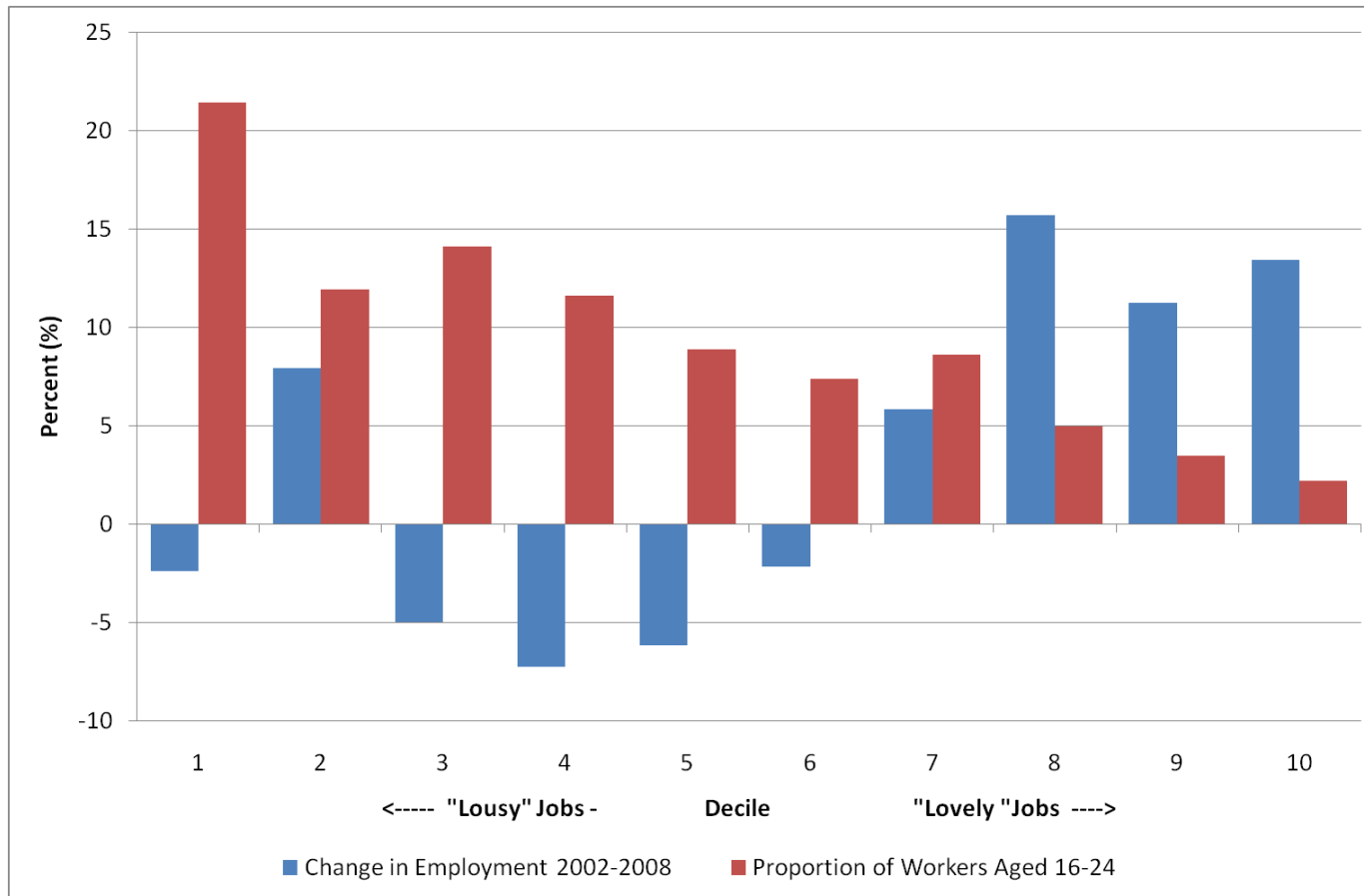
- Has the UK work force become more skilled over time?
- Which types of jobs have experienced the most growth in the UK?
- What can returns to education tell us about the demand for skills?
- How can policy be used to incentivise young people to take the “right” types of qualifications?
- Are there any lessons for qualification design?
- What types of skills do employers say that they want?
- A brief aside on STEM

More young people are graduating from university, yet the wage premium remains high



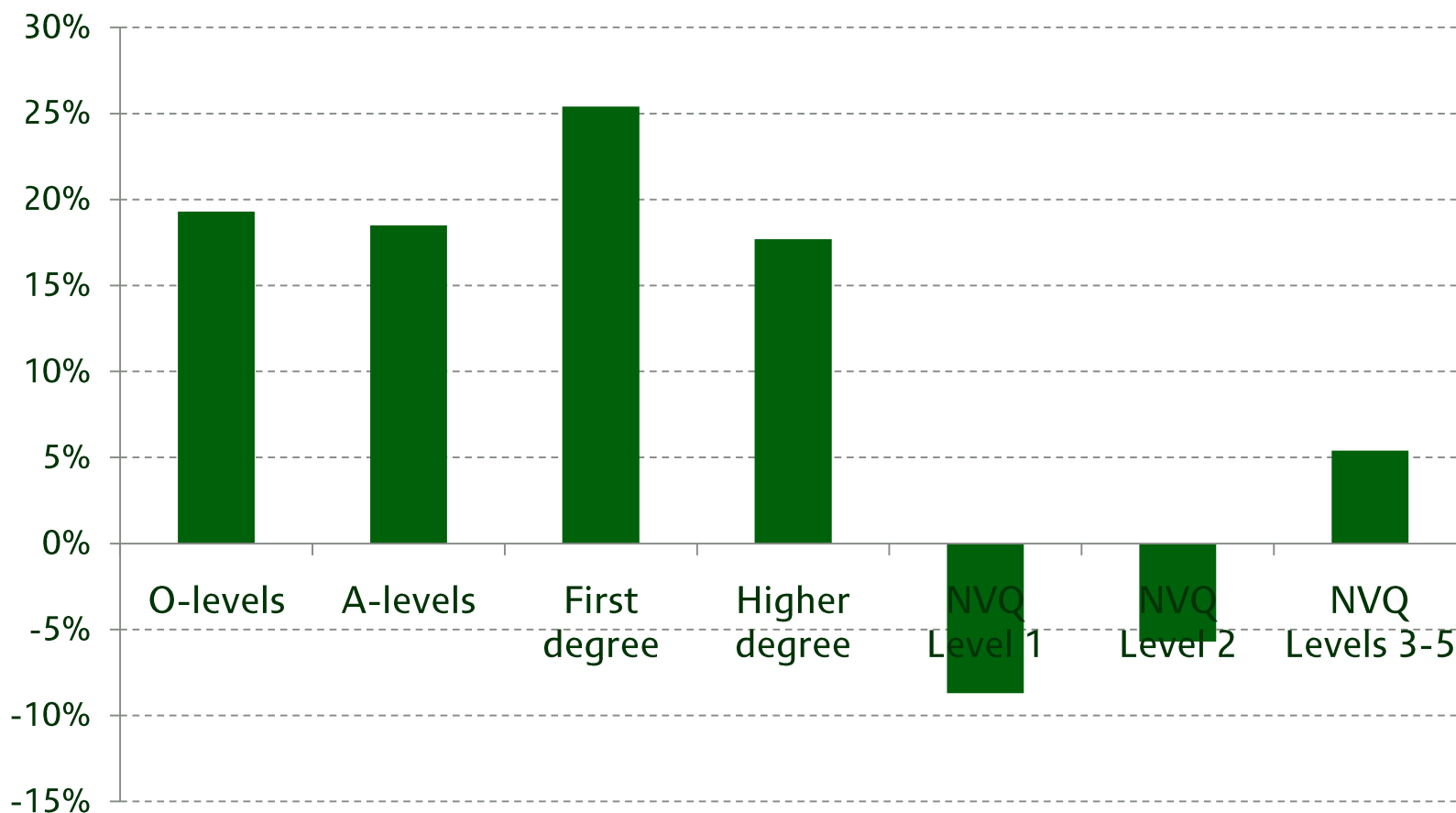
Source: Machin, S. & S. McNally (2007), *Tertiary Education Systems and Labour Markets*, report to the OECD for the Thematic Review of Tertiary Education, available at: <http://www.oecd.org/dataoecd/55/31/38006954.pdf>.

Evidence of “hollowing out” in the UK labour market, with growth in “lovely” and “lousy” jobs, and contraction in the middle; makes it harder for young people to be promoted from poorly paid jobs in which they are concentrated



Source: Bell, D. & D. Blanchflower (2010), *Youth Unemployment: Deja Vu?*, IZA Discussion Paper No. 4705.

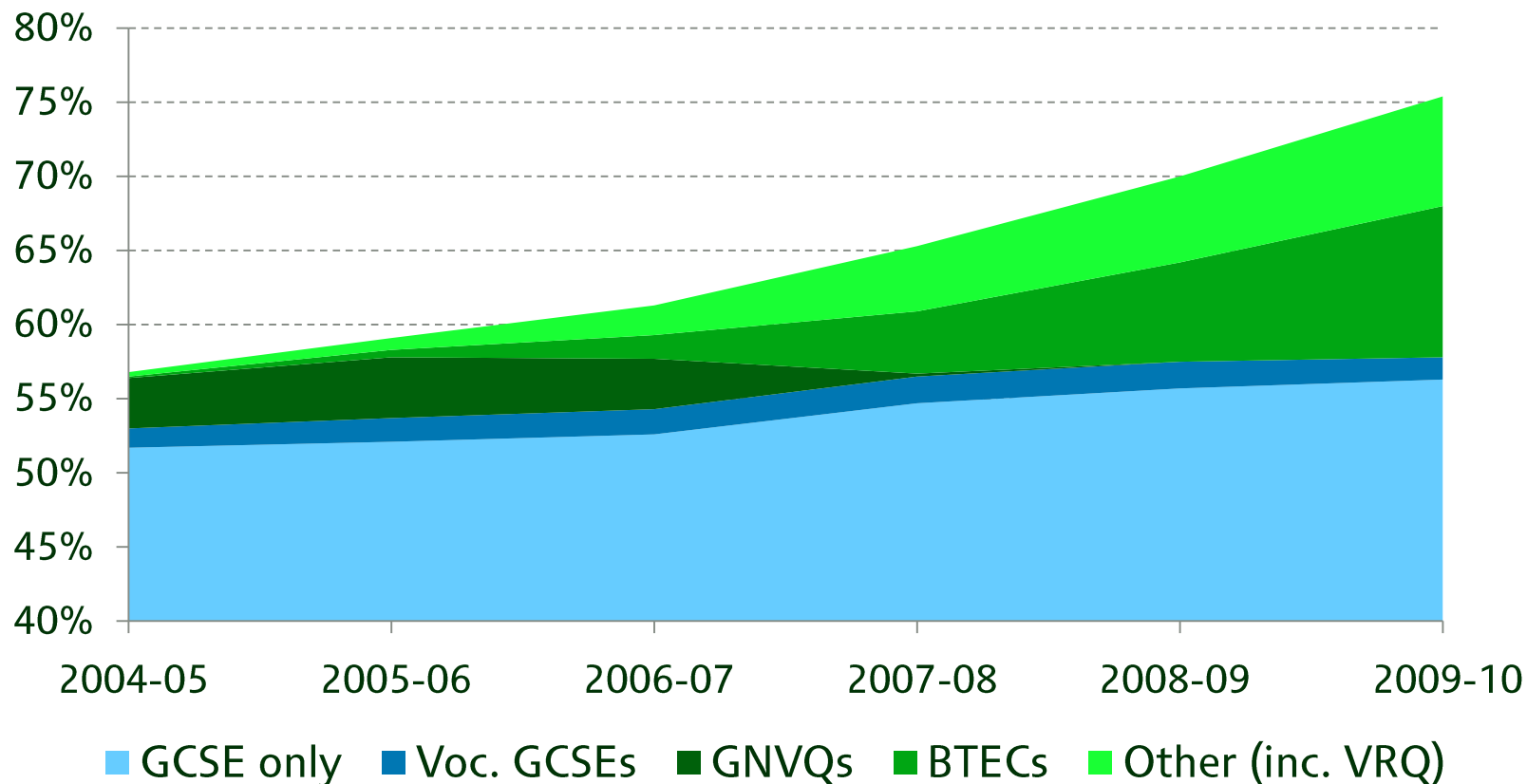
But there are poor returns to some qualifications, particularly low level vocational qualifications



Source: Dearden, L., S. McIntosh, M. Myck & A. Vignoles (2002), The returns to academic and vocational qualifications in Britain, *Bulletin of Economic Research*, Vol. 54, pp. 249-274.

The introduction of GCSE equivalents seems to encourage pupils to take such qualifications

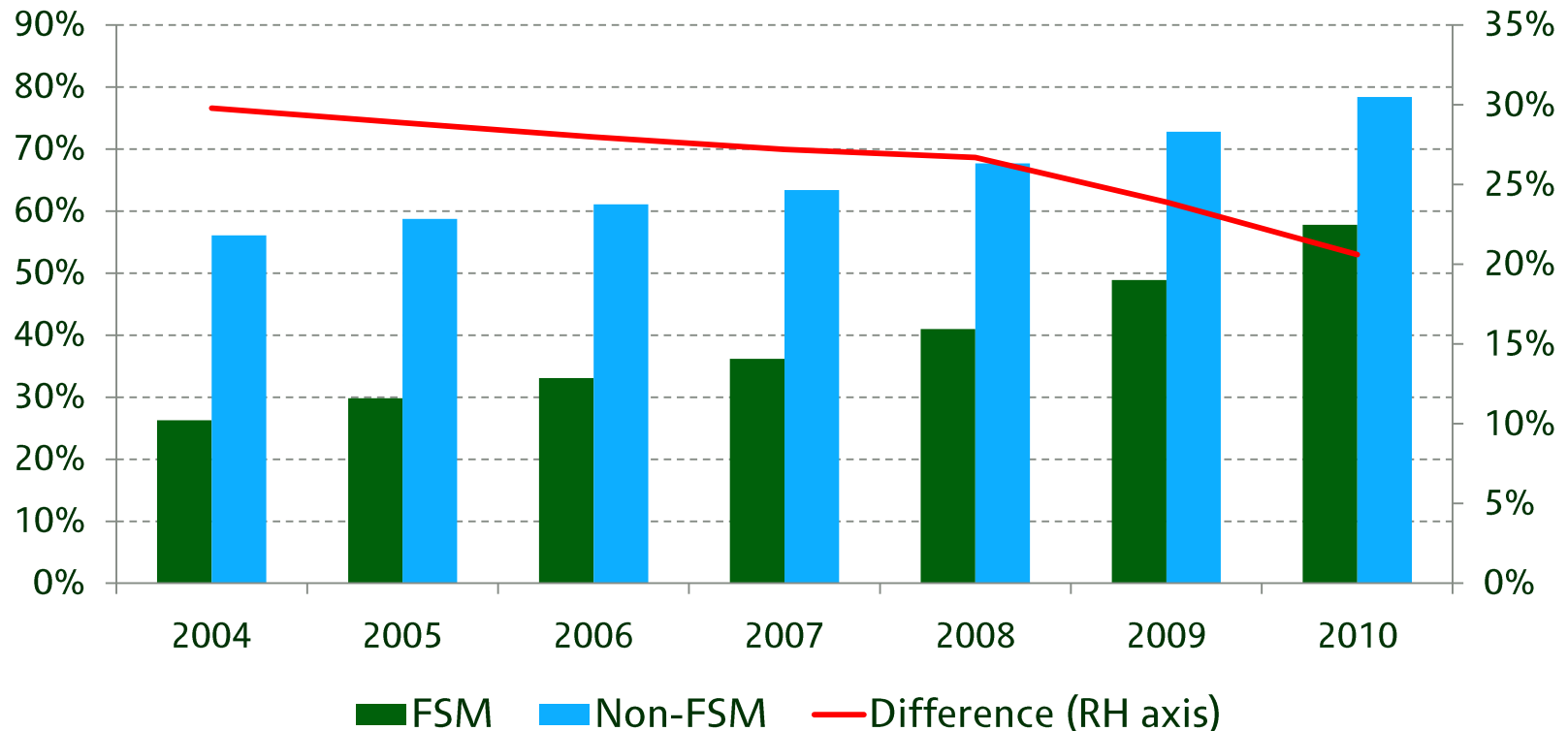
Contributions to the '5+ GCSE A*-C' performance measure in England



Source: authors' calculations based on Table 5 of the Wolf Review (2011).

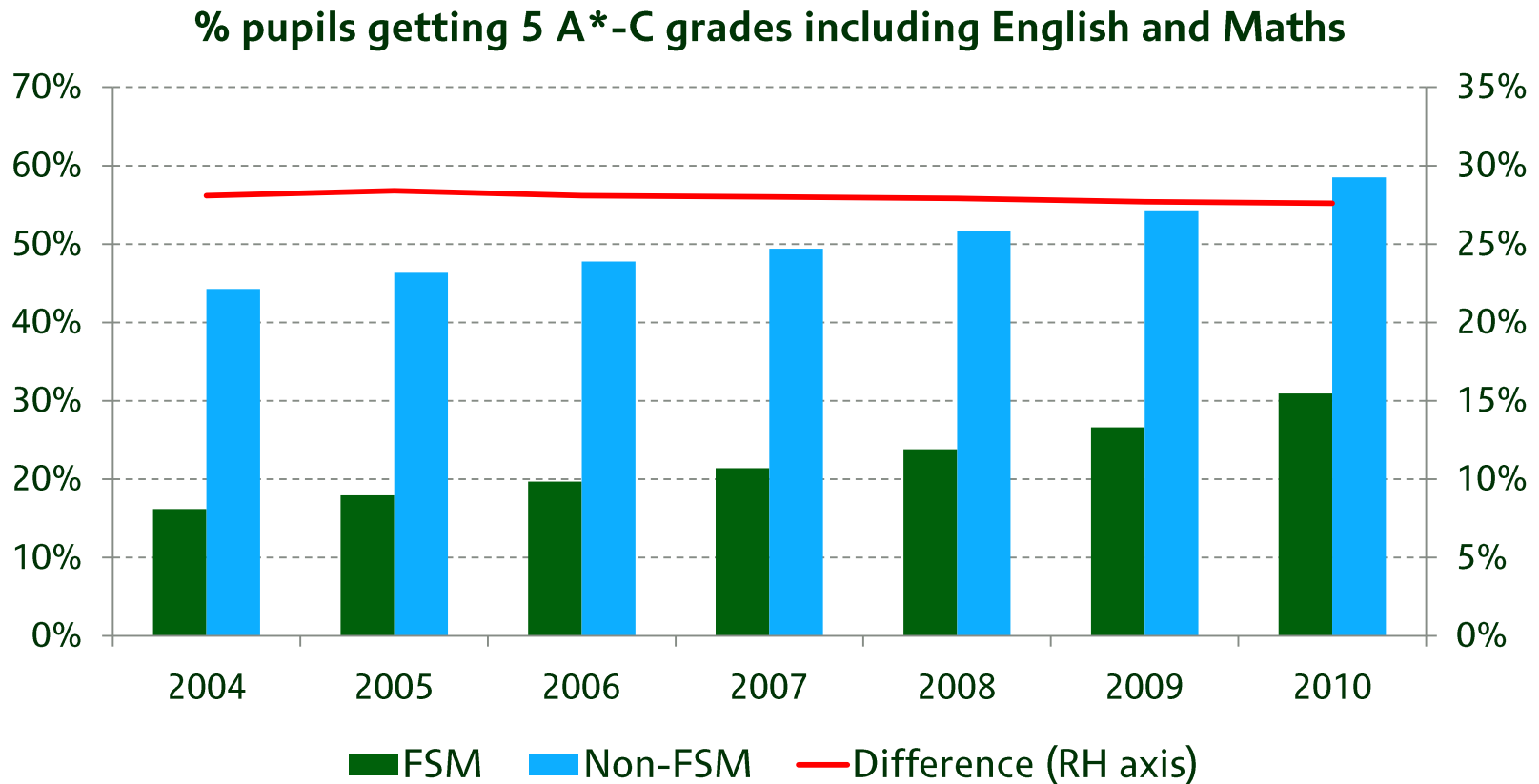
While they seem to have helped FSM pupils to close the gap . . .

% pupils getting 5 A*-C grades in GCSEs and equivalents



2006-2010 figures based on SFR 37/2010: GCSE and Equivalent Attainment by Pupil Characteristics in England, Department for Education, available at: <http://www.education.gov.uk/rsgateway/DB/SFR/s000977/sfr37-2010.pdf>. 2004-2005 figures based on authors' calculations using Key Stage 4 and PLASC data.

... the gap has not closed when measuring GCSEs including English and Maths



2006-2010 figures based on SFR 37/2010: GCSE and Equivalent Attainment by Pupil Characteristics in England, Department for Education, available at: <http://www.education.gov.uk/rsgateway/DB/SFR/s000977/sfr37-2010.pdf>. 2004-2005 figures based on authors' calculations using Key Stage 4 and PLASC data.

Portability of skills

- CAYT evidence that fed into the Wolf Review suggested that:
 - Vocational qualifications in some areas, e.g. teacher training and nursing, are used mostly in the relevant sector of expertise
 - Others, such as qualifications in arts and computing, are used across a very wide range of sectors, suggesting a need for portable skills
 - Interestingly, vocational qualifications which are used across a wider range of sectors tend to generate higher economic returns
 - May suggest they impart more transferable skills or simply be a reputation effect
- Suggests a need for vocational qualifications to impart general transferable skills (as well as specific training)

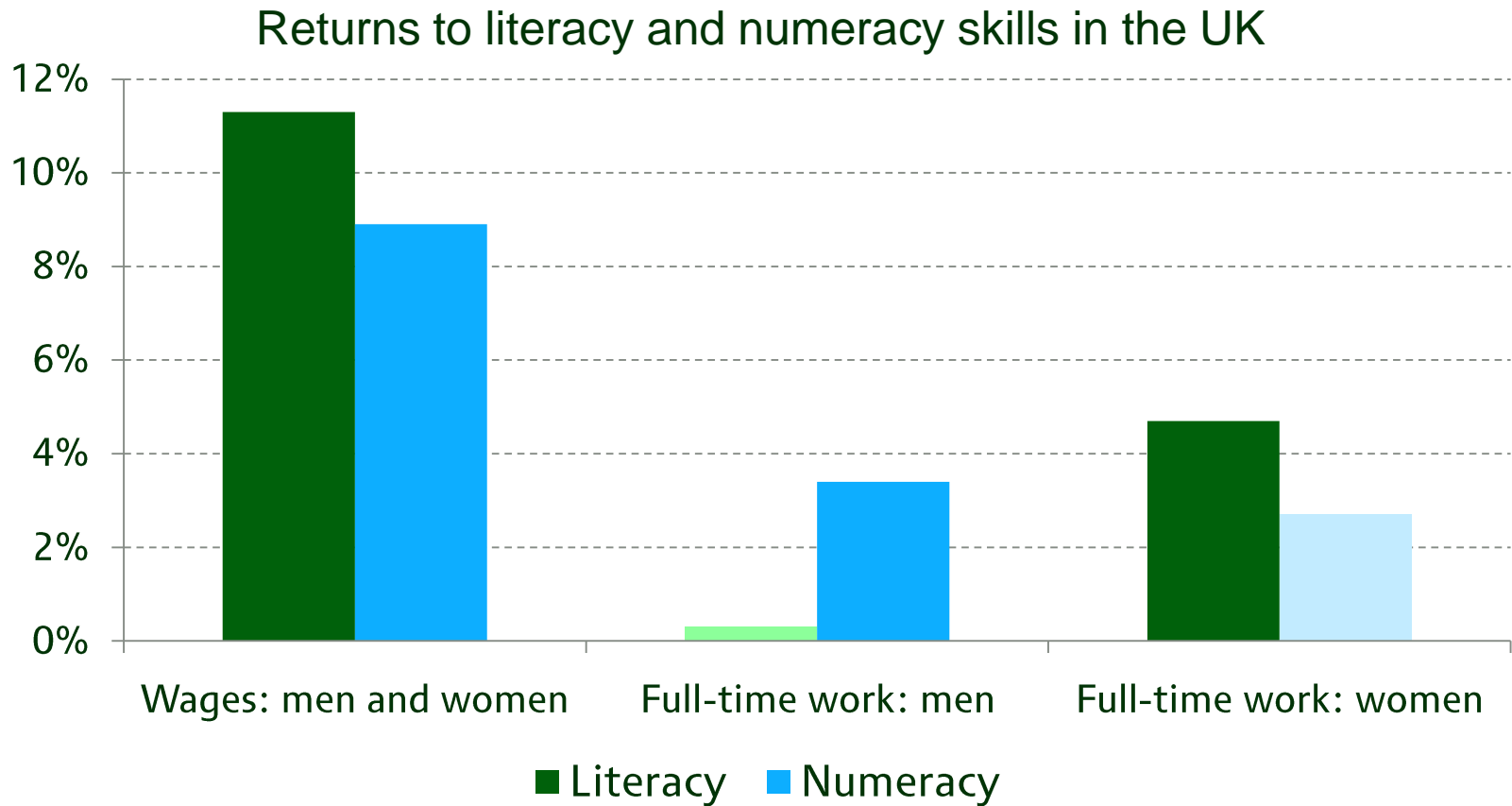
Source: Crawford, C., K. Duckworth, C. Greenwood, A. Ross, A. Vignoles & G. Wyness (2010), Evidence to the Wolf Review, CAYT research report, available at: <http://www.ifs.org.uk/caytpubs/wolf0511.pdf>.

What else do employers say they want?

- Basic skills
 - e.g. literacy, numeracy, problem solving, time management, commercial awareness
- Values
 - e.g. high work ethic, punctuality, honesty, appropriate personal behaviour, good manners, respect for authority
- Agentic skills
 - e.g. initiative, drive, self-motivation, flexibility, maturity, trainability, willingness to learn, organisation
- Social skills
 - e.g. teamwork, communication skills

Sources: National Employer Skills Survey (2007); Taylor, A. (2005), What employers look for: the skills debate and the fit with youth perceptions, *Journal of Education and Work*, Vol. 18, No. 2, pp. 201-218; Smith, E. & P. Comyn (2004), The role of employers in the development of employability skills in novice workers, *Journal of Education and Work*, Vol. 9, No. 3, pp. 319-336.

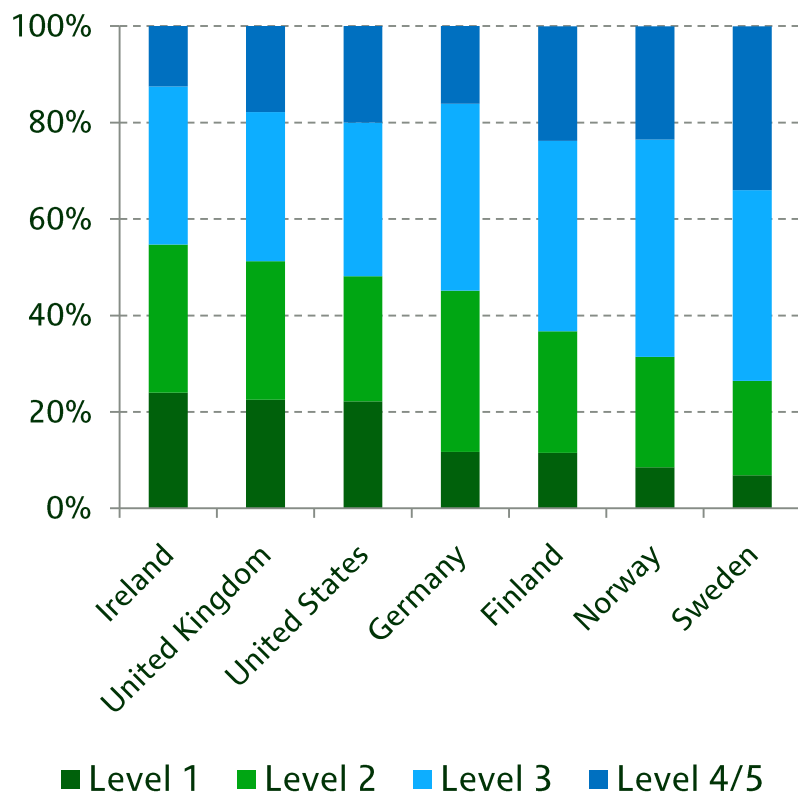
This is supported by high wage returns to literacy and numeracy skills; in terms of employment, numeracy matters more for men and literacy more for women



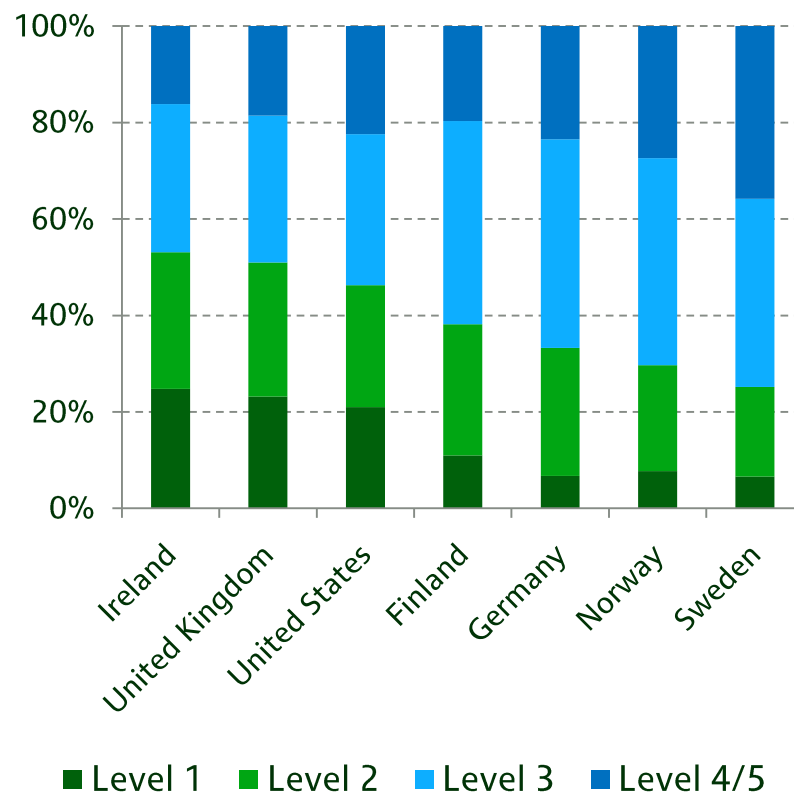
Source: De Coulon, A., O.Marcenaro-Gutierrez & A. Vignoles (2007), The value of basic skills in the British labour market, CEE Discussion Paper No.

The UK has relatively low levels of literacy and numeracy from an international perspective, with only around half of adults having adequate skills

Literacy skills (1994-1998)



Numeracy skills (1994-1998)



Source: OECD (2000), *Literacy in the Information Age*: final report of the International Adult Literacy Survey

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Returns to non-cognitive skills

- Non-cognitive skills are well rewarded in the labour market
 - **Leadership:** males who occupied leadership positions in high school earn 4-33% more as adults than those who didn't
 - **Self-esteem:** a move from the 20th to 80th percentile of the distribution of self-esteem at age 10 is associated with a 5.6% increase in earnings for boys at age 26
 - **Social adjustment:** a 1 standard deviation increase in social adjustment at age 7 is associated with a 2.1 percentage point increase in the likelihood of being in work at age 42 and a 2.5% increase in wages at the same age; these effects operate primarily via education
- But there is relatively little evidence on specific interventions which have been found to (cost) effectively improve such skills

Sources: Carneiro, P., C. Crawford & A. Goodman (2007), *The impact of early cognitive and non-cognitive skills on later outcomes*, CEE Discussion Paper No. 92; Feinstein, L. (2000), *The relative economic importance of academic, psychological and behavioural attributes developed in childhood*, CEP Discussion Paper No. 443; Kuhn, P. & C. Weinberger (2005), *Leadership skills and wages*, *Journal of Labor Economics*, Vol. 23, pp. 395-436.

A brief aside on STEM

Returns to STEM qualifications

- Many qualifications have higher returns if they are in STEM areas:
 - e.g. degrees, NVQ 2 and 3, HNC/HND, City & Guilds Foundation
 - But not all: e.g. NVQ 4, HE diplomas, BTEC higher
- Returns also vary within STEM:
 - Science: only BTEC National Certificates/Diplomas attract a premium
 - Technology: only NVQ5 and City & Guilds Part I/II attract a premium
 - Maths: first degrees and HE diplomas attract a premium
 - Engineering: most qualifications attract a premium
- And by occupation:
 - STEM premia mostly occur for those working in intermediate and lower level occupations (i.e. not professional or managerial positions)

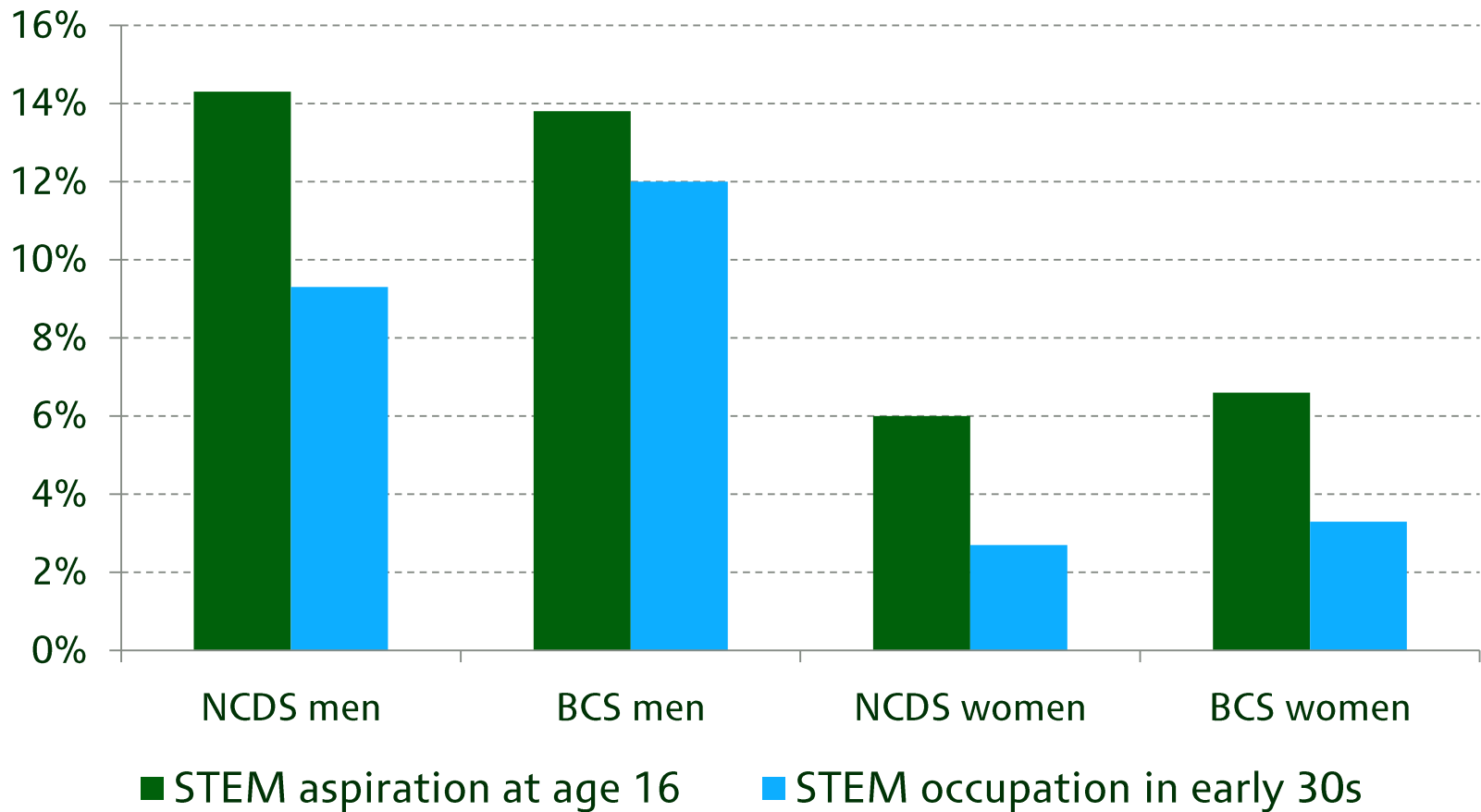
Source: Greenwood, C., M. Harrison & A. Vignoles (forthcoming), *The labour market value of STEM qualifications and occupations*, Report to the Royal Academy of Engineering

Who chooses STEM qualifications?

- Amongst those who are offered it, certain types of pupils are more likely to take triple sciences at GCSE than others:
 - Boys
 - Asian ethnic minorities
 - Those attending independent and grammar schools
 - Those scoring in the top quintile in Maths and Science at KS3
 - Those who say their favourite subject is Science at age 14 (those who report “hating” Science at age 14 are less likely to take triple science)
- Men and those with high maths achievement and self-concepts were also more likely to study STEM subjects at university

Source on GCSE attainment: Jin, M., A. Muriel & L. Sibieta (forthcoming), CUBeC report on subject choices
Source on university major: Schoon et al (forthcoming)

Who works in a STEM occupation?



Source: Schoon, I., A. Ross & P. Martin (2007), Science related careers: aspirations and outcomes in two British cohort studies, *Equal Opportunities International*, Vol. 26, No. 2, pp. 129-143

Summary

- There is a continuing demand for high skilled people, with average degree returns remaining high despite a huge increase in supply
- But there has also been growth in low paid jobs and a contraction in the middle, suggesting a “hollowing out” of the labour market
- Despite the large returns to higher education, there are very poor returns to some low level vocational qualifications, and we have a system which seems to encourage young people – particularly those from low SES backgrounds – to take these
- There is some evidence that “portable” vocational qualifications – those which can be used across a variety of sectors – are the most highly rewarded, suggesting a need for some element of general transferable skills to be included in all vocational qualifications

Summary continued

- Employers say they want workers with better literacy/numeracy skills and are clearly willing to pay for them, suggesting a shortage
- But there is limited evidence of (cost) effective ways of improving such skills once individuals have left the school system
 - Pilot interventions would be particularly welcome here
- Employers also say they want workers with good non-cognitive skills, and these are well rewarded in the labour market
- There is evidence that non-cognitive skills may be more malleable than cognitive skills in adolescence and adulthood – and we saw earlier that such skills affect young people’s labour market choices – suggesting this may be an area ripe for intervention
 - But again there is limited evidence on specific programmes that are (cost) effective, so pilot interventions would be welcome here too

Summary continued

- There are mixed messages in terms of the demand for STEM qualifications: returns vary by type and level of qualification, as well as subject within the STEM family
- It is perhaps not surprising that those who enjoy maths and science and think they are good at them are more likely to study STEM subjects and more likely to work in STEM occupations
- Limited evidence on the role of teachers, but perhaps greater focus on and innovation in maths and science teaching in secondary school would help to increase engagement?

Conclusions

Key messages

- There is strong evidence that youth unemployment has long term consequences, including increasing the probability of future spells of unemployment and reducing future wages, providing support for interventions that reduce the risk of becoming NEET
- Improving basic and non-cognitive skills may be fruitful ways of increasing engagement amongst those at risk of becoming NEET, but there is a lack of evidence on programmes that might (cost) effectively improve such skills, so pilot studies would be welcome
- Despite the increasing supply of graduates, returns to higher education remain high, suggesting that a degree continues to be a worthwhile investment (although returns are not uniform)

Key messages continued

- By contrast, some low level vocational qualifications provide very poor returns, and we have a system which seems to encourage low SES/low ability pupils to take such qualifications
- Of course this is a difficult problem to solve, but a lower weighting for such qualifications in school league tables might help, as would a greater focus on school value added by ability
- Reforms to the content of such qualifications might also help, with evidence suggesting the need for general transferable skills to be included alongside specific training in all vocational qualifications

Key messages continued

- These key messages chime with recent evidence from the OECD, suggesting the following “pathways to a skilled workforce”:
 - Maximise skills of school leavers
 - Provision to upgrade skills of jobless youth
 - Ensure better cooperation between education system and employment services to reach the ‘disengaged’
 - Provide early guidance about job search
 - Extend job-search assistance measures for those who are job ready
 - Enable working while in school instead of traditional model of ‘school first, then work’
 - Provide subsidies to promote apprenticeship
 - Mutual obligations approach: mix of ‘carrots’ (e.g. income support) and ‘sticks’ (active search on part of the unemployed)

Source: Scarpetta, S., A. Sonnet and T. Manfredi (2010), *Rising Youth Unemployment During The Crisis: How to Prevent Negative Long-term Consequences on a Generation?*, OECD Social, Employment and Migration Working Papers