

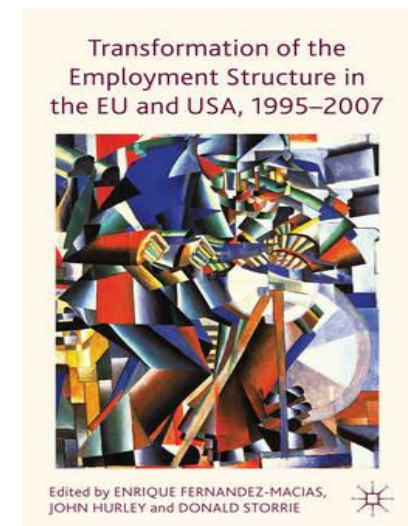
Shift in the employment structure: polarisation or upgrading ...?

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Warwick University, 2/3/16
October 14th 2015

- The European Jobs Monitor / the 'jobs approach'
- What is employment polarisation?
- Is it happening? Where?
- What is driving changes in the employment structure?
- Conclusions

- **Annual reports**
 - ▶ 2008: First comparative Europe-wide application of the jobs approach
 - ▶ 2011-ongoing: European Jobs Monitor annual reports. Next report: 2016q2
- **Research papers**, eg: Fernández-Macías, E. "Job polarization in Europe? Changes in the employment structure and job quality, 1995-2007." *Work and Occupations* (2012)
- **Chapter contributions** to European Commission flagship reports, eg. Employment and Social Developments in Europe 2011
- **Academic publication:** Fernandez-Macias, E., Hurley, J. and Storrie, D., eds. (2012). *Transformation of the Employment Structure in the EU and USA, 1995-2007* (London: Palgrave Macmillan)



'Jobs approach' first used by J. Stiglitz, and refined by E.O. Wright / R.Dwyer – USA in the 1990s

Concept/objectives:

- To describe structural change in the labour market using the job as a unit of observation. A job is an occupation in a sector.
- To add a qualitative dimension to net employment change data (Labour Force Survey), eg. using mean hourly job wage (as a proxy of job quality).
- Where – in what sectors, occupations – are new jobs being created and destroyed in our labour markets?
- What are the implications for aggregate employment quality?

Rank jobs

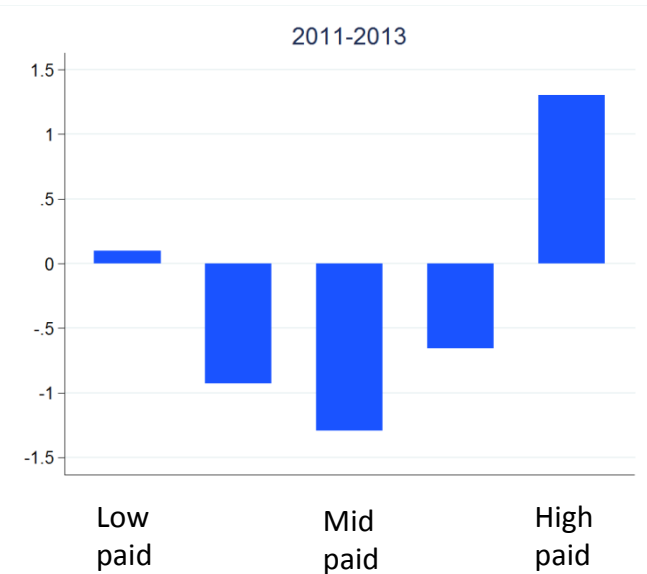
Rank	Occupation	Sector
1	Corporate managers	Financial services
2	Other professionals	Legal/accounting
3	Life science/health professionals	Human health
...		
345	Sales/services elementary occups	Construction
346	Plant/machine operators	Manufacture: auto
347	Sales/services elementary occups	Wholesale retail
...		
823	Personal care workers	Residential care
824	Craft workers	Manufacture: food
825	Sales/services elementary occups	Accommodation

Assign to quintiles

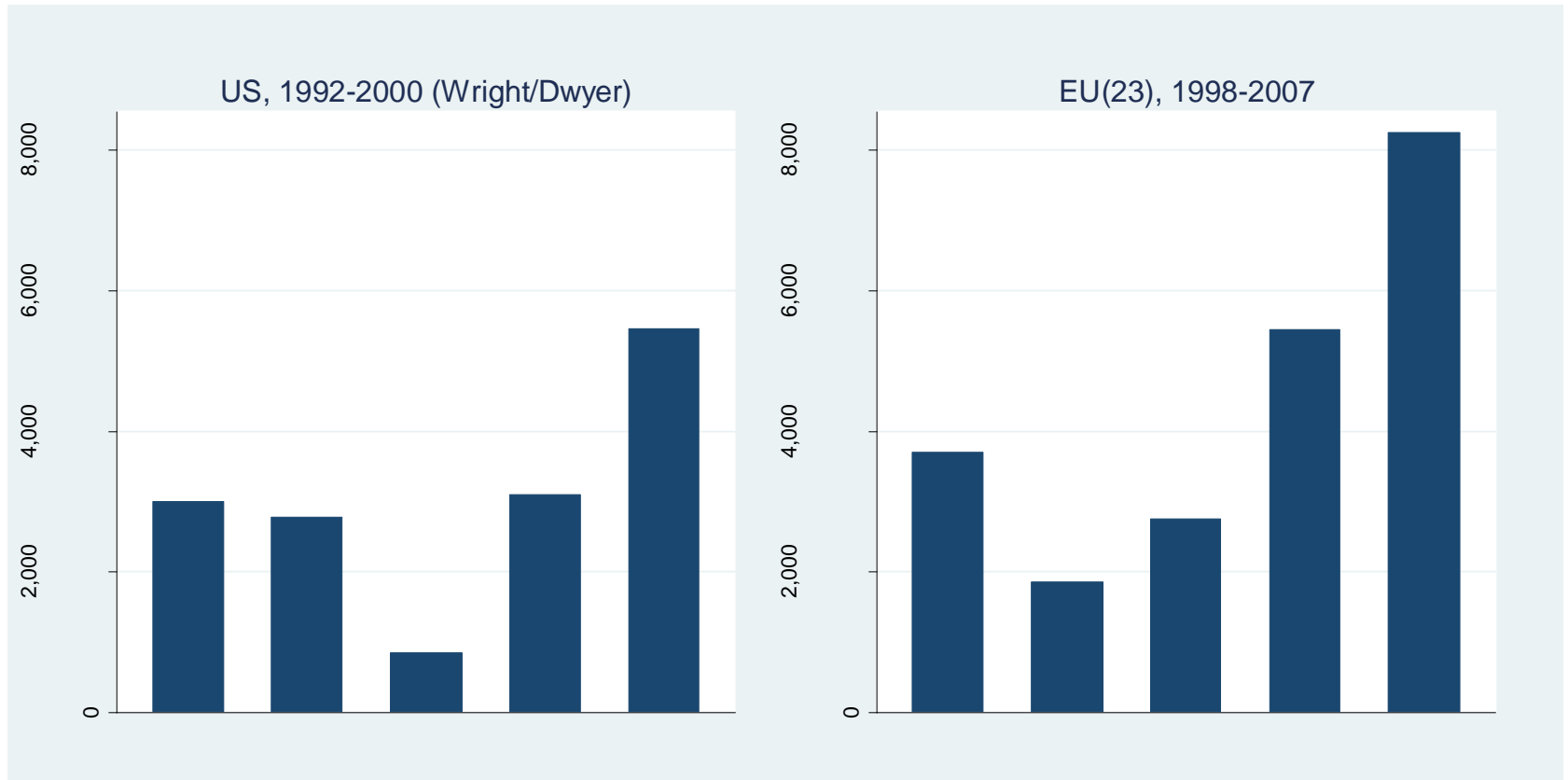
Quintiles
→ High paid
Mid-high
→ Mid-paid
Mid-low
→ Low-paid

Show net employment shift for period by quintile

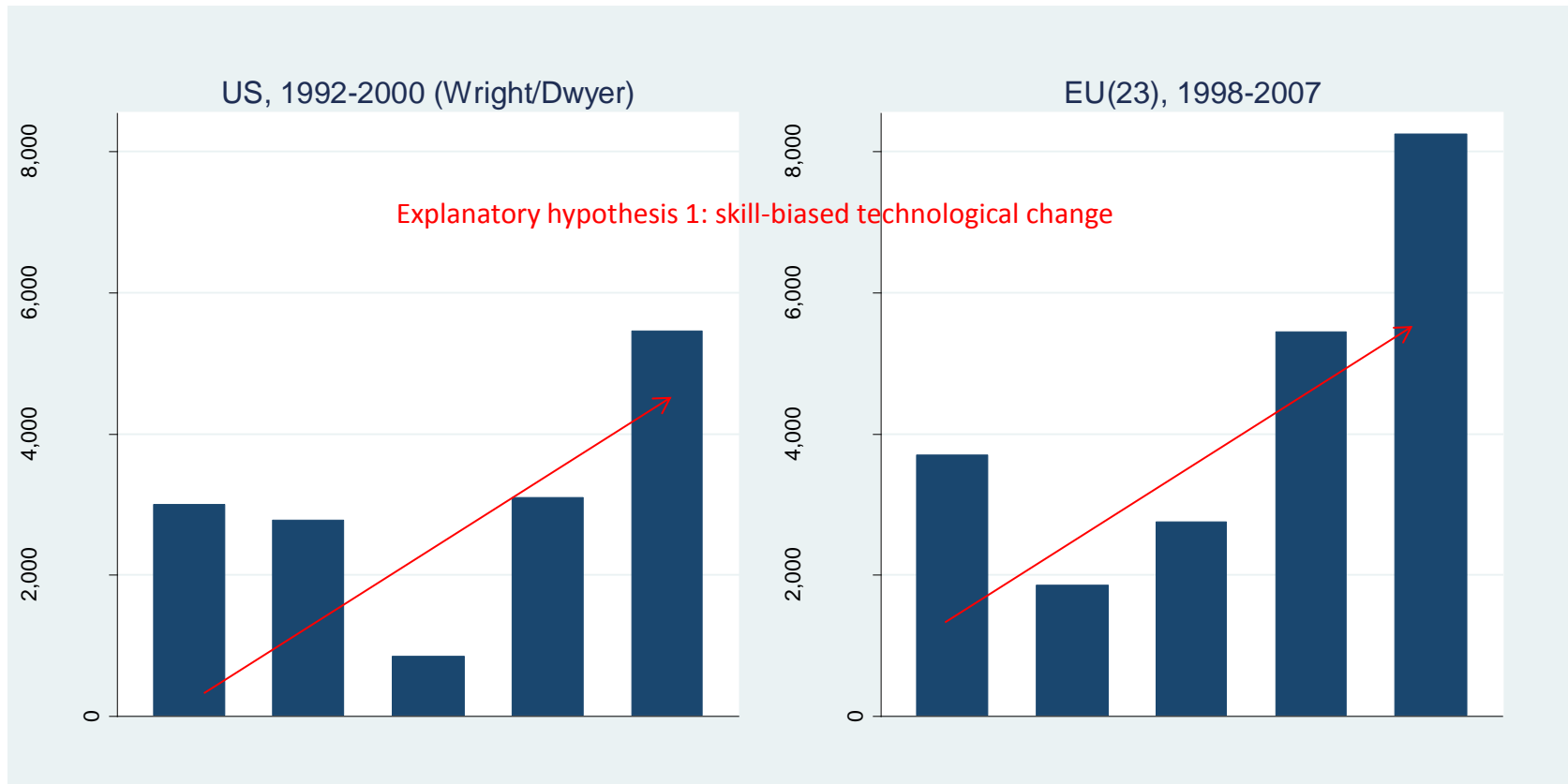
2011q2-2013q2



Recent employment expansions in EU and US (different periods)

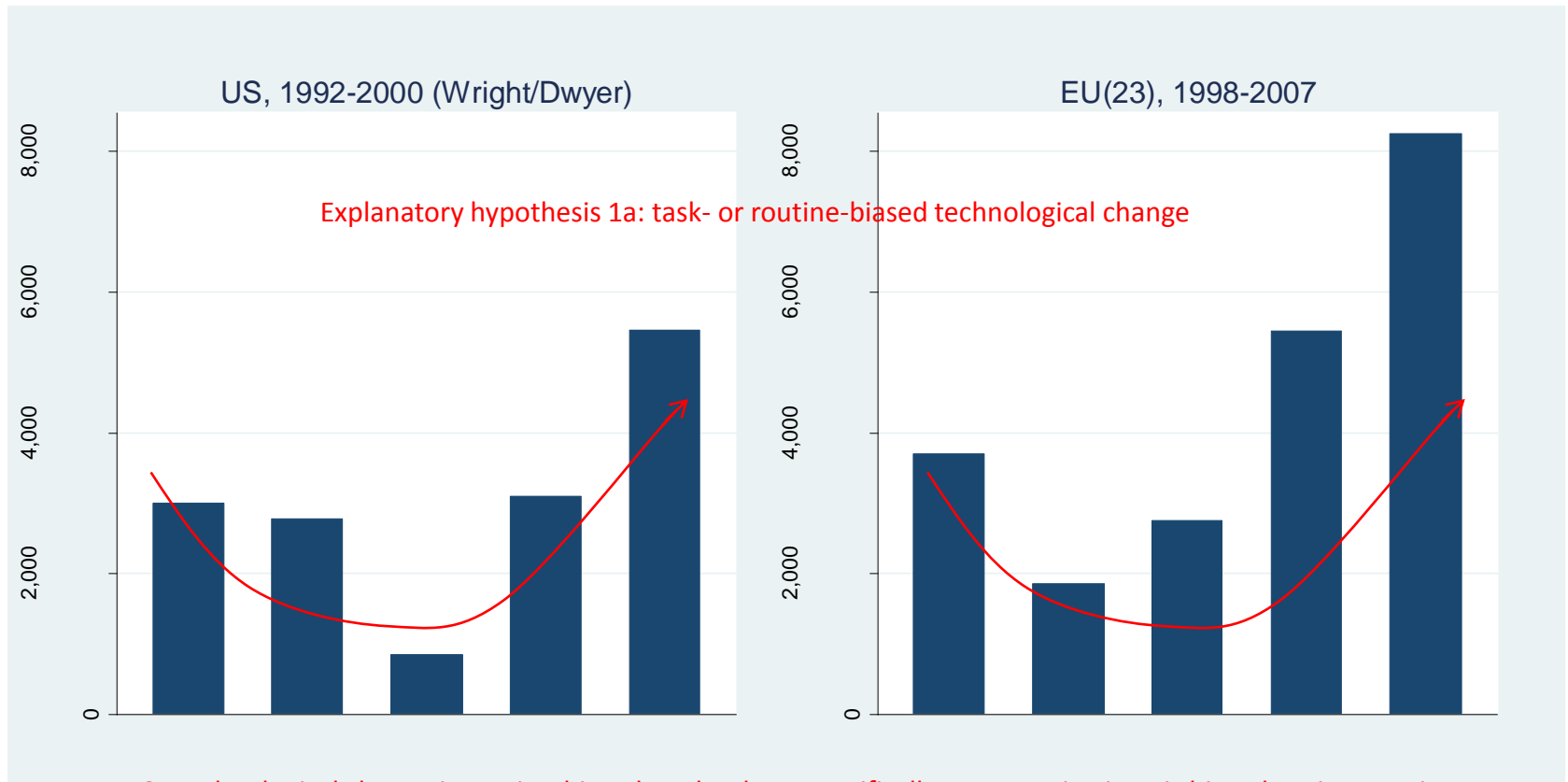


Recent employment expansions in EU and US (different periods)



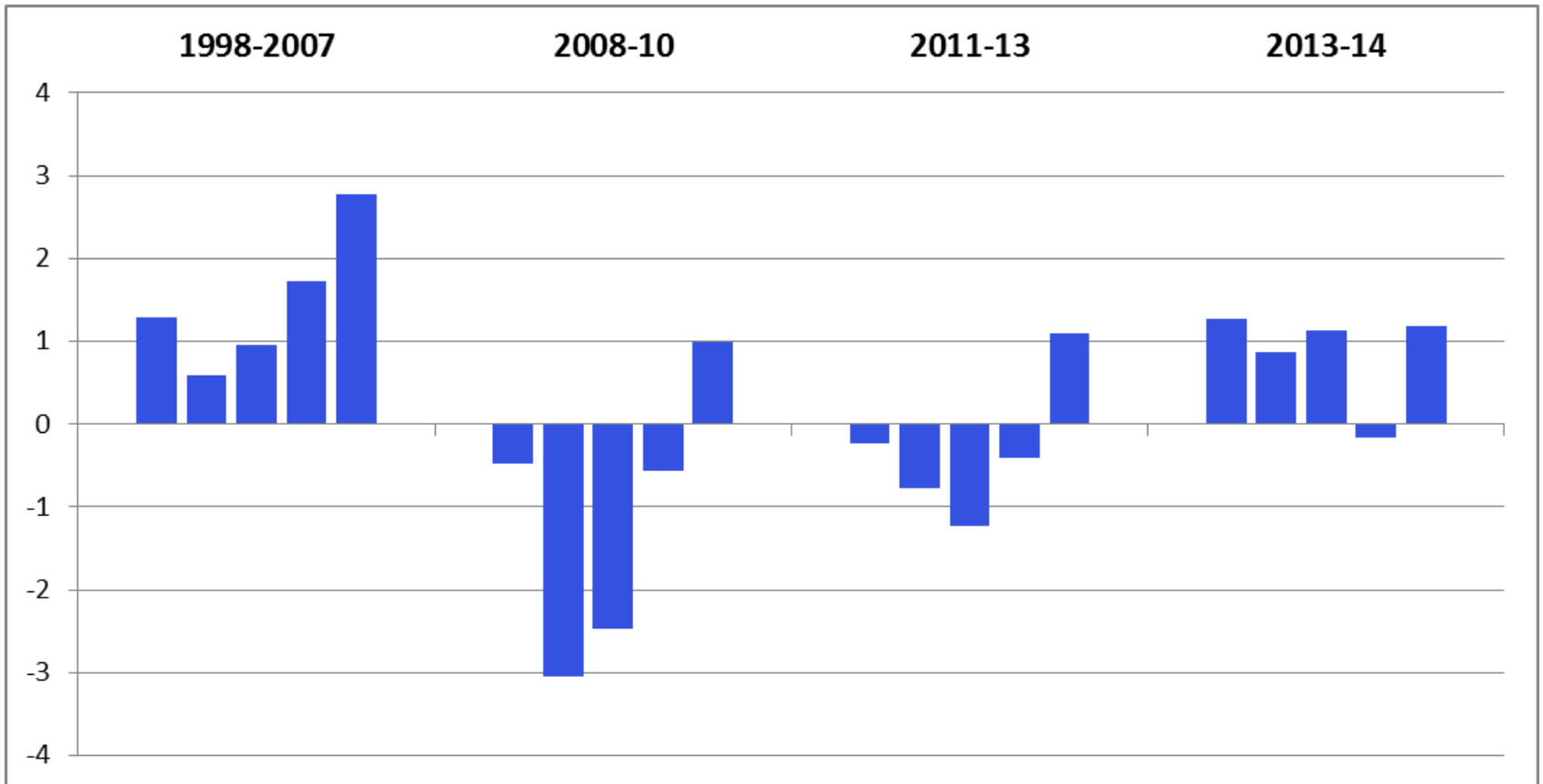
SBTC: technological change is skill-biased. Technology is complementary to high-skill jobs, makes them more productive and increases demand for them but substitutes for and reduces demand for low skilled jobs. The effect is linear across the wage distribution.

Recent employment expansions in EU and US (different periods)



RBTC: technological change is routine-biased. Technology, specifically computerisation, is biased against routine jobs, those comprising tasks that are easily codifiable. These can be displaced easily, by automation or by offshoring. Two axes: routine and cognitive. Routine jobs, both high and low-cognitive, predominate in the middle of the wage structure. Decreasing relative demand for them generates employment polarisation.

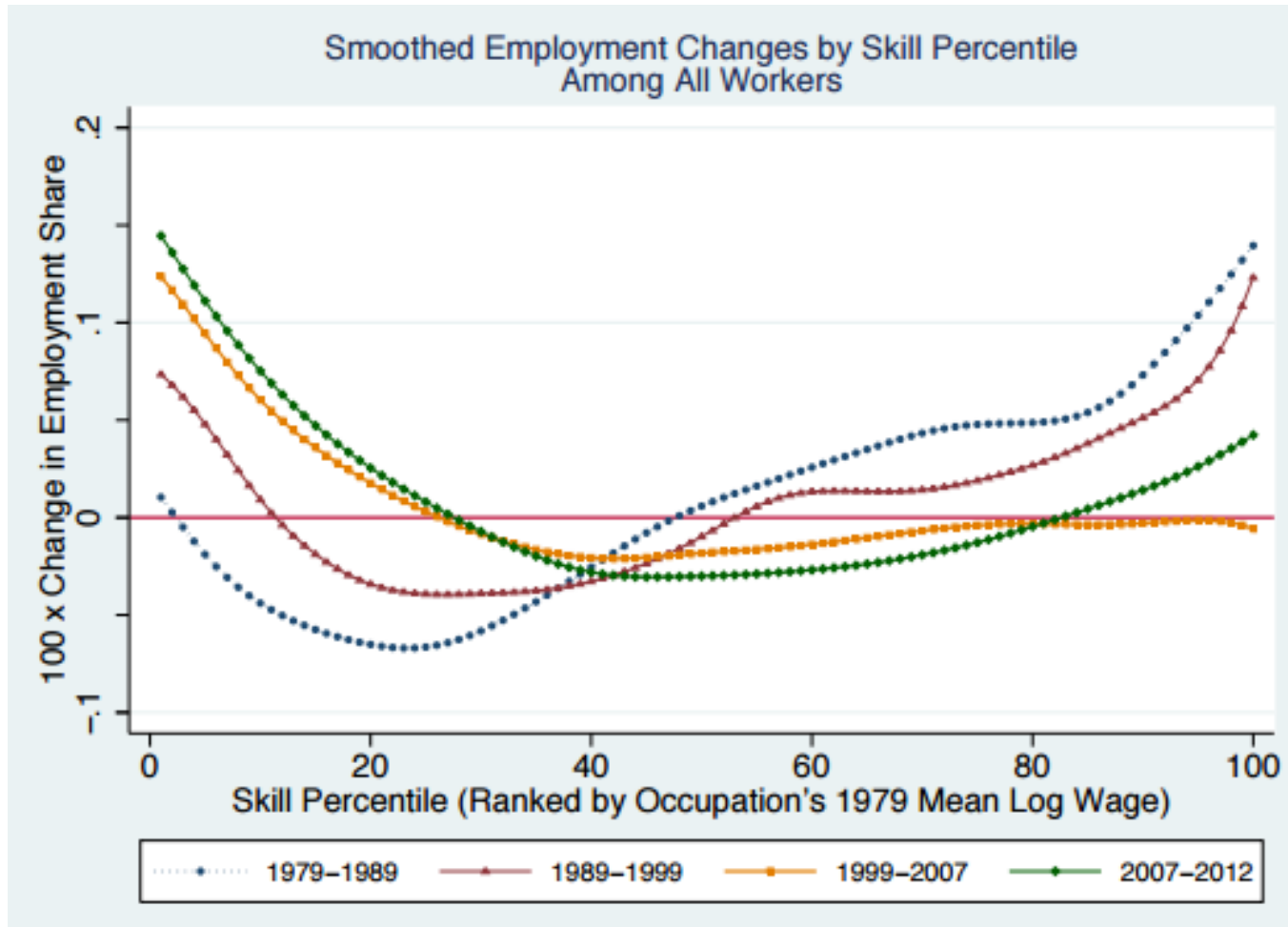
Employment shifts (EU, % pa) before during and after crisis



Source: EJM annual reports, authors' calculations based on EU-LFS, SES data.

Note: EU23 for 1998-2007; EU27 for 2008-14

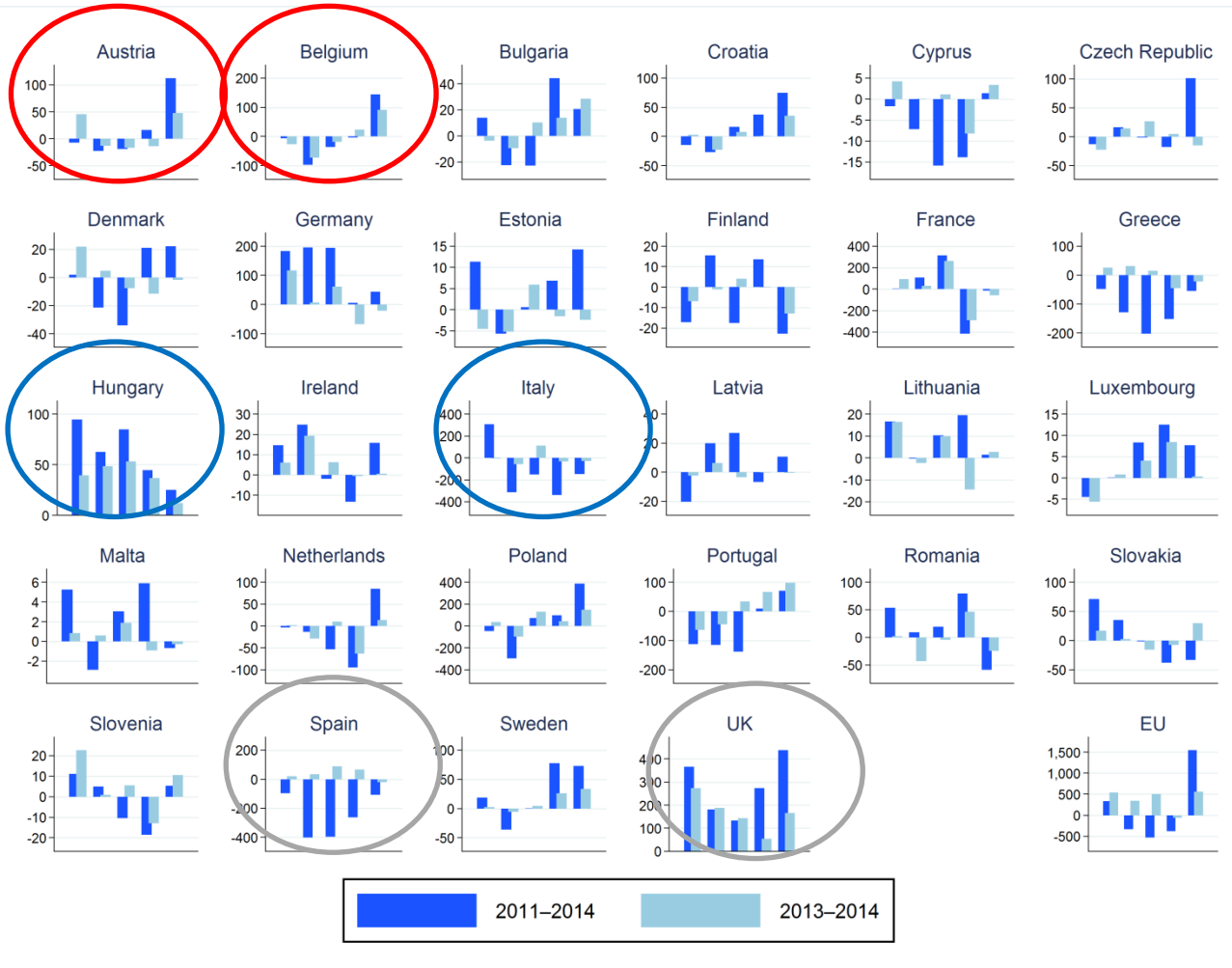
Shifting employment patterns in the US, 1979-2012



Source: Autor, 2015

Employment shifts by job-wage quintile

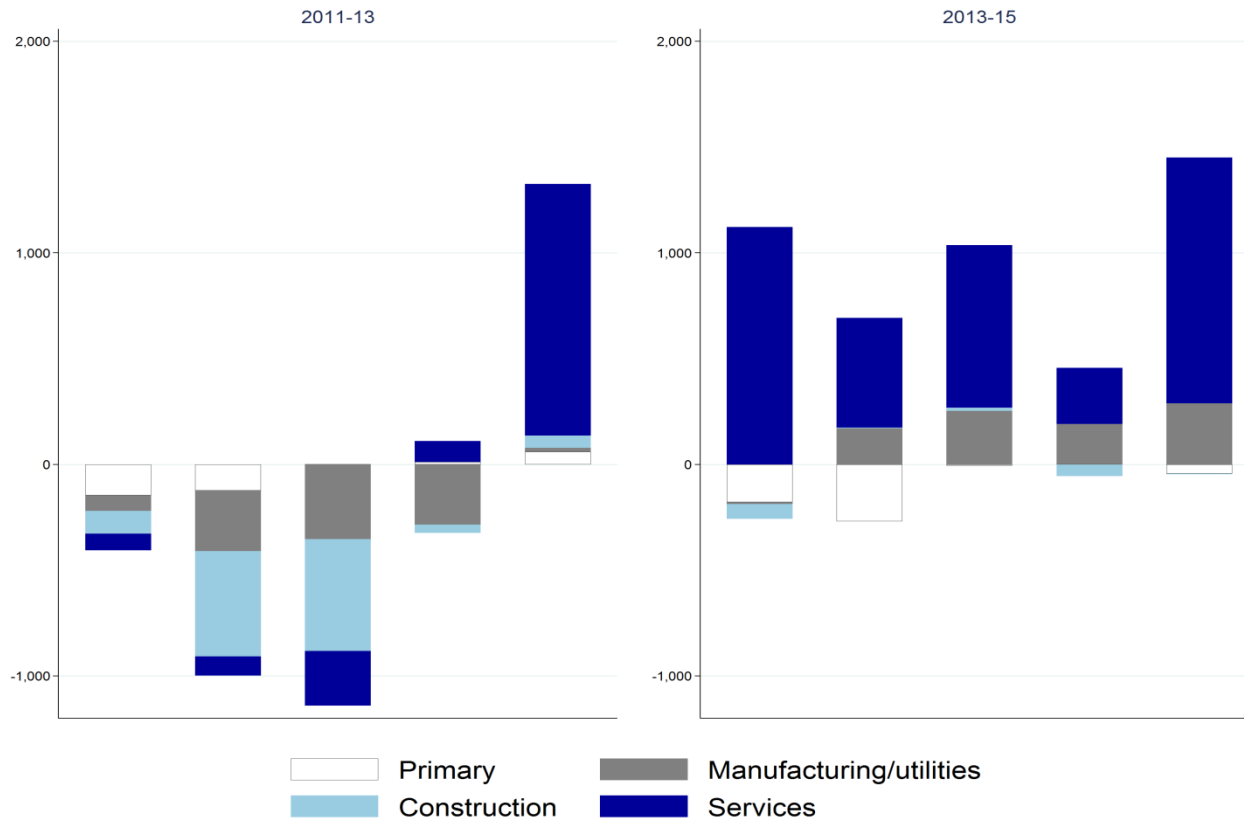
Upgrading



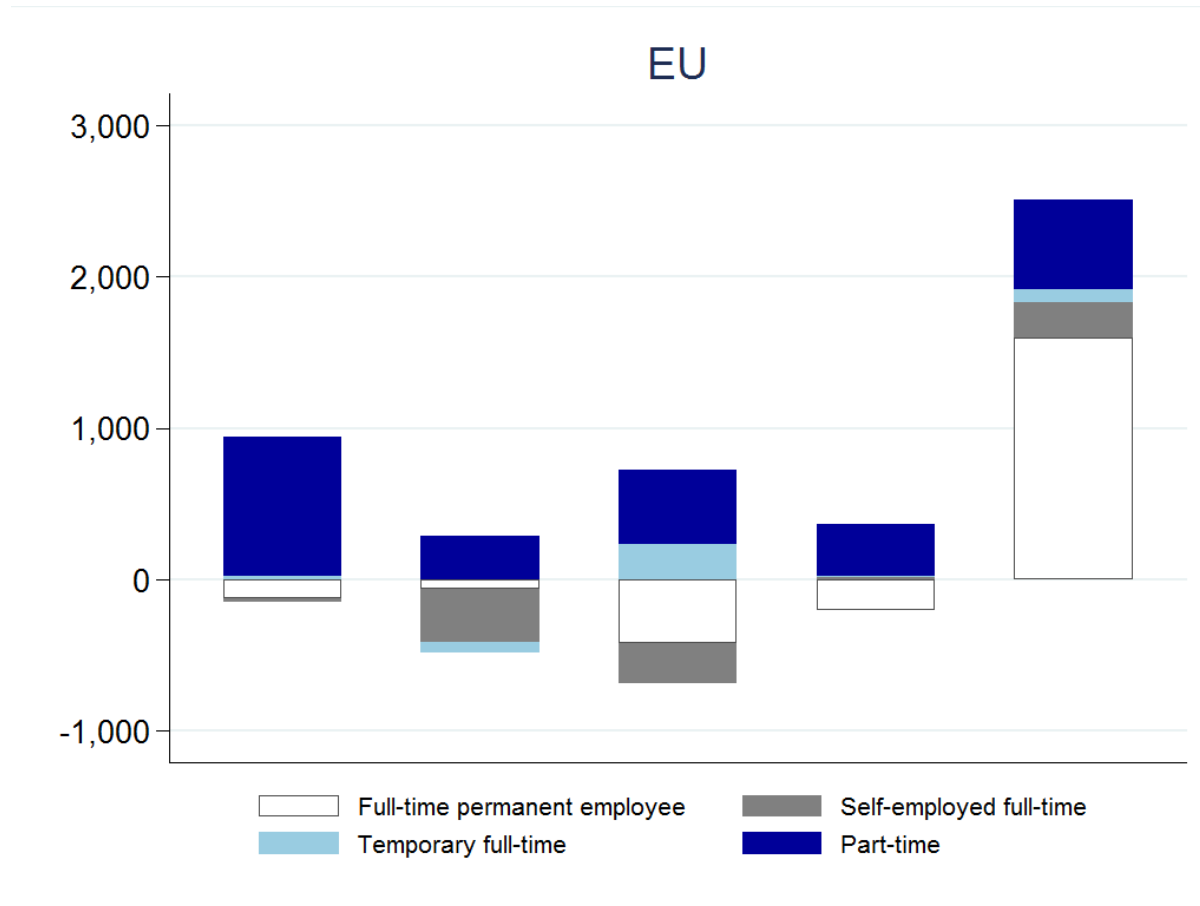
Downgrading

Polarising

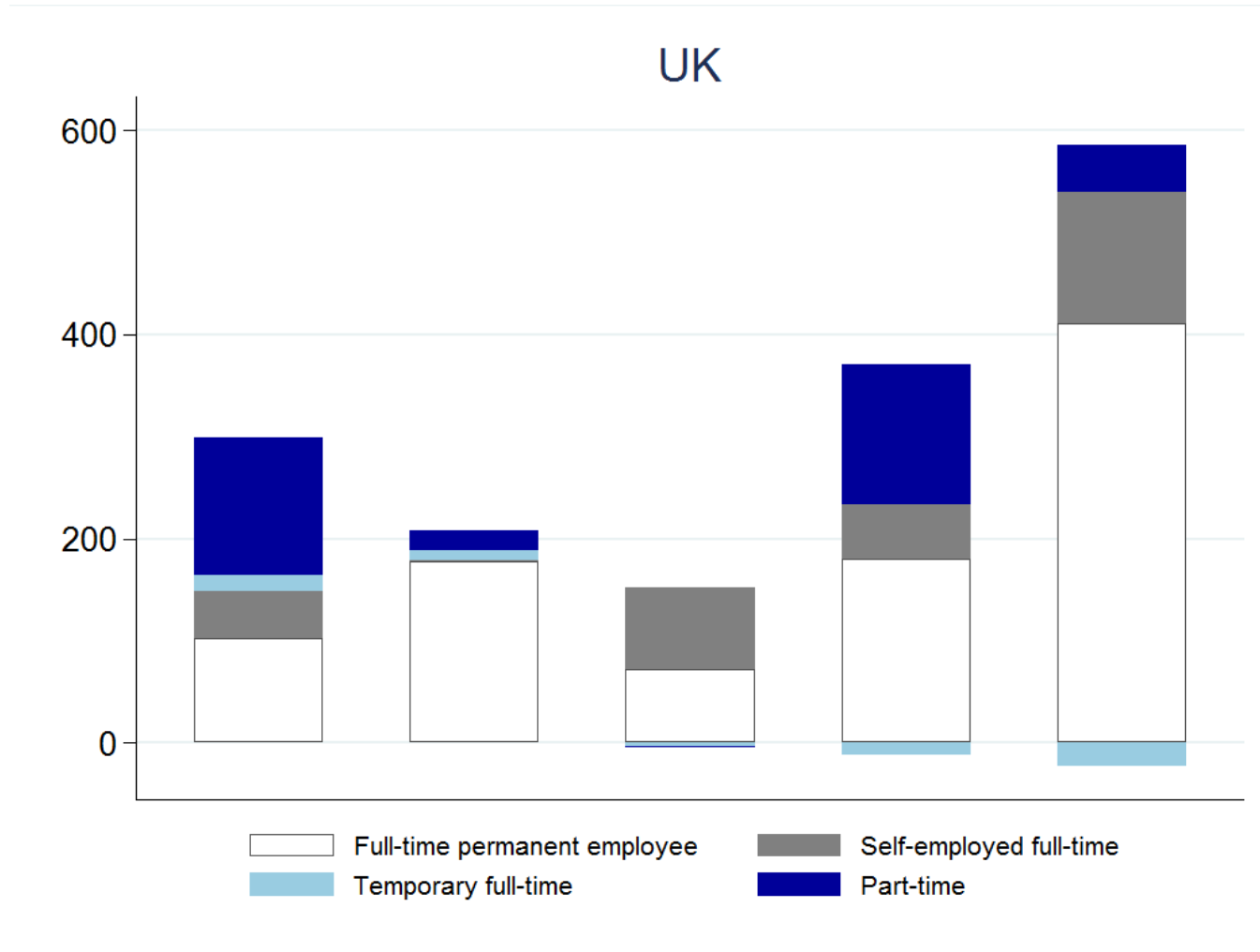
Note: German data for 2012-14 only. Source: EJM annual report 2015, authors' calculations based on EU-LFS, SES data.

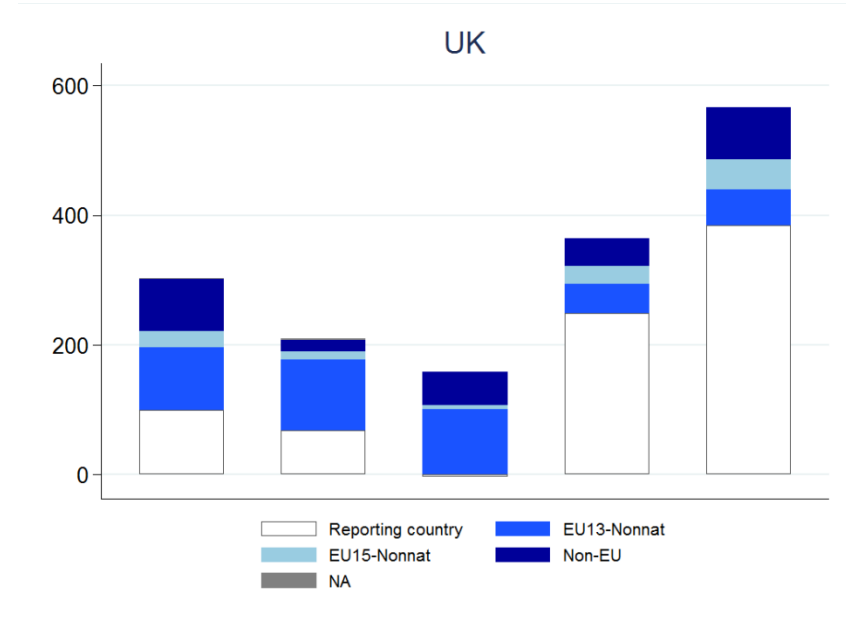
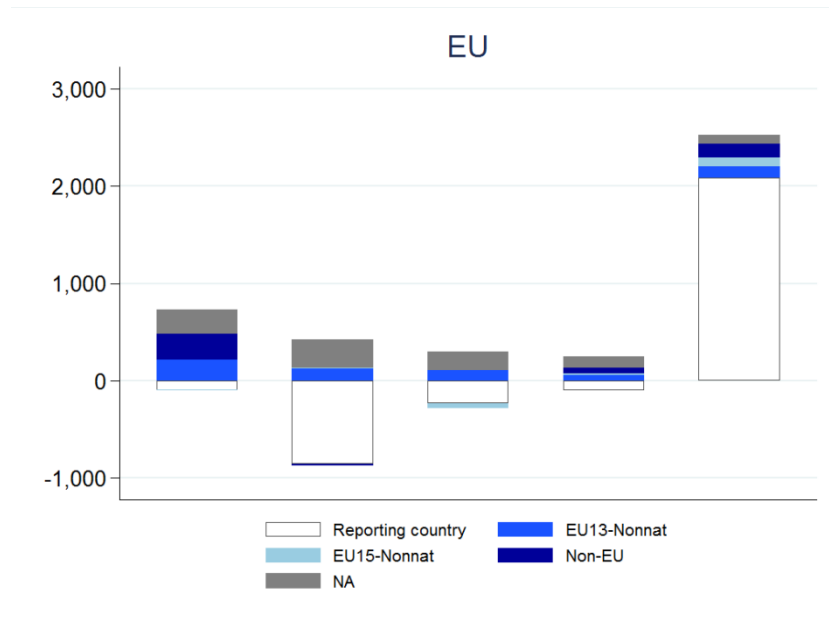


Source: EJM annual rpt 2016 (forthcoming). Note: EU27 (exc LU). Q2 data in each year.



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TOP TEN JOBS BY EMPLOYMENT		Quintiles			Emp, EU28 (th, 2014q2)	% chg pa 11-14
Occupation	Sector	Wage	Educ	Job q		
Sales workers	Retail Trade	1	2	3	12021	0.0
Teaching professionals	Education	5	5	5	9591	0.5
Market-oriented skilled agricultural workers	Crop and Animal Production etc	2	1	2	6752	-1.4
Health professionals	Human Health Activities	5	5	3	4742	2.4
Personal service workers	Food and Beverage Service Activities	1	2	1	4096	2.2
Building and related trades workers	Specialised Construction Activities	2	2	2	4035	-5.2
Drivers and mobile plant operators	Land Transport and Transport Via Pipelines	3	2	1	3864	-1.0
Health associate professionals	Human Health Activities	4	4	3	3732	-0.1
Business and administration associate professionals	Public Admin and Defence; Compulsory Social Security	4	4	5	3018	-1.3
Building and related trades workers	Construction of Buildings	3	1	1	2214	-3.4

- Ten jobs account for nearly a quarter of employment

Source: EJM annual report 2015, authors' calculations based on EU-LFS, SES data.

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- Strong and persistent growth in some professional, mainly public sector jobs in health/education

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- Ten jobs account for nearly a quarter of employment
- Strong and persistent growth in some professional, mainly public sector jobs in health/education
- Within public sector, employment losses have been recorded in public administration
- Growth in lower level service jobs also
- Construction shedding employment from 2008-14.

Source: EJM annual report 2015, authors' calculations based on EU-LFS, SES data.

1. Technology:

- **Skills-Biased Technical Change:** computerization increases the relative demand of high-skilled labour. Implies a more or less linear upgrading occupational change.
- **Routine-Biased Technical Change:** on top of the skills bias, there is a routine-bias in computerization (routine tasks are easier to do with machines). Since routine tasks are more frequent in the middle of the skills continuum, there is a non-linear, polarizing effect.

2. Trade:

- **Offshorability:** some jobs are more tradable than others, and thus more affected by the increasing levels of trade openness. Jobs requiring more social interaction are less affected by trade and they are often in the top and bottom (thus contributing to polarization).

3. Institutions:

- **Labour market regulation and policies** interact with other factors producing different patterns of structural change. Examples: deregulation of employment contracts, minimum wages. Also state as employer.

4. *Labour market supply factors:*

- *Increased female participation, migration, educational upskilling*

5. *Macro-economic variables:*

- *Growth rate, stage of economic development, stage of business-cycle*

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6. Consumption spillovers

- *Inequality, increased demand for basic services from the time-poor, well-off*

- Variety of outcomes across member states. There is no ‘pervasive polarisation’.
 - This suggests a role for institutional variables, especially as the cross-country variation relates mainly to low and mid-paid employment; ie. where labour market policies / institutions tends to impact employment
- The recession was associated with a sharpening of employment polarisation.
- Employment growth post-crisis resilient in high-paid, high-skilled jobs, generally in knowledge intensive services.
- Growth of atypical, especially, part-time employment. Permanent, full-time status increasingly the privilege of well-paid jobs.
- “Hollowing” middle: one of the main underlying stories is the relative decline of good quality, mid-paid, often male, jobs not requiring 3rd level education.
- More recent data from US – and some European countries - indicates (emerging?) pattern of employment downgrading ... ‘secular stagnation’ , low productivity growth
- Technology / computerisation is an important vector of change ... but not the only explanation

Thank you for your attention!

John.Hurley@eurofound.europa.eu

Main sources: [EJM annual report 2015: Upgrading or polarisation?: long-term and global shifts in the employment structure](#) and EJM annual 2016 (forthcoming)