



# A polarising crisis

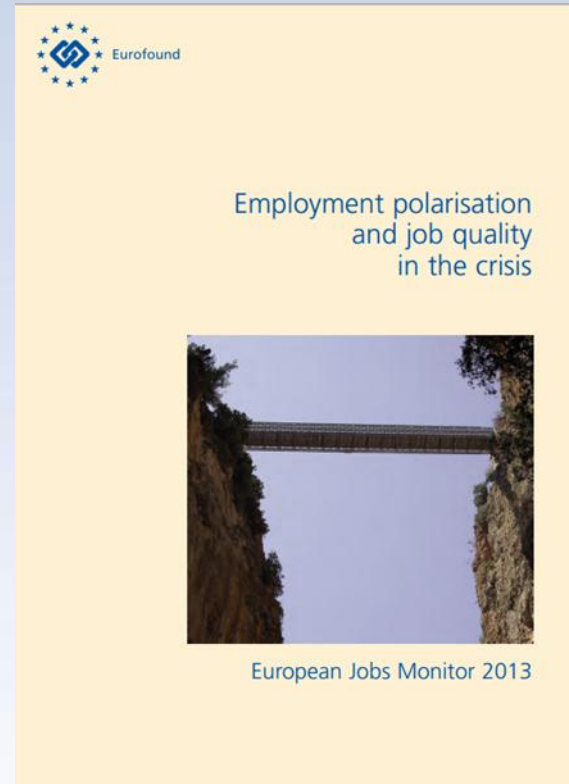
**Structural employment shifts in the EU  
before, during and after the Great Recession**

*John Hurley  
HSE*

*3<sup>rd</sup> LCSR conference Moscow*



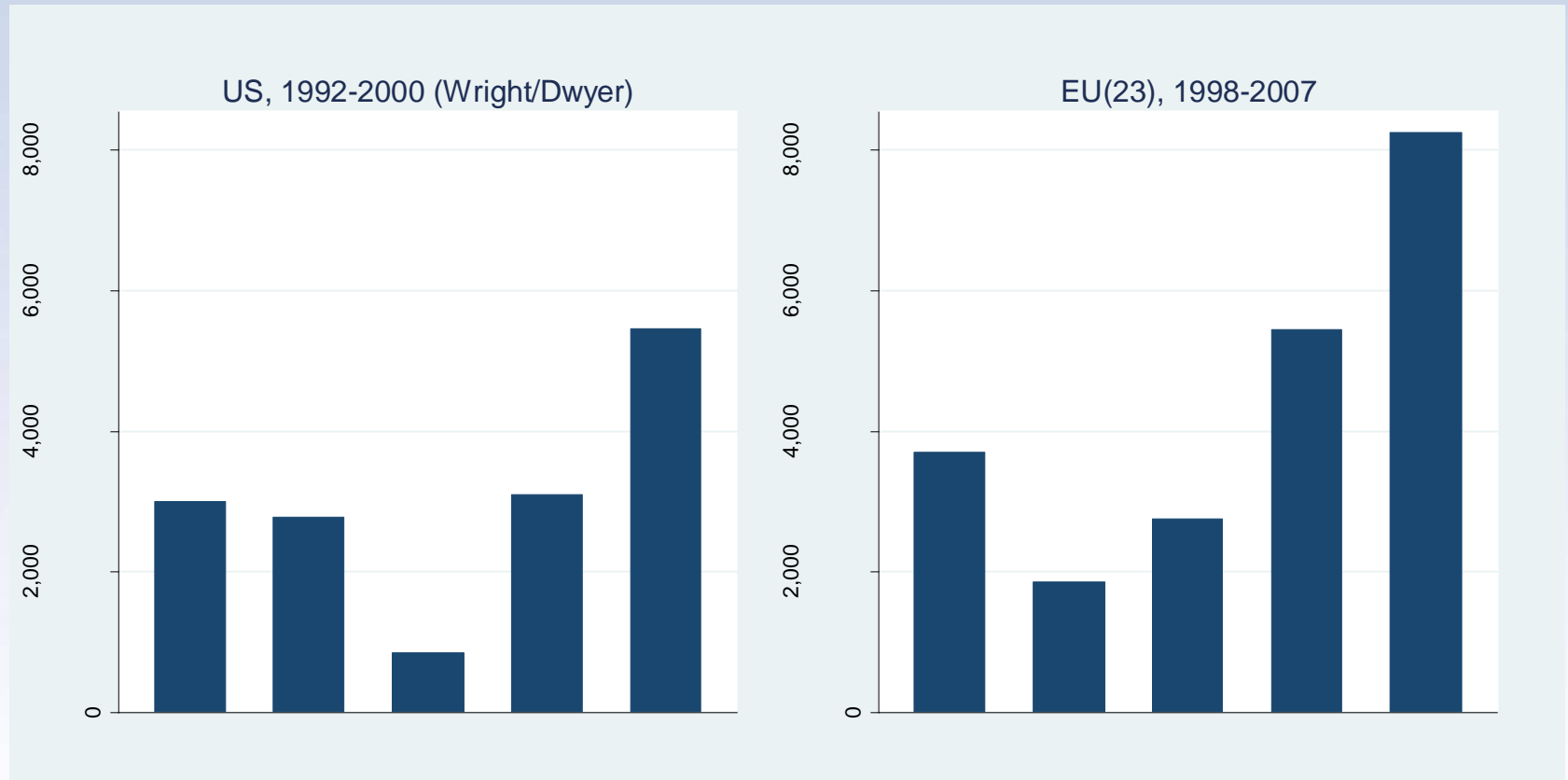
- Method: 'the jobs approach'
- Background: are developed country labour markets polarising?
- Results
- Discussion



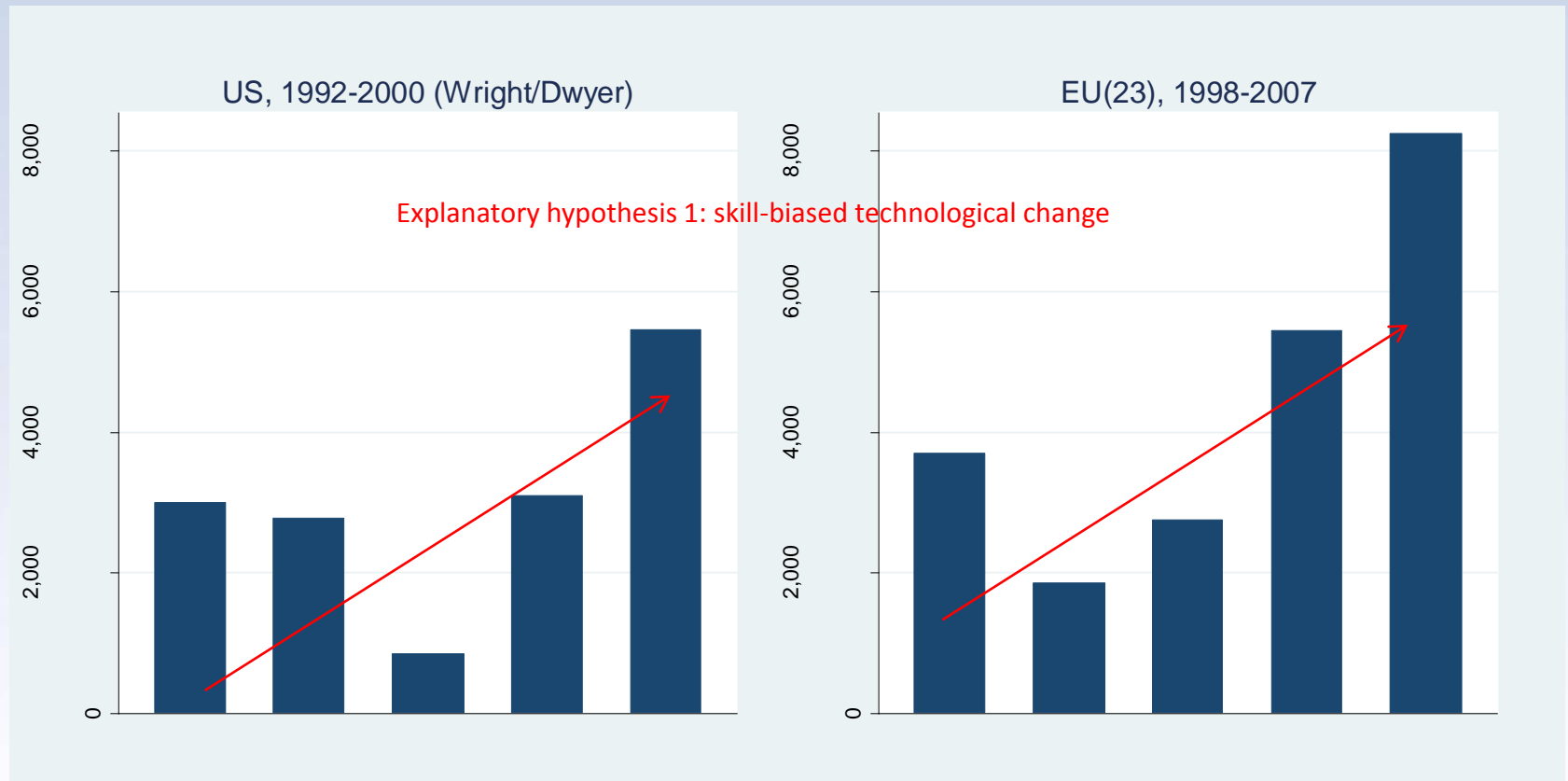
# The 'jobs approach': methodology

- 'Jobs approach' first used by J. Stiglitz, and refined by E.O. Wright – USA in the 1990s
- Concept:
  - ▶ To describe structural change in the labour market using the job as a unit of observation. A job is an occupation in a sector (isco 2d x nace 2d)
  - ▶ To add a qualitative dimension to net employment change data (Labour Force Survey), for eg. using wage as a proxy of job quality. Mean hourly job wage.
- Objectives:
  - ▶ To identify growing and declining jobs, occupations and sectors
  - ▶ To provide data on the extent to which member states are making good on EU policy commitments to create 'more **and** better jobs' ...
  - ▶ ... and to assess the extent to which employment change is polarising
- First cross-national application in Europe (to 23 EU countries for 1995-2006) in *More and better jobs?: Patterns of employment expansion in Europe, 1995-2006*. Subsequently developed as a monitoring tool by Eurofound in 2009-11 (annual EJM reports)

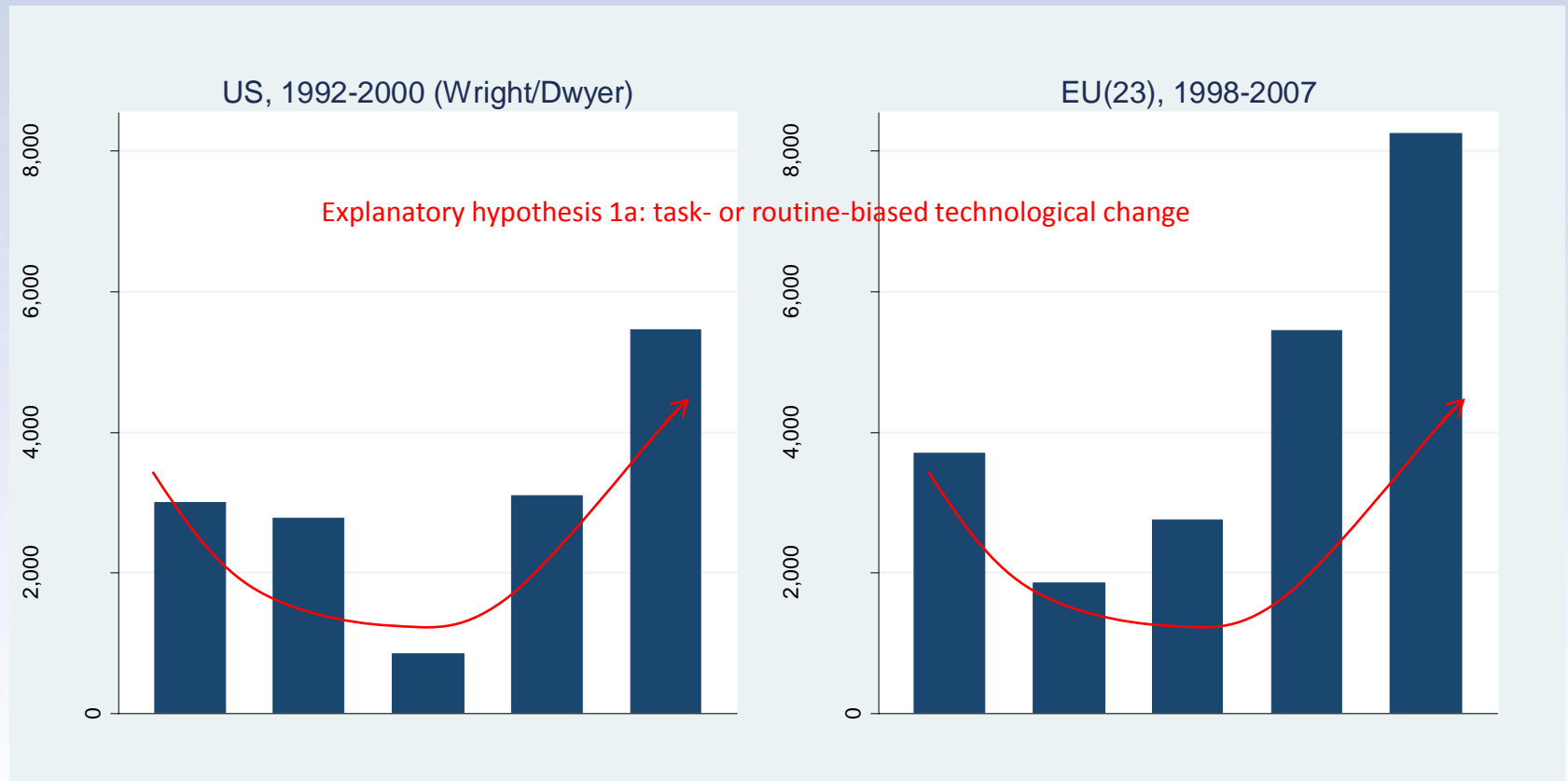
# Recent employment expansions in EU and US (different periods)



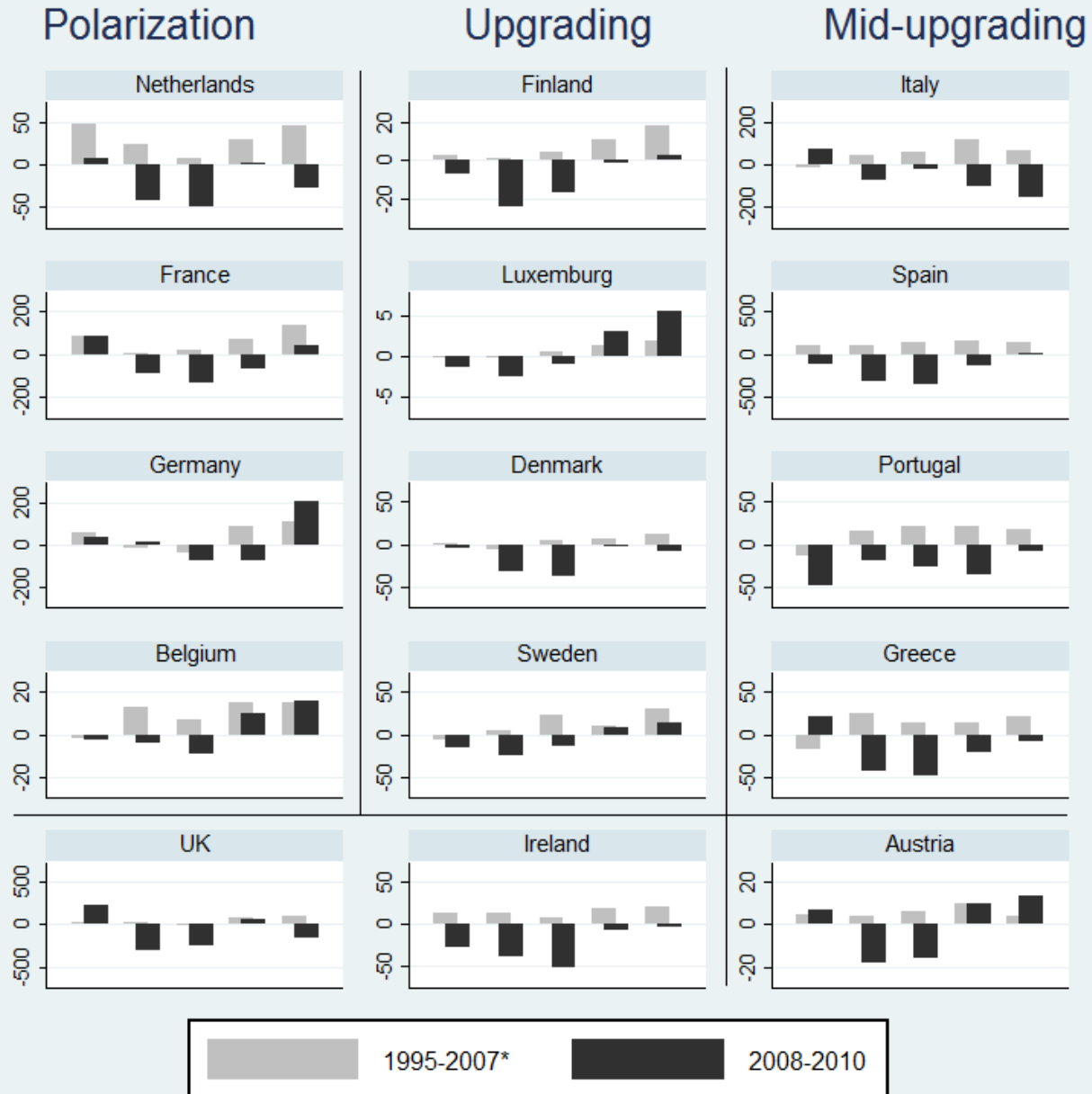
# Recent employment expansions in EU and US (different periods)



# Recent employment expansions in EU and US (different periods)



**Before vs. after the crisis: annual average absolute change in each period**





Eurofound

# Upgrading / polarisation in the pre-crisis expansion

- Polarisation linked to Autor-Levy-Murnane 'routinisation' hypothesis – routine jobs are more easily displaceable by automation or trade / offshoring
- And these tend to be mid-paying jobs (in manufacturing, some forms of clerical/administrative work)
- Lower and higher paid service sector jobs tend (for now) to be less vulnerable
- Goos / Manning / Salomons (2009) observe 'pervasive polarisation' in Europe (15 of 16 countries, 1993-2006)
- We find a plurality of national patterns in a similar period (1995-2007) – polarisation, upgrading and many hybrid patterns







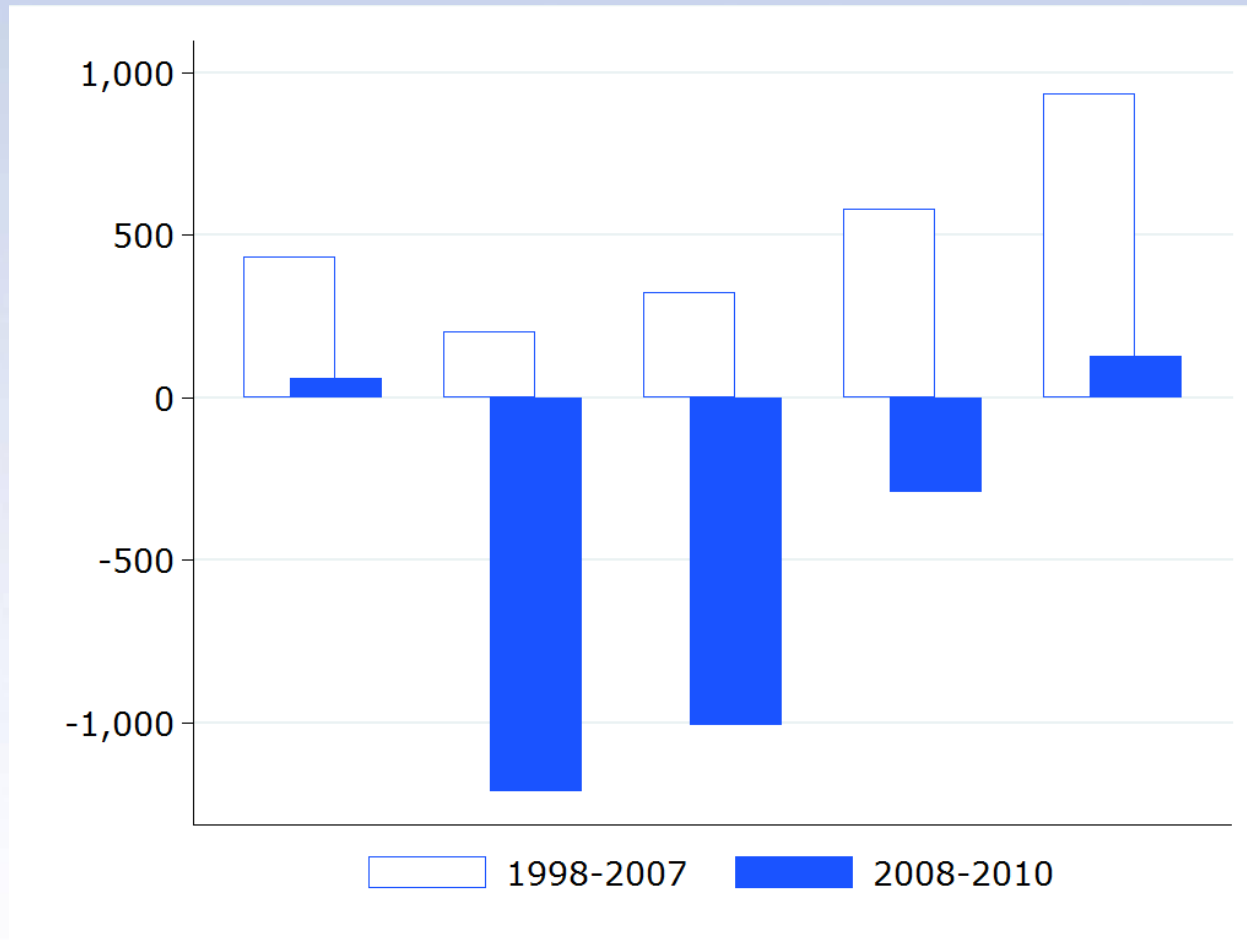
Eurofound

# Upgrading / polarisation in the pre-crisis expansion

- Why the discrepancies? (see Fernandez-Macias 2012)
- Implications of different empirical findings
  - ▶ Pervasive polarisation implies a single dominant vector of change in employment demand across countries – technological determinism
  - ▶ A plurality of patterns suggests that there may be other important policy-related factors at play, ie. factors specific to individual countries
  - ▶ A long list
    - changing gender / public sector share of employment
    - LM regulatory frameworks - minimum wages, employment protection, extent of deregulation of non-standard employment forms
    - union and collective bargaining coverage,
    - immigration,
    - activation measures
    - social welfare regimes
    - sector specificities (FIRE, construction boom-busts)
    - as well as macroeconomic factors (budgetary balance, austerity, export orientation...)
  - ▶ Note that ...
    - Most of the country variation is in the lower quintiles



# Changes in the job structure: the good years v bad years



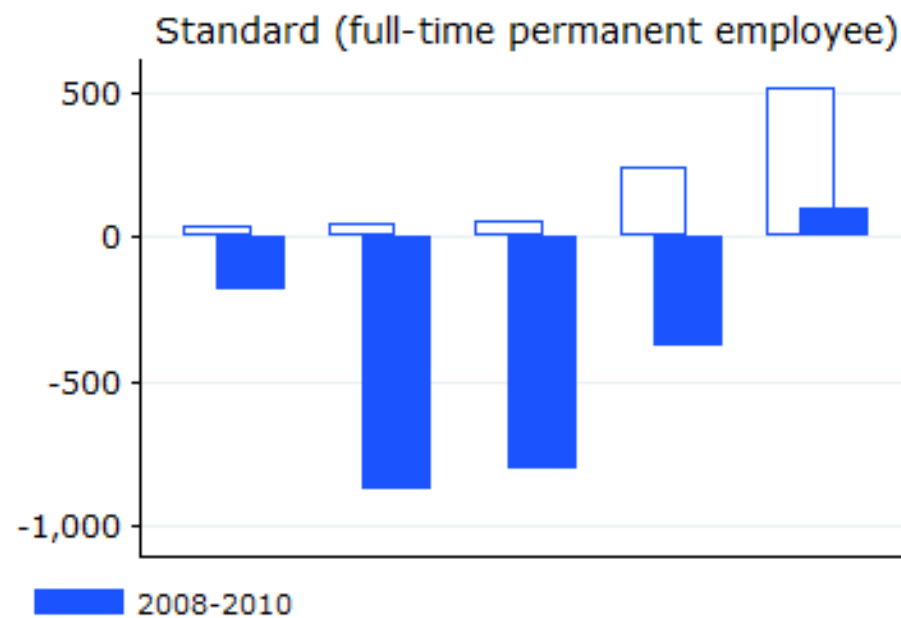
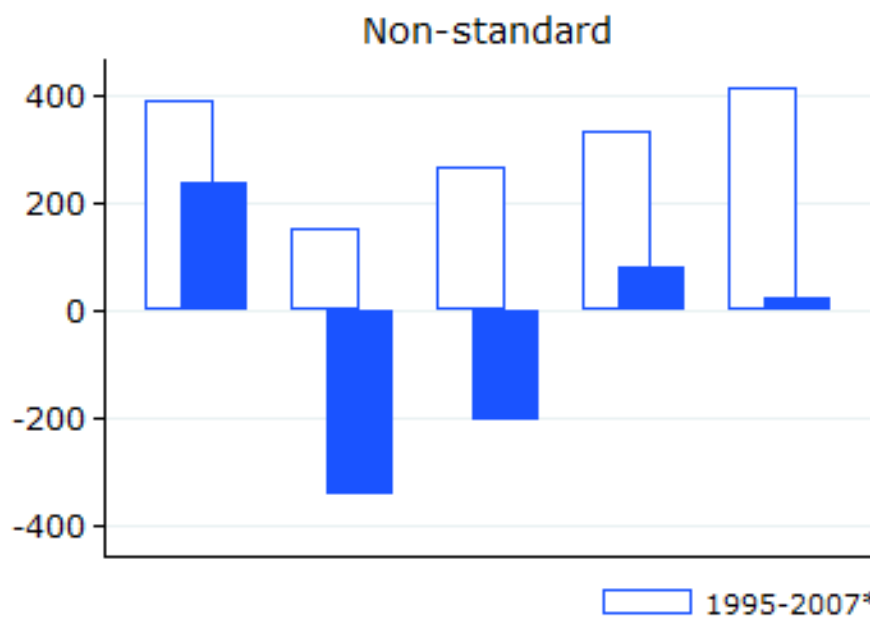
*Yearly average change in the wage quintiles (,000s), EU23*

# Polarisation / upgrading in the crisis and afterwards

- Our findings: upgrading with some polarisation in 1995-2007, polarisation with some upgrading in 2008-10.
- Cycle effect?
- Recessions = intense restructuring activity
- Jaimovich and Siu (2012): destruction of routine, mid-paying jobs in the USA has been concentrated in recession periods.
- Destruction of jobs in structurally declining sectors which 'muddled through' the expansion – and in construction booms busting
  
- ... but again there are important LM institutional factors at work



# An ongoing destandardization



*Yearly average change in the wage quintiles, EU23, (,000s)*

- Technological change increases the demand for high-skilled workers – computers ‘complements’ them / makes them more productive. Higher-paid jobs were much more resilient during the crisis
- Aside from construction booms, the middle tends to be most negatively affected by technological change (manufacturing)
- But what happens in the bottom (low-skilled, low-paid jobs) has little to do with technology and much to do with institutions

## References:

Eurofound (2013), *Job quality and employment polarisation during the crisis*.

Fernandez-Macias, E. (2012) “Job polarisation in Europe?..”, *Work and Occupations*

Jaimovich and Siu (2012): “The trend is the cycle...”, NBER working paper

E. Fernández-Macías, J. Hurley, and D. Storrie (eds.) (2012), *Transformation of the Employment Structure in the EU and USA, 1995-2007*, Palgrave-Macmillan

**Thank you for your attention!**

**[John.hurley@eurofound.europa.eu](mailto:John.hurley@eurofound.europa.eu)**



## 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

*Occupations (ISCO-08) at 2 digit = 43*

*Sectors (NACE rev 2) at 2 digit = 88*

*"Jobs" = Occupation x sector = 3784 (theoretically)*

*... c.900 (CY) to c.2700 (DE) (in practice)*



## 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

*Occupations (ISCO-08) at 2 digit = 53*

*Sectors (NACE rev 2) at 2 digit = 88*

*"Jobs" = Occupation x sector = 3784 (theoretically)*

*... c.900 (CY) to c.2700 (DE) (in practice)*

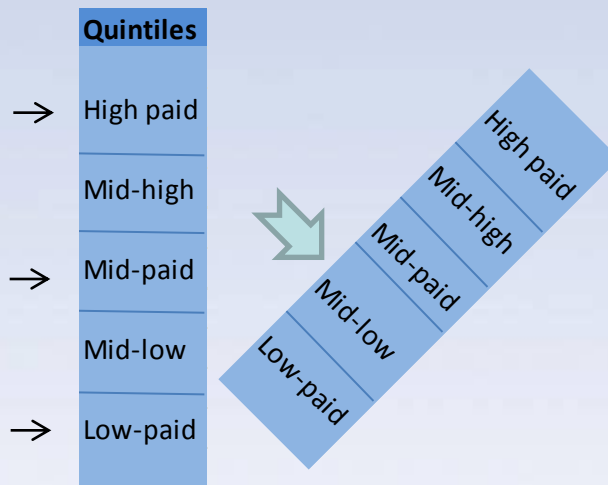




## Rank jobs

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

## Assign to quintiles

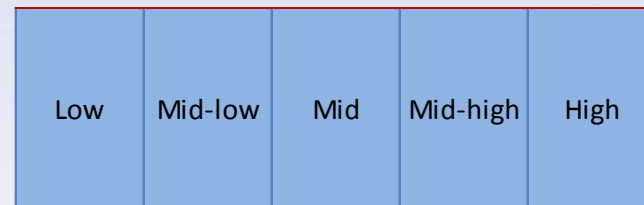


## Rank jobs

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



## Rank jobs

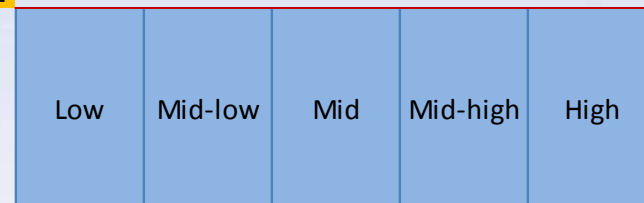
Rank	Occupation	Sector
1	Corporate managers	Financial services
2	Other professionals	Legal/accounting
3	Life science/health professionals	Human health
...		
345	Sales/services elementary occups	Construction
346	Plant/machine operators	Manufacture: auto
347	Sales/services elementary occups	Wholesale retail
...		
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

Each quintile has 20% of employment in start period

2011q2



## 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

## Employment by quintile changes over period ...



## 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

## Employment by quintile changes over period ...



## Rank jobs

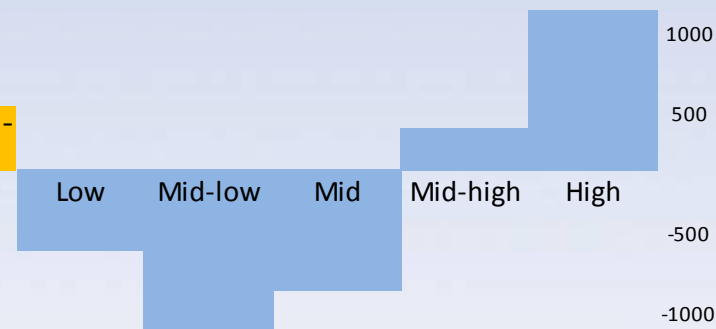
Rank	Occupation	Sector
1	Corporate managers	Financial services
2	Other professionals	Legal/accounting
3	Life science/health professionals	Human health
...		
345	Sales/services elementary occups	Construction
346	Plant/machine operators	Manufacture: auto
347	Sales/services elementary occups	Wholesale retail
...		
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-  
2012q2



## Rank jobs

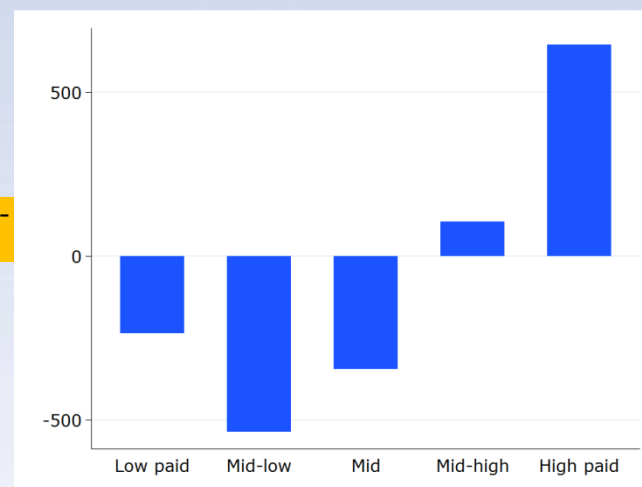
Rank	Occupation	Sector
1	Corporate managers	Financial services
2	Other professionals	Legal/accounting
3	Life science/health professionals	Human health
...		
345	Sales/services elementary occups	Construction
346	Plant/machine operators	Manufacture: auto
347	Sales/services elementary occups	Wholesale retail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

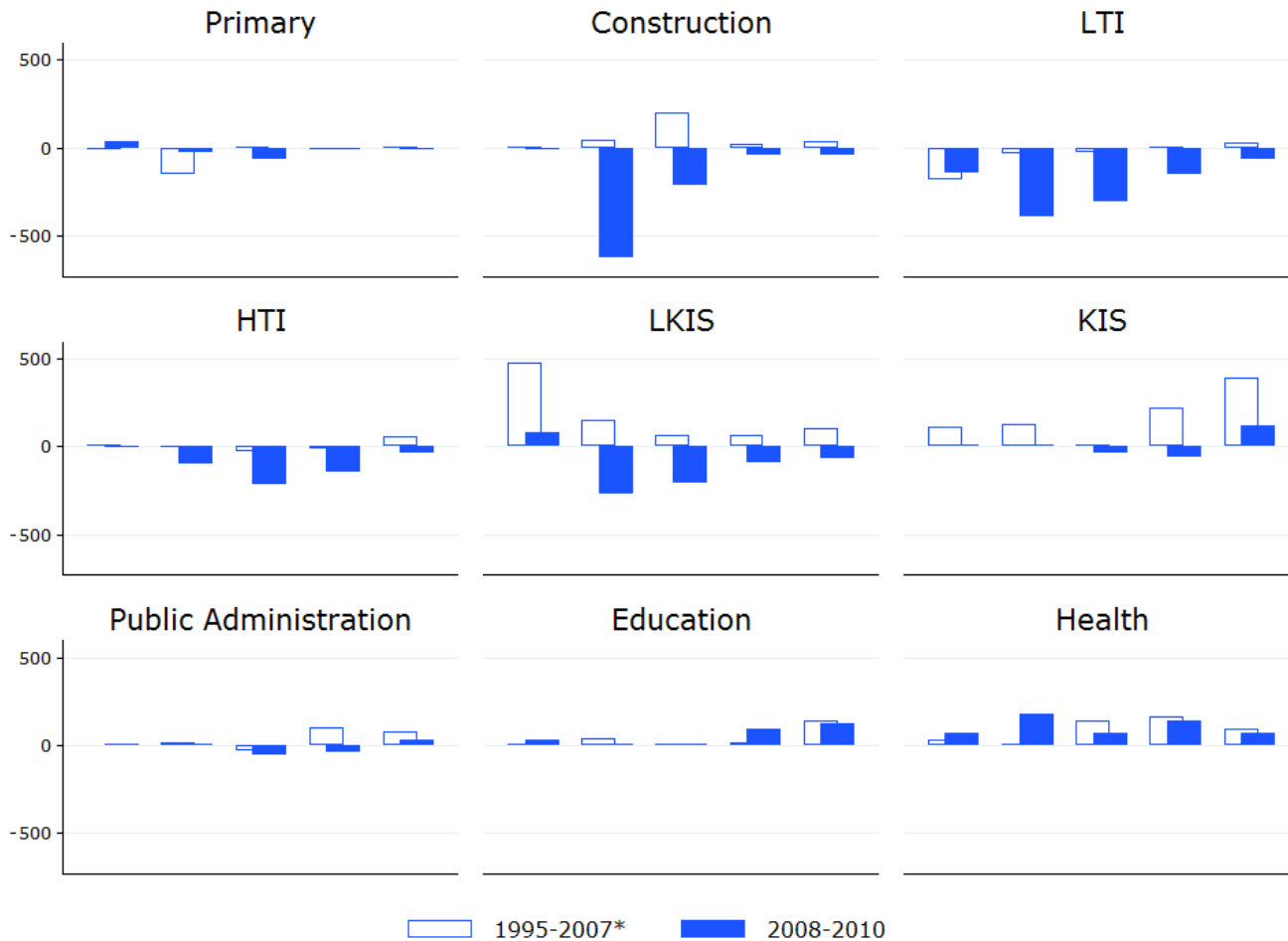
## Assign to quintiles

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

## Show net employment shift for period by quintile

2011q2-  
2012q2





Yearly average change in the wage quintiles



## 1. Intrinsic quality of work (25%)

- ▶ Skills (8.3%; isco q49d q49e q49f)
- ▶ Autonomy (8.3%; q25a q50b q50c q49b)
- ▶ Social support (8.3%; q51a q51b)

## 2. Employment quality (25%)

- ▶ Contractual stability (12.5%; q7 q77a q12)
- ▶ Development opportunities (12.5%; q61a q77c)

## 3. Workplace risks (25%)

- ▶ Physical risks (\*20%; q23a-i q24a q24b q24c q24e)
- ▶ Psychosocial risks (\*5%; q71b)

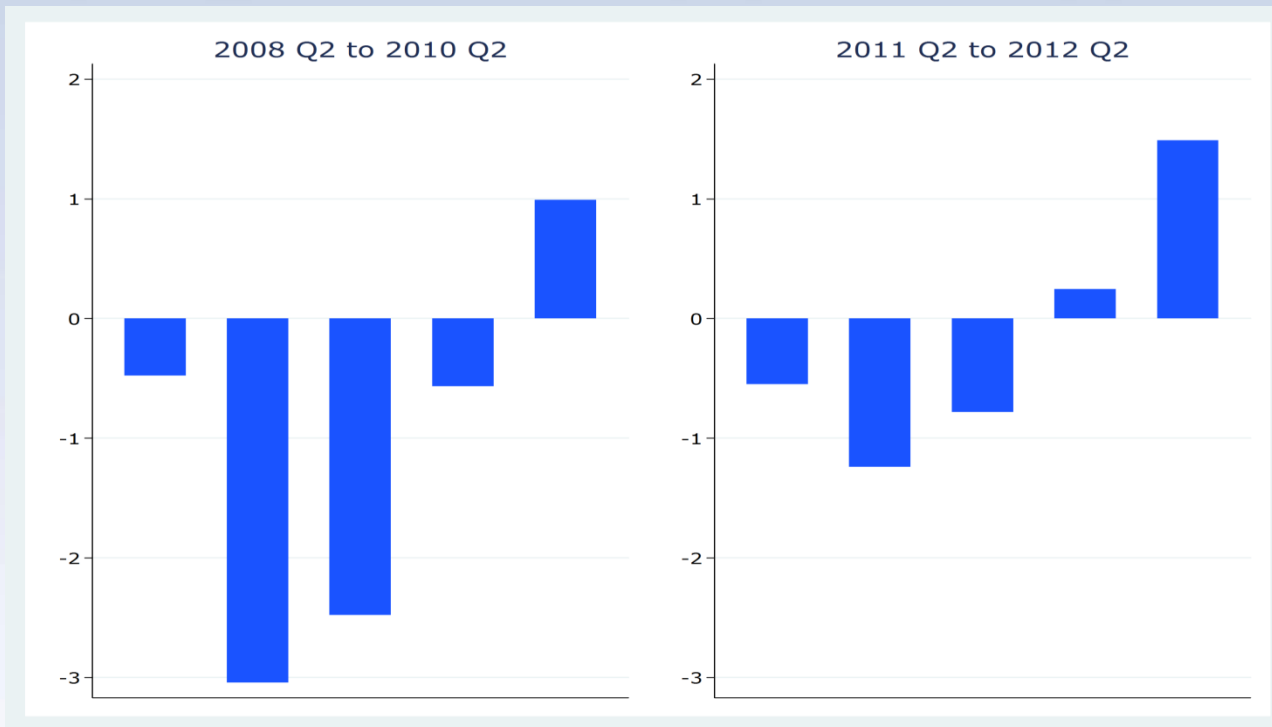
## 4. Working time and work-life balance (25%)

- ▶ Duration (6.25%; q18)
- ▶ Scheduling (6.25%; q32 q33 q34 q35)
- ▶ Flexibility (6.25%; q39 q40)
- ▶ Intensity (6.25%; q45a q45b)

*\*Approximately (different aggregation procedure). Datasource: 5th EWCS (2010)*

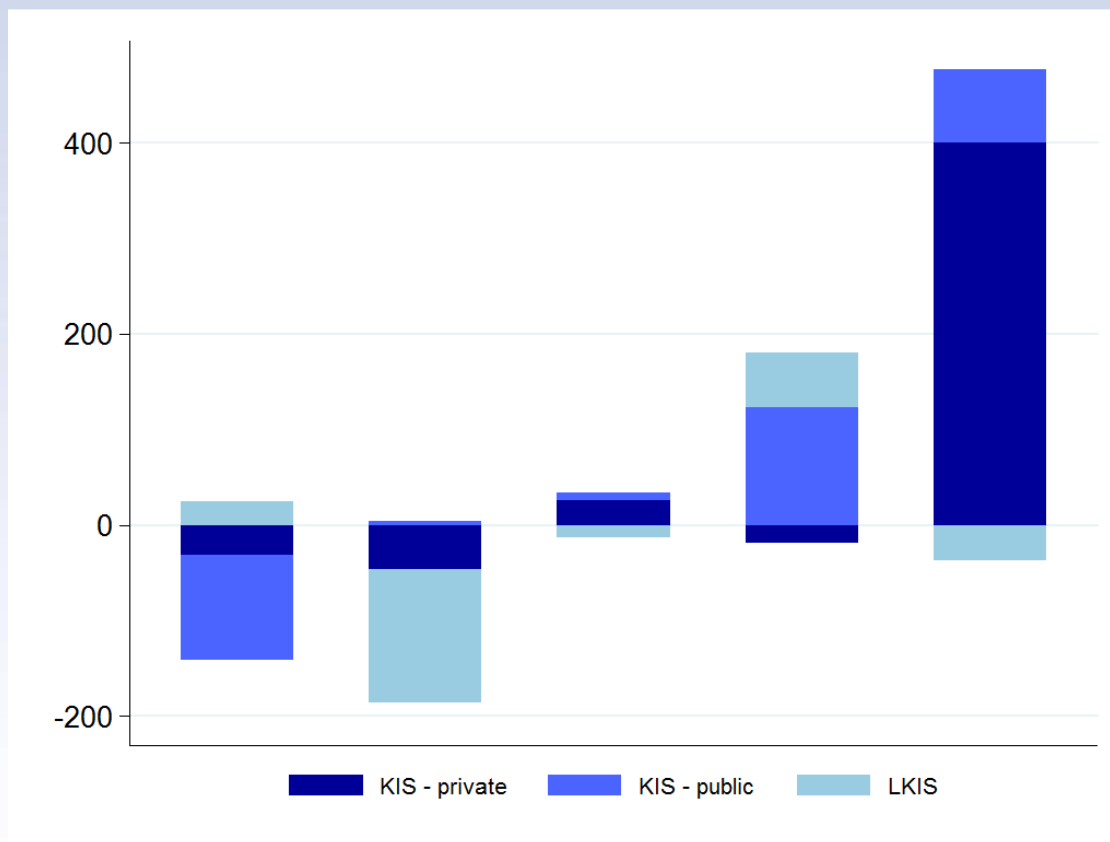


# ... after the (great) recession



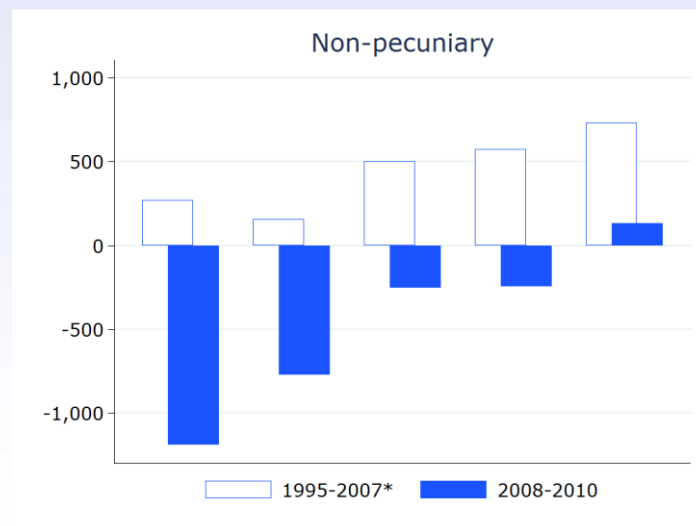
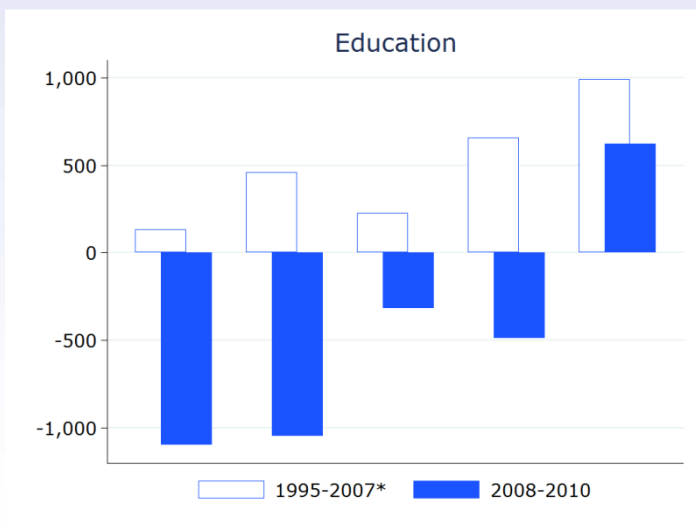
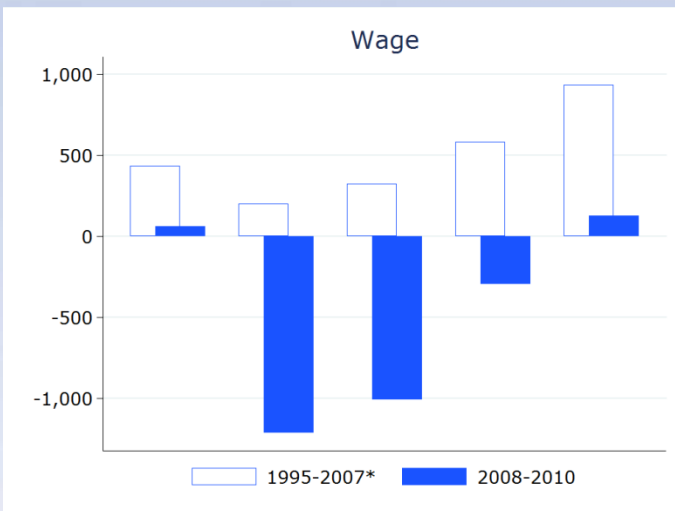
*Yearly % change in the wage quintiles*

# Where the growth is: services

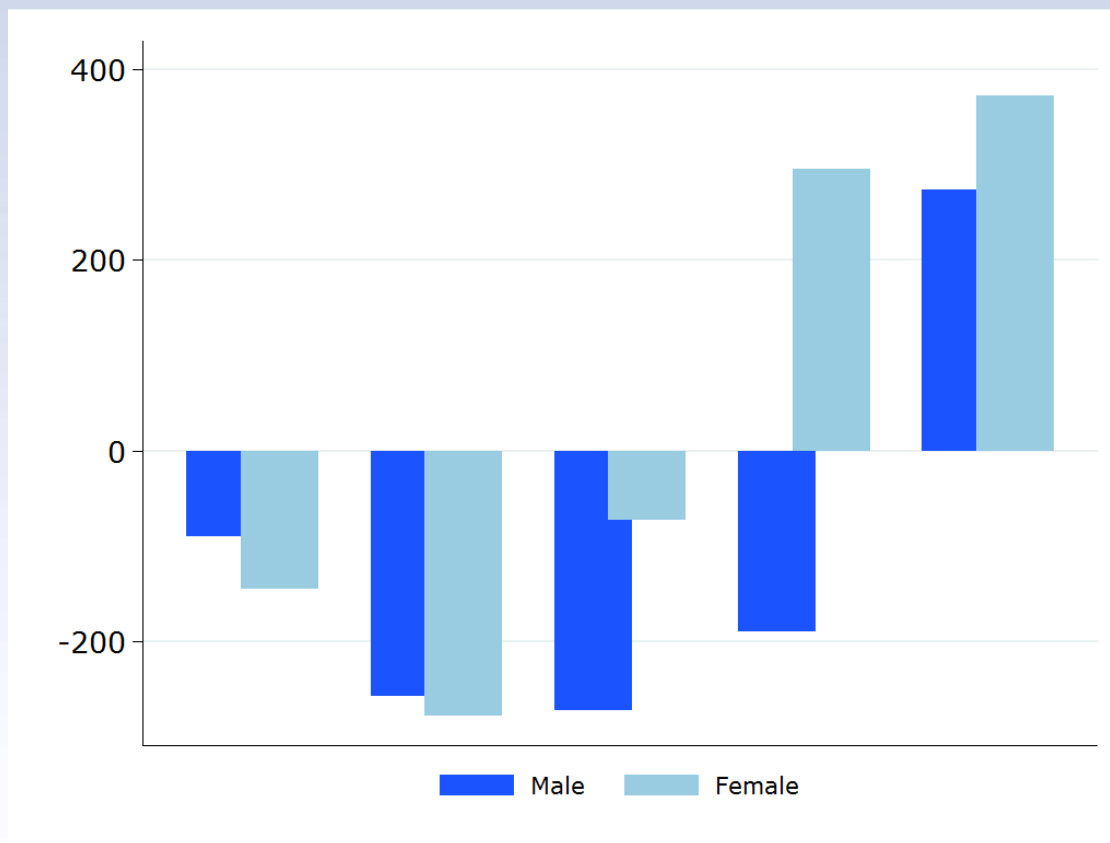


*Change in wage quintile, 2011q2-2012q2*

# Polarization: it's just about wages!



# Gender employment shifts: 2011q2-12q2



## 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

*Occupations (ISCO-08) at 2 digit = 43*

*Sectors (NACE rev 2) at 2 digit = 88*

*"Jobs" = Occupation x sector = 3784 (theoretically)*

*... c.900 (CY) to c.2700 (DE) (in practice)*

*Main data sources: European Labour Force Survey (for employment), different sources including Structure of Earning Survey and ELFS (for wages)*

## 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

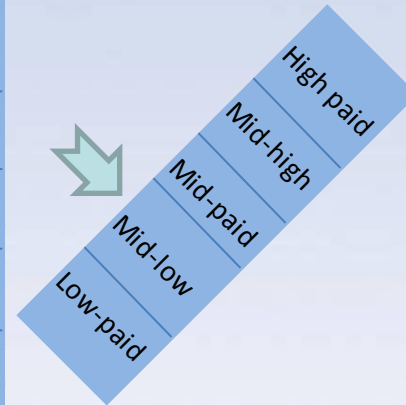


## Rank jobs

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

## Assign to quintiles

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



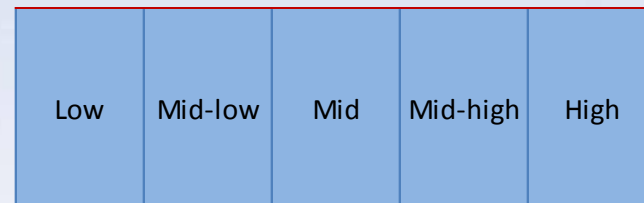


## Rank jobs

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



## Rank jobs

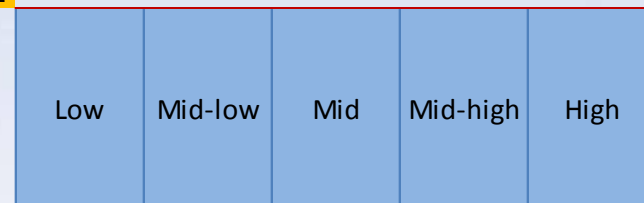
Rank	Occupation	Sector
1	Corporate managers	Financial services
2	Other professionals	Legal/accounting
3	Life science/health professionals	Human health
...		
345	Sales/services elementary occups	Construction
346	Plant/machine operators	Manufacture: auto
347	Sales/services elementary occups	Wholesale retail
...		
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

Each quintile has 20% of employment in start period

2011q2



## 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

## Employment by quintile changes over period ...



## 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

## Employment by quintile changes over period ...



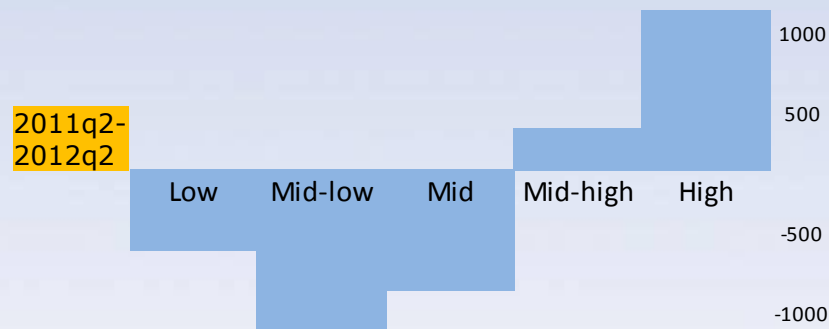
## Rank jobs

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



## Rank jobs

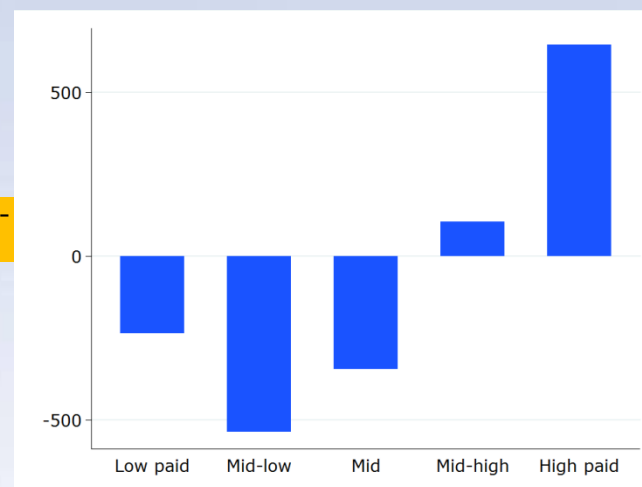
Rank	Occupation	Sector
1	Corporate managers	Financial services
2	Other professionals	Legal/accounting
3	Life science/health professionals	Human health
...		
345	Sales/services elementary occups	Construction
346	Plant/machine operators	Manufacture: auto
347	Sales/services elementary occups	Wholesale retail
...		
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

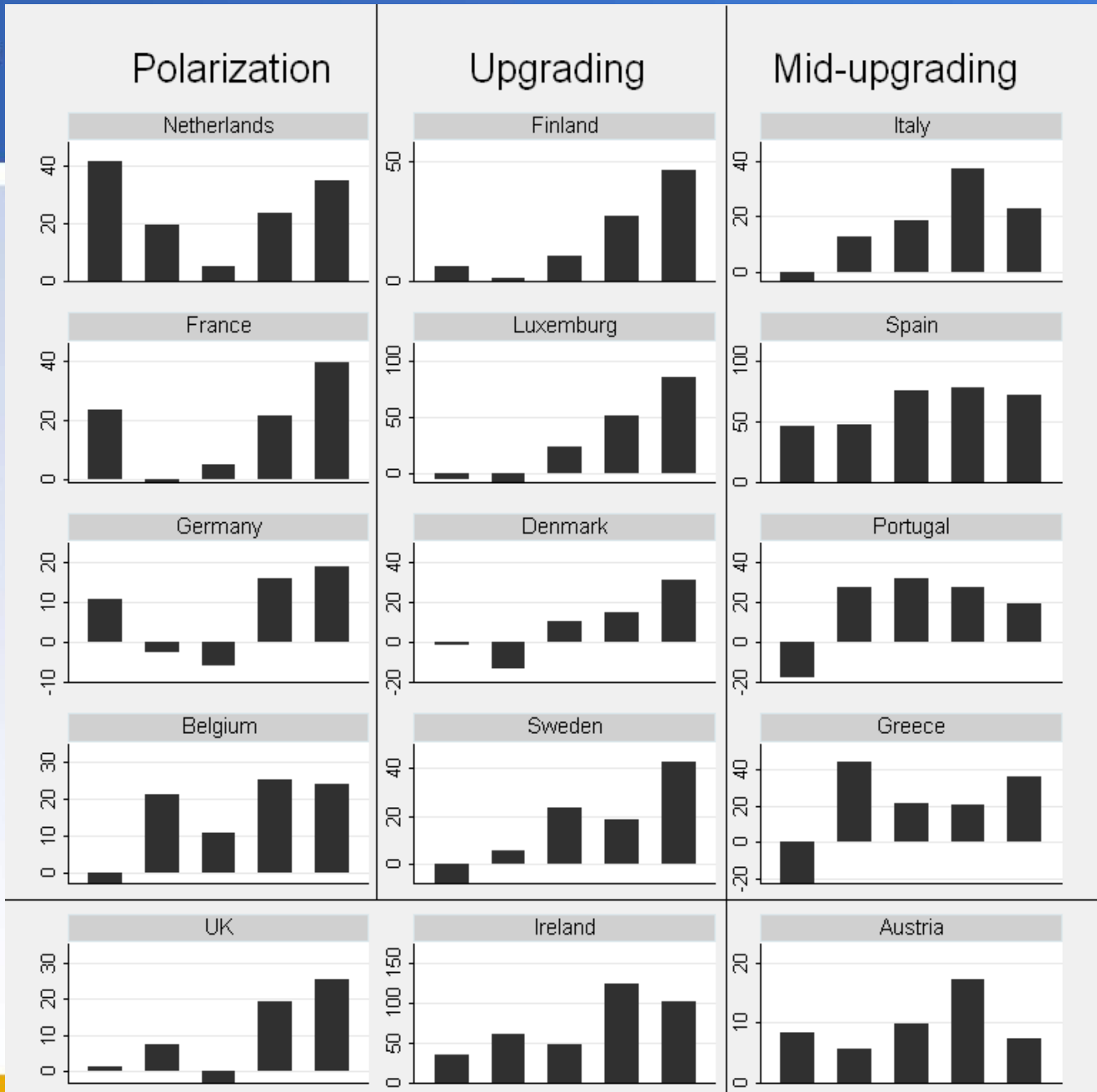
2011q2-  
2012q2



## Main points

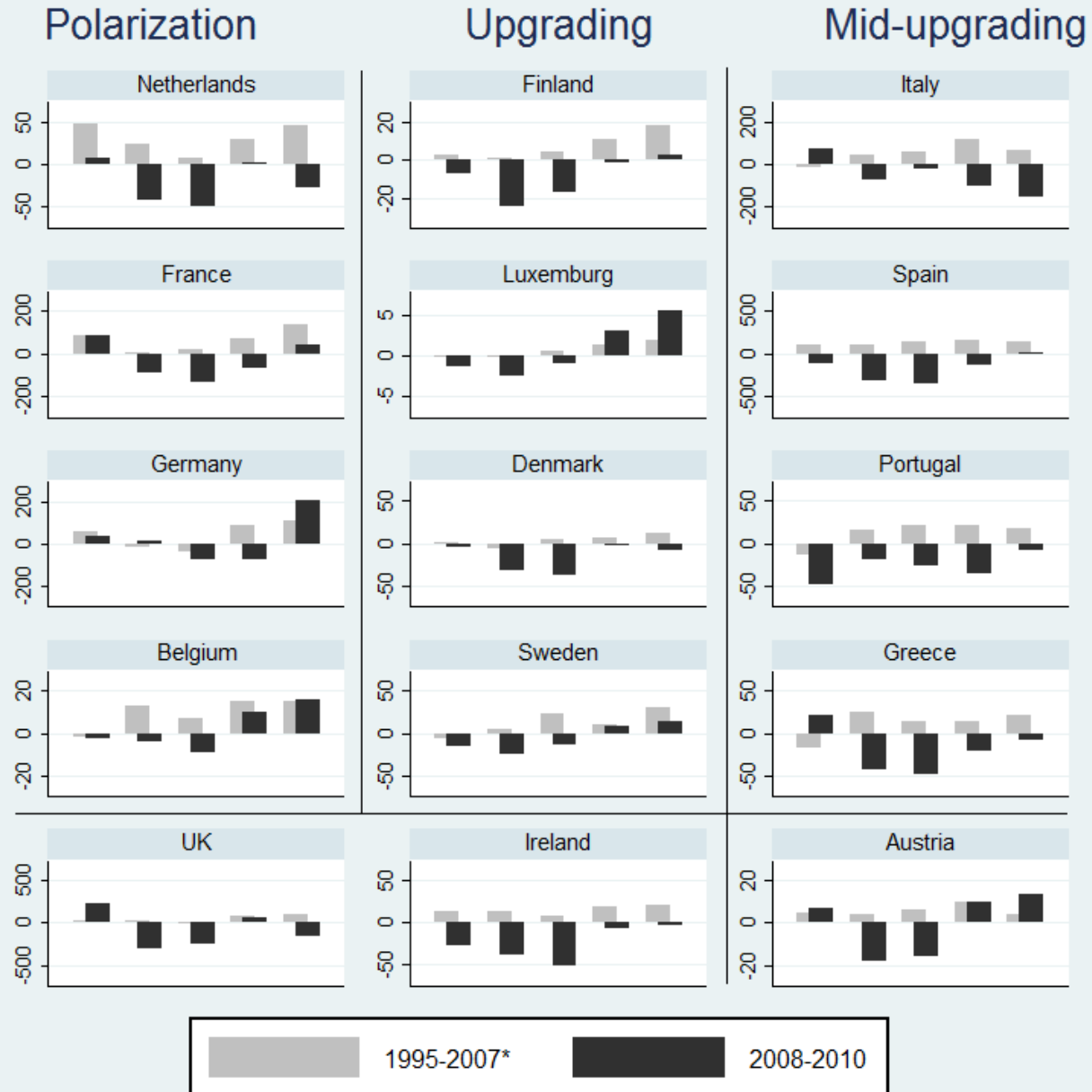
- Although according to our own results the crisis did generate a pervasive process of polarization, that was not the case in the previous expansion (1995-2007).
- The diversity of patterns of employment is associated with European institutional families: polarization mostly took place in continental Europe, associated with a process of labour reform and destandardization.
- In other countries, there was upgrading (Scandinavians) or growth in the middle (Southern Europe).

**Patterns of structural change in employment  
by wage quintiles, relative change 1995-2007**





**Before vs. after the crisis: annual average absolute change in each period**



## An alternative explanation

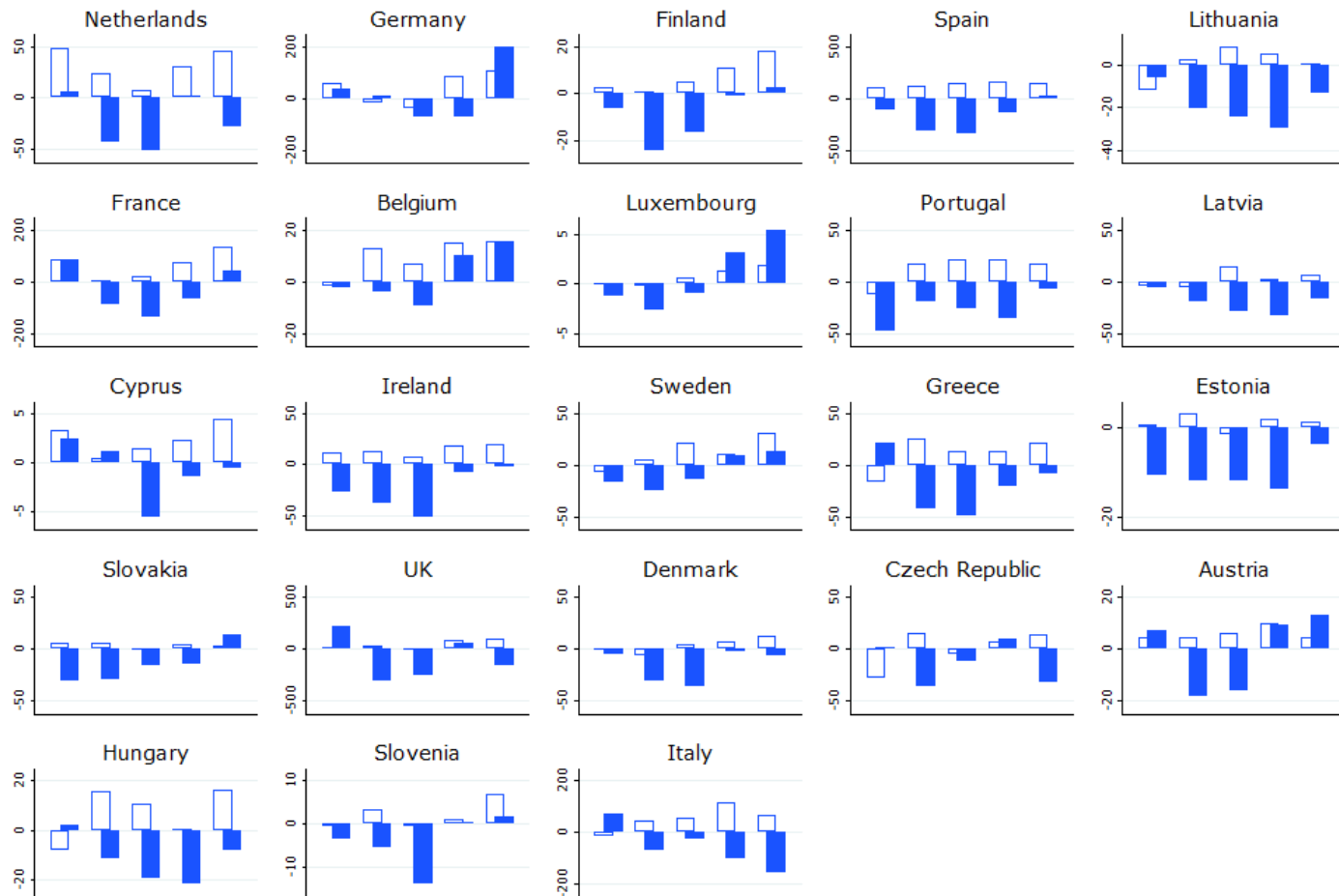
- Technological change increases the demand for high-skilled workers.
- Aside from construction booms, the middle tends to be most negatively affected by technological change.
- But what happens in the bottom (low-skilled, low-paid jobs) has little to do with technology and much to do with institutions
  - ▶ Labour market institutions have most effect in such segments: minimum wages, wage floors, centralized bargaining or unemployment benefits directly affect the incidence of low pay by affecting its relative costs.

## Are there alternatives?

- The observed pattern of polarization was largely the result of political choices: labour reforms aimed (often explicitly!) at facilitating the creation of low-paid jobs.
- Current emphasis on austerity and structural reforms will of course generate even more polarization, which at some point may be socially unsustainable.
- But the Scandinavians (or most of Europe in the post-war period) show an alternative path: socialising some of the gains brought about by rapid technical change, creating welfare-providing jobs in the public sector and maintaining institutions which are anti-low pay.

## Sources

- Eurofound (2013), *Job quality and employment polarisation in the crisis: European Jobs Monitor 2013*, Eurofound, Dublin (authors: John Hurley, E. Fernández-Macías and D. Storrie).
- E. Fernández-Macías, J. Hurley, and D. Storrie (eds.) (2012), *Transformation of the Employment Structure in the EU and USA, 1995-2007*, Palgrave-Macmillan.
- E. Fernández-Macías (2012), *Job Polarization in Europe? Changes in the Employment Structure and Job Quality, 1995-2007*, *Work and Occupations* 39(2) : 157-182.

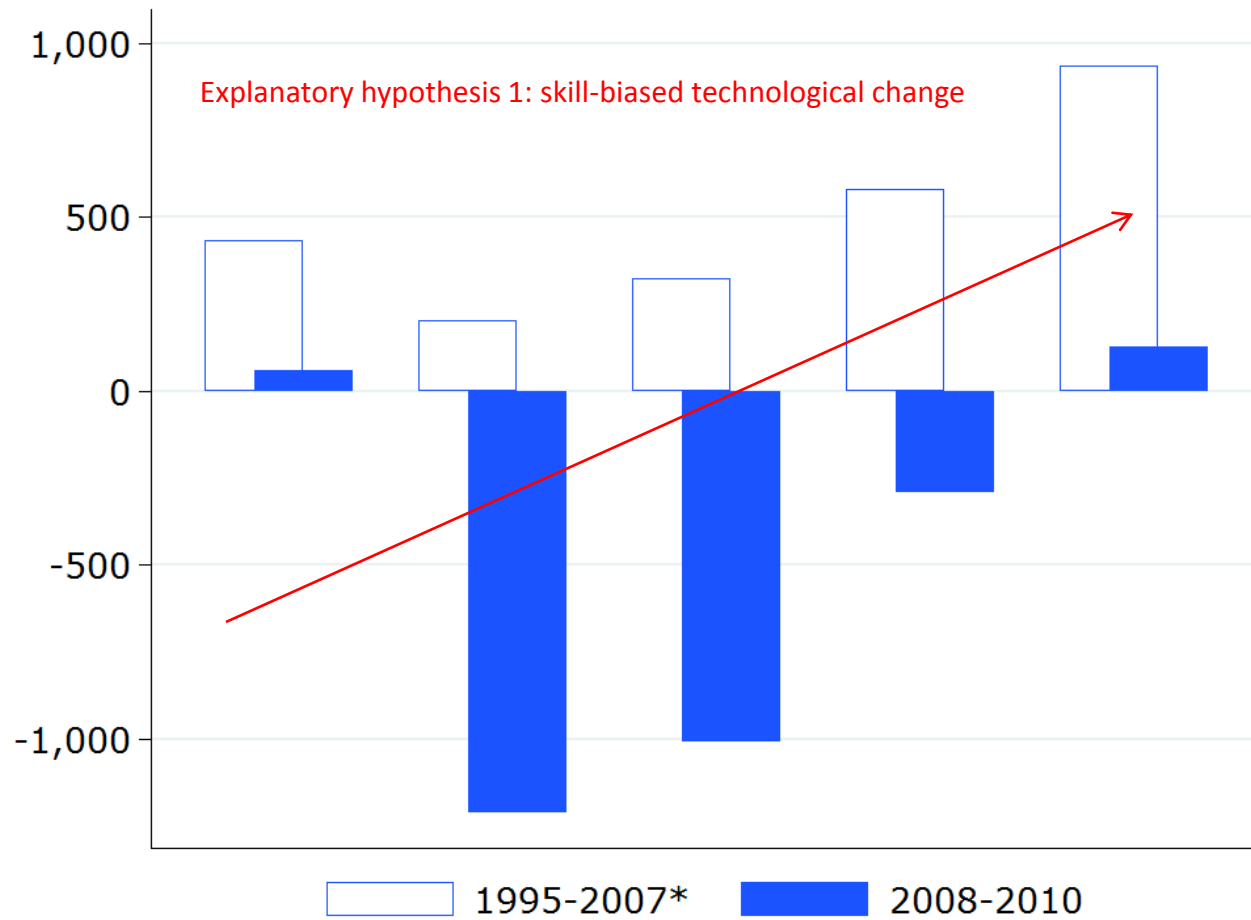


□ 1995-2007\*    ■ 2008-2010



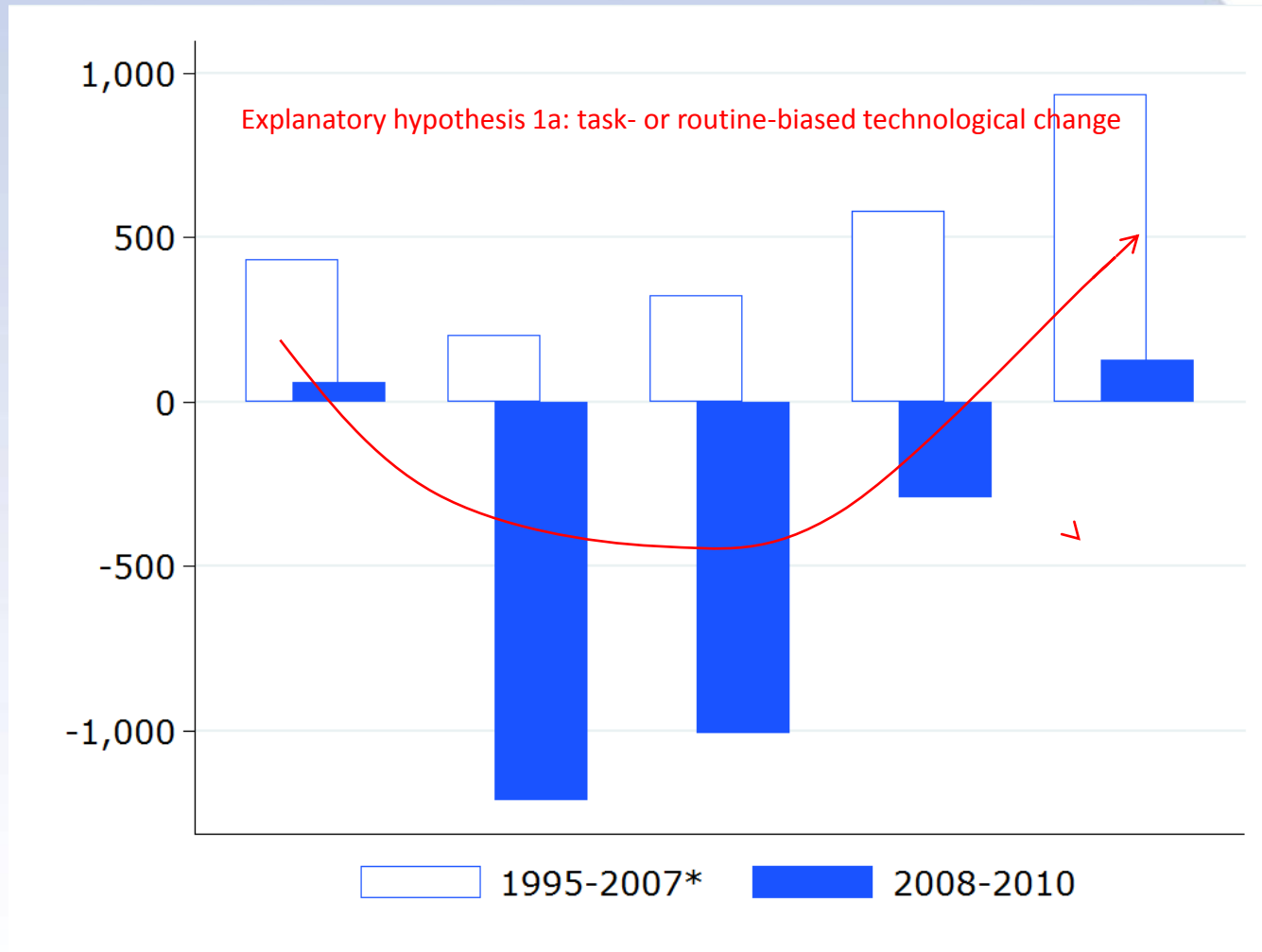


# Changes in the job structure: the good years v bad years



*Yearly average change in the wage quintiles, EU23*

# Changes in the job structure: the good years v bad years



Yearly average change in the wage quintiles, EU23



## 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

*Occupations (ISCO-08) at 2 digit = 43*

*Sectors (NACE rev 2) at 2 digit = 88*

*"Jobs" = Occupation x sector = 3784 (theoretically)*

*... c.900 (CY) to c.2700 (DE) (in practice)*



## 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

*Occupations (ISCO-08) at 2 digit = 53*

*Sectors (NACE rev 2) at 2 digit = 88*

*"Jobs" = Occupation x sector = 3784 (theoretically)*

*... c.900 (CY) to c.2700 (DE) (in practice)*

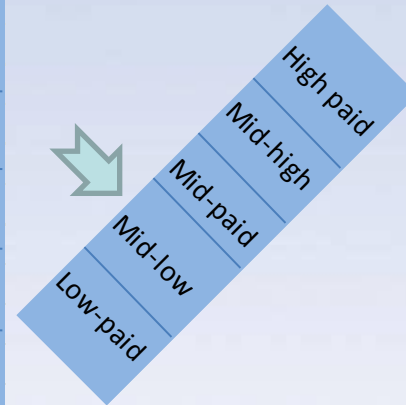


## Rank jobs

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

## Assign to quintiles

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

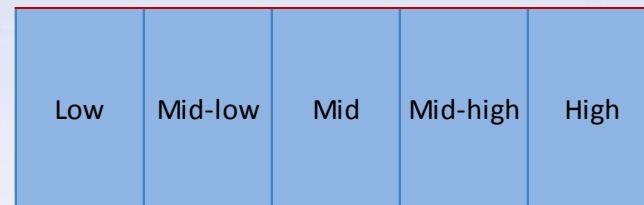


## Rank jobs

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



## Rank jobs

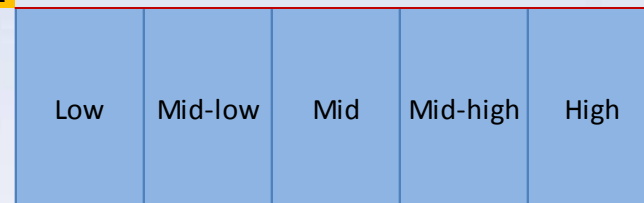
Rank	Occupation	Sector
1	Corporate managers	Financial services
2	Other professionals	Legal/accounting
3	Life science/health professionals	Human health
...		
345	Sales/services elementary occups	Construction
346	Plant/machine operators	Manufacture: auto
347	Sales/services elementary occups	Wholesale retail
...		
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

Each quintile has 20% of employment in start period

2011q2



## 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

## Employment by quintile changes over period ...



## 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

## Employment by quintile changes over period ...



# Jobs monitor: methodology

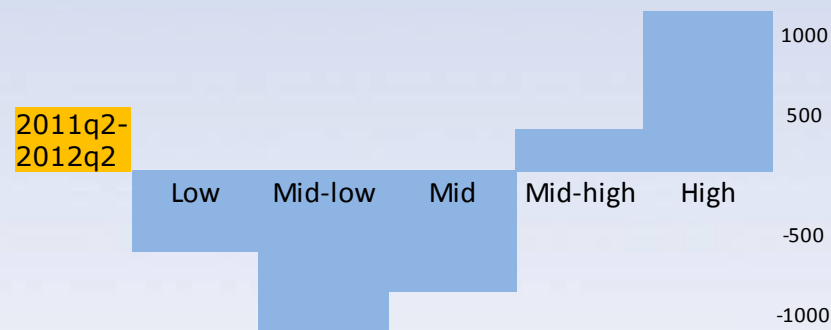
## Rank jobs

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





## Rank jobs

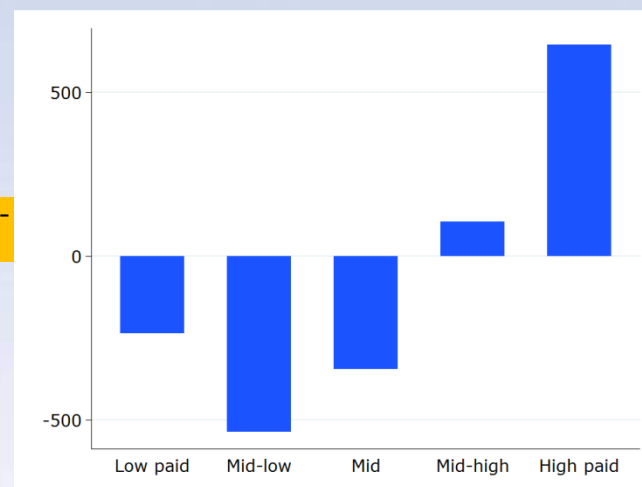
Rank	Occupation	Sector
1	Corporate managers	Financial services
2	Other professionals	Legal/accounting
3	Life science/health professionals	Human health
...		
345	Sales/services elementary occups	Construction
346	Plant/machine operators	Manufacture: auto
347	Sales/services elementary occups	Wholesale retail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

## Assign to quintiles

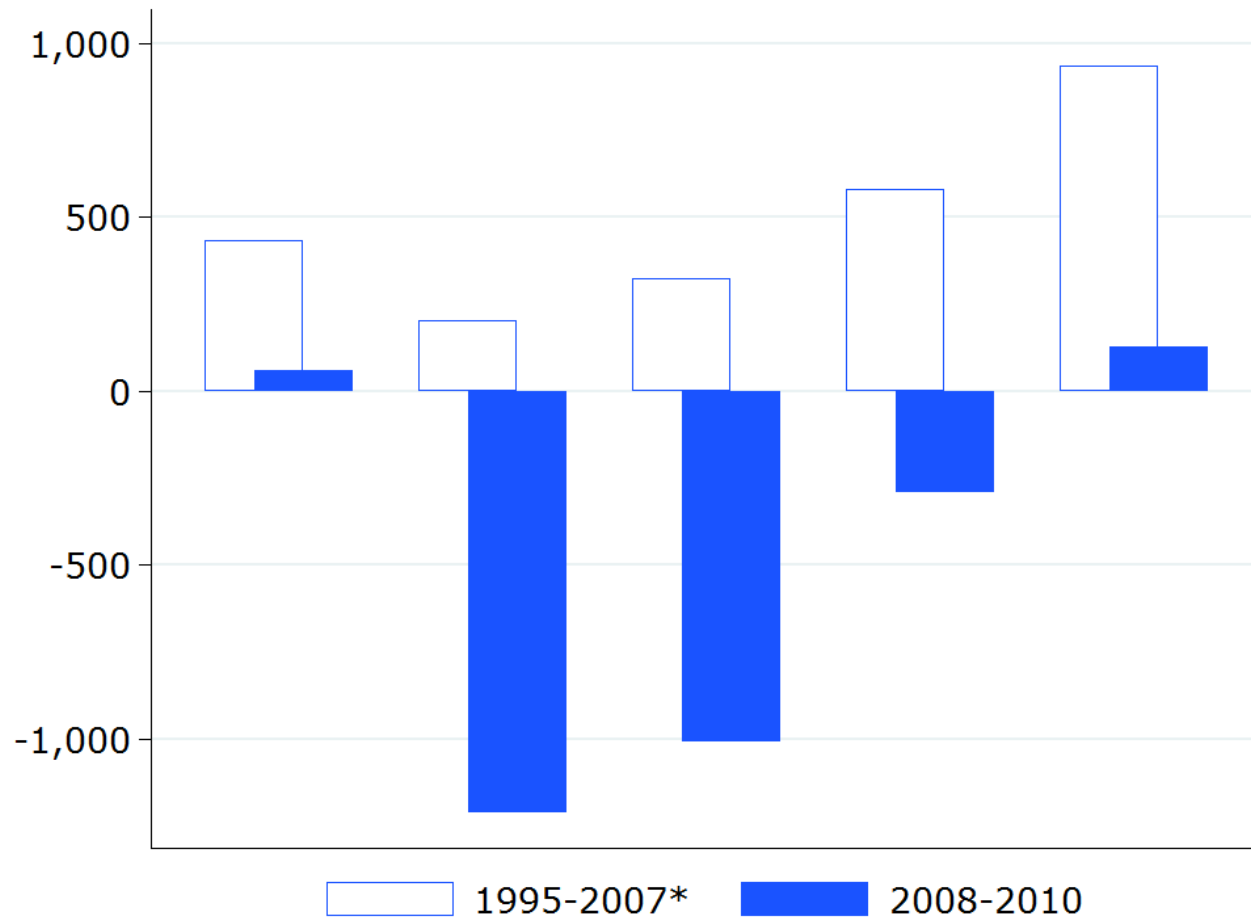
Quintiles
→ High paid
Mid-high
→ Mid-paid
Mid-low
→ Low-paid

## Show net employment shift for period by quintile

2011q2-2012q2



# Changes in the job structure: the good years v bad years



*Yearly average change in the wage quintiles, EU23*