

# Finland: firm factors in wages and wage changes

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## Structure of paper

- Description of wage setting institutions and data definitions
- Computation of comparable tables (separate table appendix)
- More detailed analysis of salaried employee wage structures
- Tentative analysis of the impact of exits and promotions on wage outcomes

## Interesting issues

- Pay bargaining is a mixture of market forces and collectively agreed elements – how do these institutions translate into wage structure outcomes?
- What long run changes can we detect in the stylised facts of pay differentials and wage dynamics?
- How do the stylised facts on wage structure and mobility compare to other countries?

## Data (swift recap)

- Manufacturing industry only, all individuals 1980-2000
- Thus, coverage is almost total in manufacturing, no information from the rest of the economy
- Information is register-based, not collected for research purposes, yet mostly quite detailed and accurate
- Worker information (pay by hour) and salaried employee information (monthly salary) are in separate files, merged for the comparison table years (1981, 1990, 1989) (big effort, controversial choices)
- Otherwise, we analyse salaried employees only

# Pay bargaining

- Mixture of individual contracts and collective action
- Practically everybody is under collective agreements, yet the collective agreements affect mostly two things:
  - Minimum “tariff” wages for job categories, not directly binding for most workers and employees
  - “General” percentual (and industrywise) wage increases agreed on each bargaining round, these are applied to existing wage contracts, regardless of level
- General increases are not binding norms for the local agents, they are free to deviate from them but that requires the consent of both worker and firm
- The legal significance of the general increase is: the local parties have relinquished their right to undertake strikes or lockouts – any deviation from the general increase must be negotiated under a peace clause
- Thus, the general increase is like an upward updating of the existing contract

## Bottom line of pay bargaining

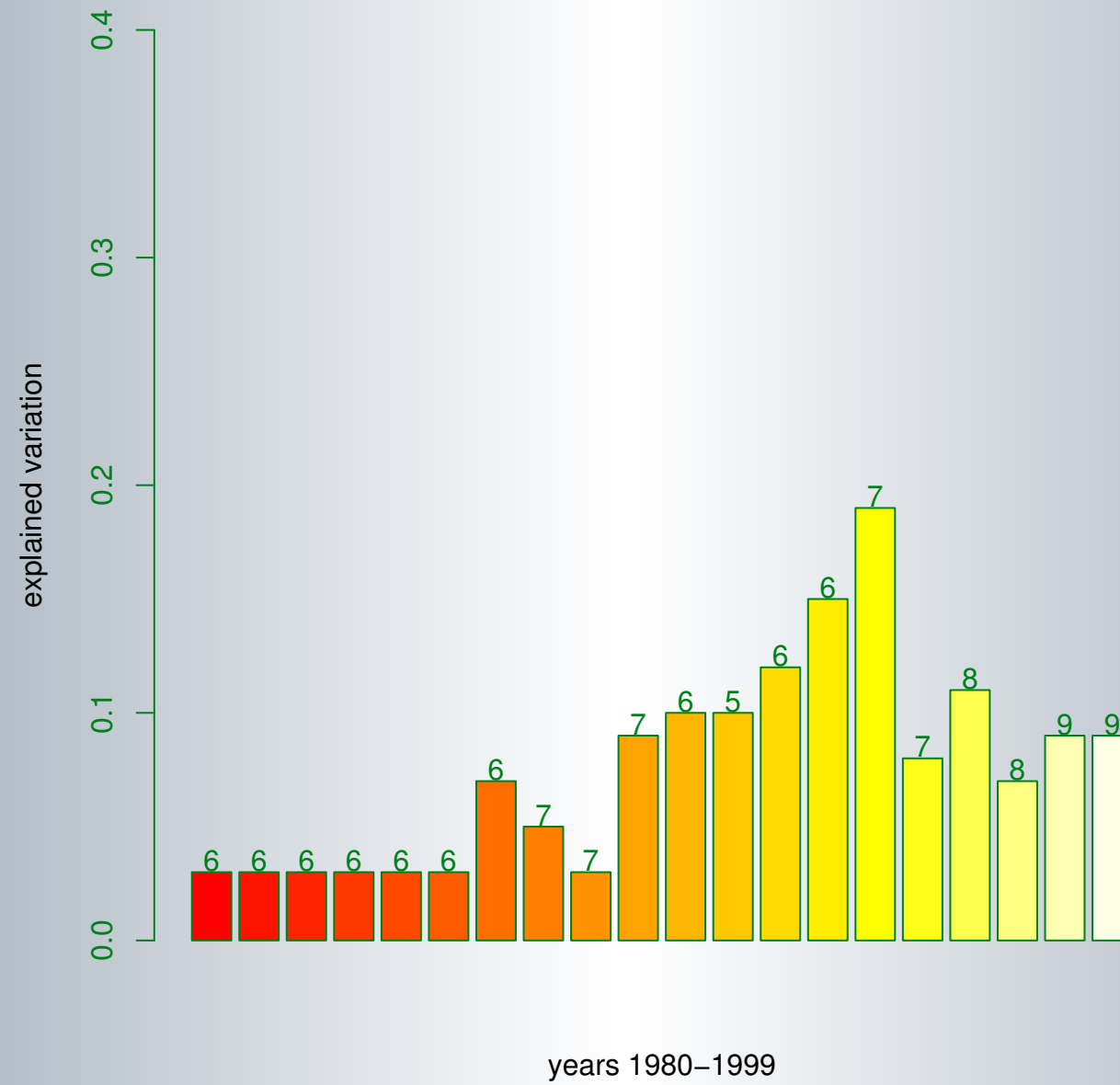
- The unions can affect affect the average speed of wage increases
- The unions have hardly any control of local or industrywise wage structures: the firms can set the wages of their employees as they wish, as long as minimum tariffs are respected.

- This corresponds to the “Dutch” model as exposed by Teulings and Hartog (“Corporatism or Competition” 1998)
  - Theoretical rationale derived from considerations of holdup (Macleod and Malcomson AER 1993) and efficient mobility (Hall and Lazear JLE 1984)
  - Typical institution for a small and open (hence volatile) economy: the salaries of entire industries can be adjusted swiftly without having to open the local contracts of each employee in each firm.
- Even the firms are reluctant to move to a decentralised system in which the workers could undertake local industrial action
- Although deviations from the general increases occur (frequent wage cuts in depression, see the last tables of the paper), the “mechanical” application of the general increase is often the outcome in normal conditions
- This generates large profits in firms which increase their labour productivity faster than others (cf. electronics industry in the 1990s)

- We would expect to observe small firm-specific differentials in wage increases
- Indeed, the comparable tables confirm that the standard deviation of the year-to-year change in pay (over individuals and over firms) is lower than in any other country analysed in this project
- Finland 0.10, Sweden 0.15, France, Germany 0.3
- Our ANOVA for salary increases yields similar results

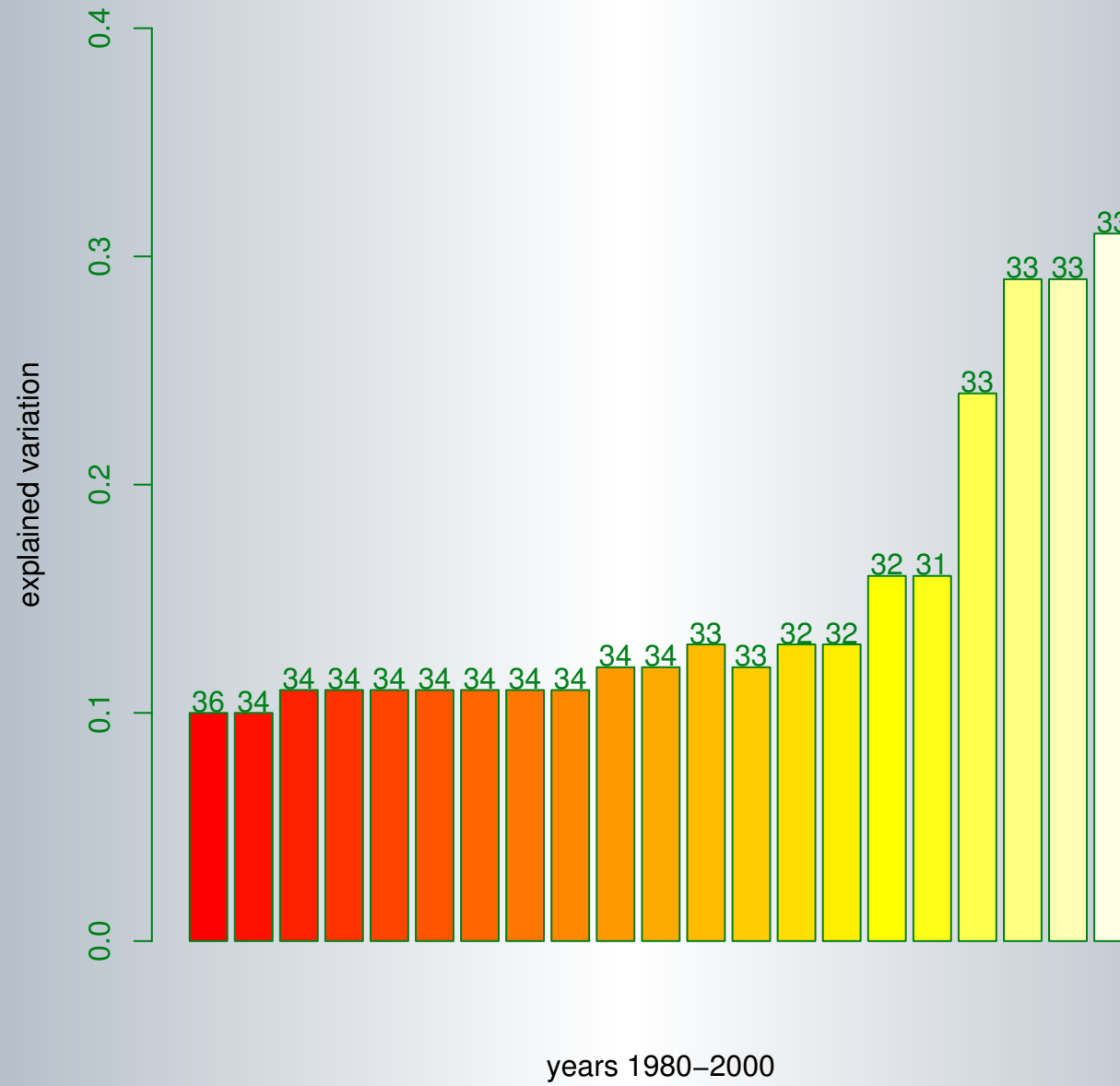


### "ANOVA of salary increases, job stayers"

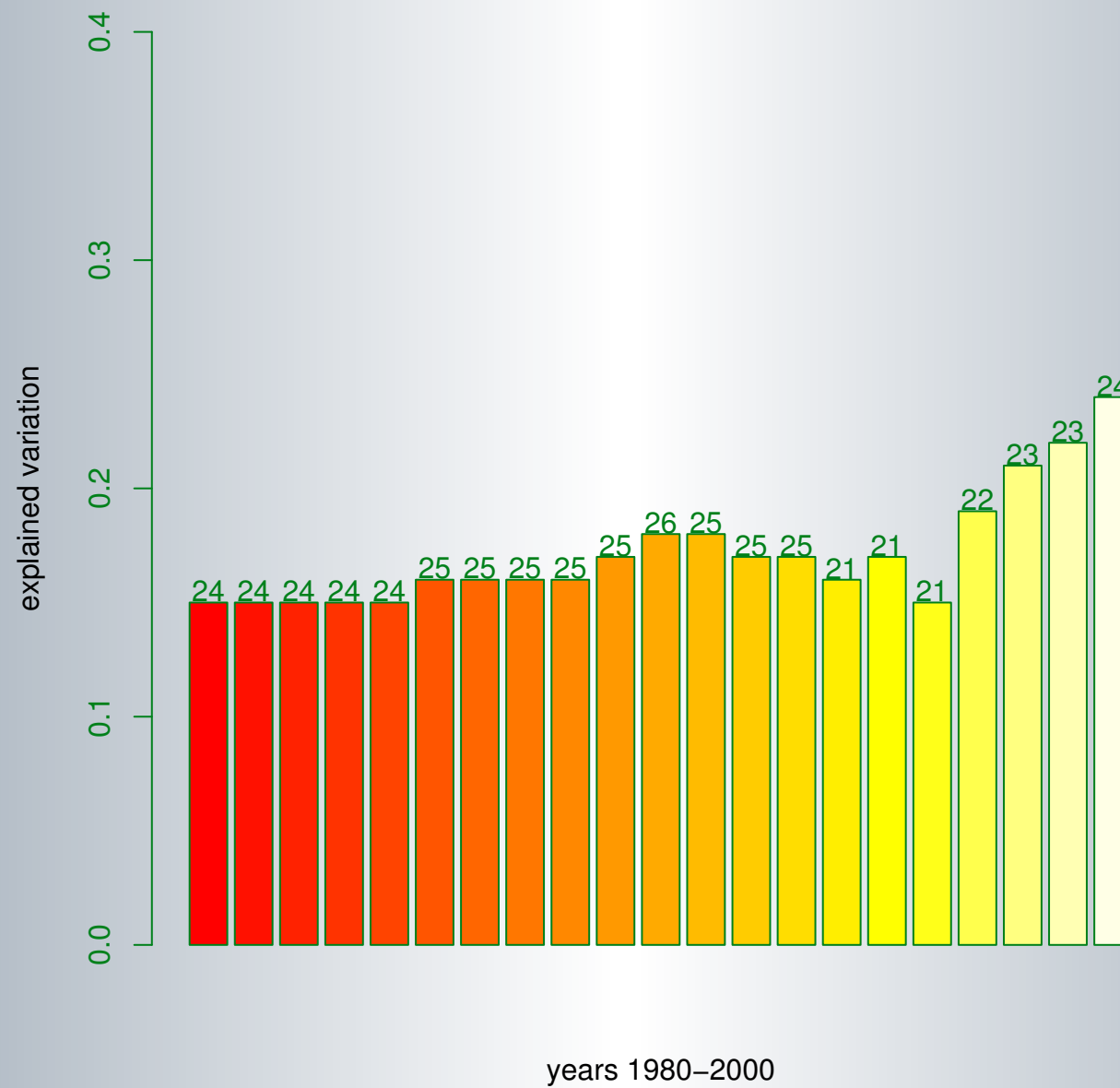


- Similarly, our ANOVA of salaries confirms low (but increasing) variance share of differences between firm means and establishment means
- Yet the increase is very different for salaries and salary residuals:

# "ANOVA of logsalary, establishments"



### "ANOVA of residual logsalary, establishments"



- The role of different firm means has increased, but far more for “raw” salaries than Mincer residuals
- This suggests an ongoing process which reassigns employees so that the ability composition of firms becomes much more homogeneous – an interesting observation that has been evoked in many theoretical papers

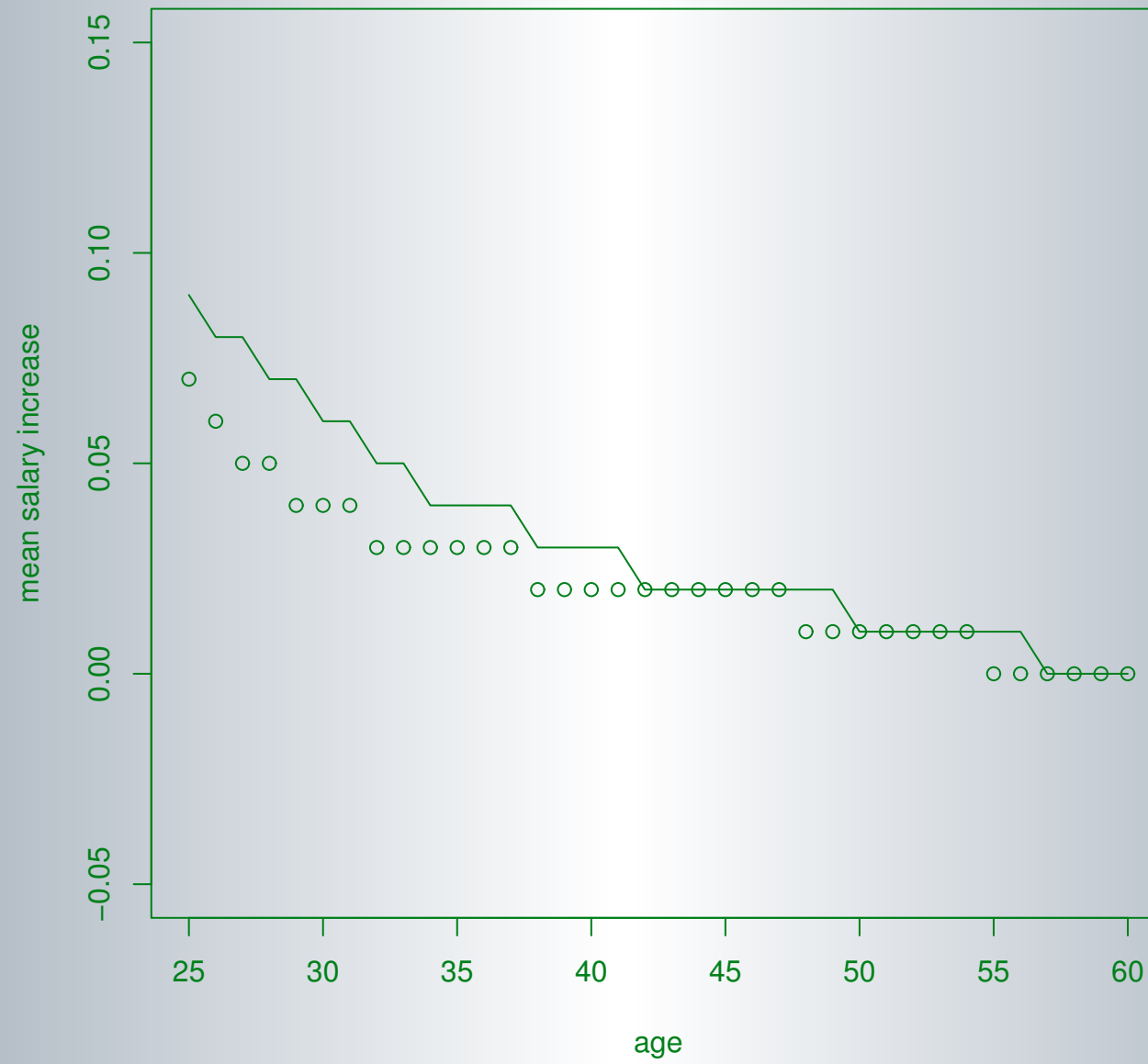
# Mobility

- Hard to measure in a completely convincing way
- Coding changes or flows of individuals – comparison table in paper
- Even coding changes can be ambiguous ... firm code “12349876” becomes “98761234” for, say, 53 per cent of employees ... what will you do?
- Have promised a short digression paper on that to Lars Vilhuber
- Central stylised facts: the very high mobility figures of the comparison tables probably exaggerate mobility, other ways to compute mobility yield parameters more in tune with the US, say.

## Effect of job changes (exits) and occupation changes on pay

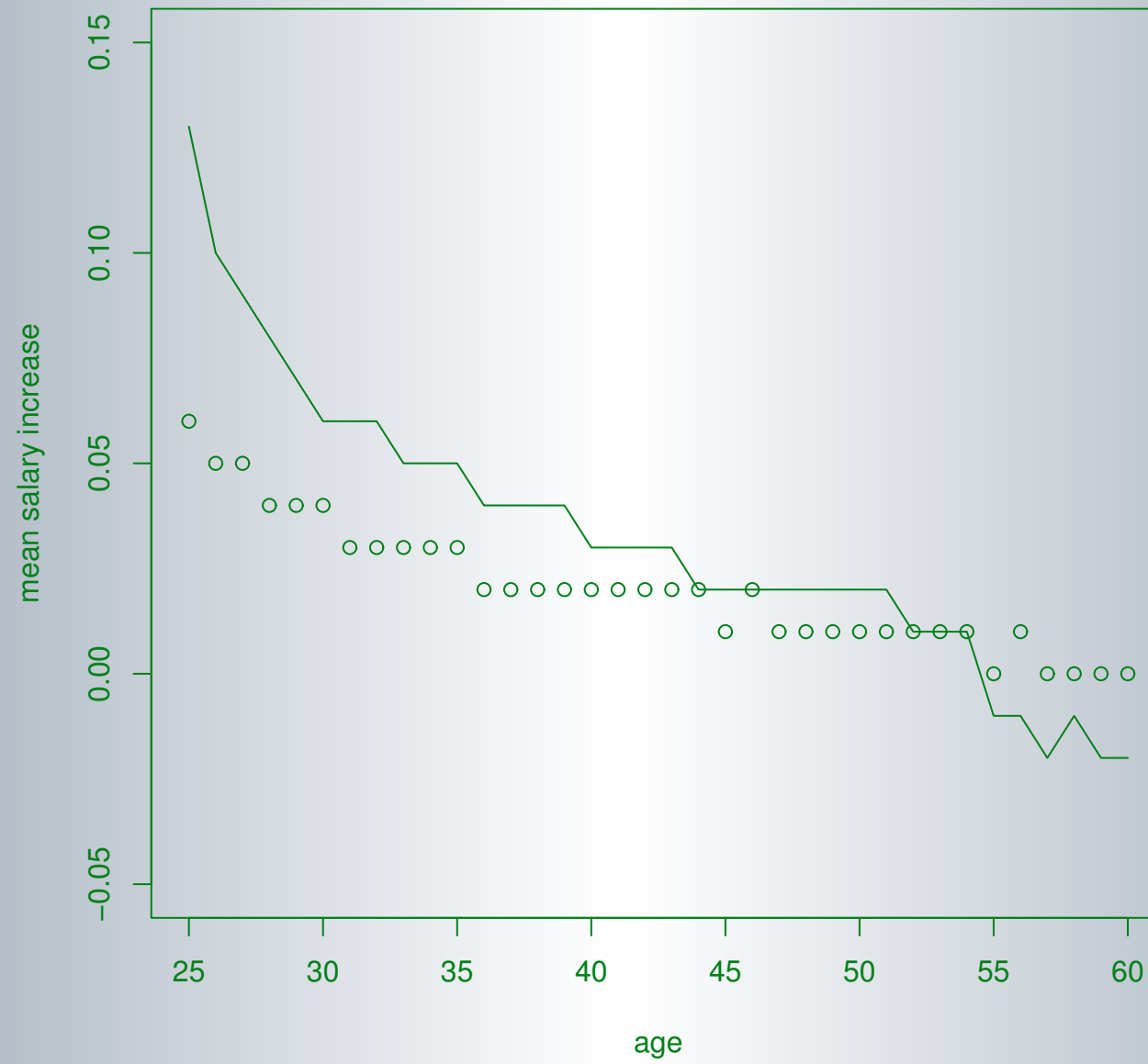
- Change of firm or occupation within firm yield large pay increases for the young, deterioration for the old; relationship is monotone
- The following figures are comparable to those of Niels Westergaard-Nielsen et al.

**"Mean increase stayers and changers, by age"**





"Mean increase for occupation changers and keepers, by age"



## Long run effects of job changes (exits) and occupation changes on pay

- We have analysed some cohorts of new entrants for 12 years
- Macroeconomics seem to matter for the individual's relative performance
- The best performers seem to have a couple of employer changes and then many promotions

- 1981 cohort relative wage gains as a function of
  - job changes (vertical direction downward) and
  - internal promotions (horizontal direction)

$$\begin{pmatrix} 8 & 16 & 20 & 14 & 14 & 8 & . & 15 \\ 10 & 13 & 18 & 28 & 19 & 17 & 38 & . \\ 9 & 15 & 20 & 21 & 21 & 9 & -5 & . \\ 11 & 15 & 12 & 18 & 19 & . & . & . \\ 13 & 19 & 13 & 34 & 30 & . & . & . \\ 12 & 19 & 26 & . & . & . & . & . \\ 3 & 20 & 39 & . & . & . & . & . \\ 14 & -1 & 52 & 15 & . & . & . & . \\ 11 & . & . & . & . & . & . & . \end{pmatrix}$$

- 1981 cohort headcounts as a function of
  - job changes (vertical direction downward) and
  - internal promotions (horizontal direction)

$$\begin{pmatrix} 624 & 504 & 300 & 156 & 84 & 24 & 0 & 12 \\ 4752 & 2928 & 1284 & 648 & 120 & 60 & 24 & 0 \\ 5124 & 3780 & 1704 & 516 & 180 & 96 & 24 & 0 \\ 2916 & 2328 & 900 & 384 & 48 & 0 & 0 & 0 \\ 1044 & 1116 & 288 & 84 & 12 & 0 & 0 & 0 \\ 468 & 288 & 108 & 0 & 0 & 0 & 0 & 0 \\ 240 & 120 & 60 & 0 & 0 & 0 & 0 & 0 \\ 72 & 12 & 24 & 12 & 0 & 0 & 0 & 0 \\ 12 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \end{pmatrix}$$

- 1981 cohort initial ranks as a function of
  - job changes (vertical direction downward) and
  - internal promotions (horizontal direction)

$$\begin{pmatrix}
 43 & 41 & 47 & 46 & 35 & 36 & . & 82 \\
 39 & 40 & 34 & 27 & 47 & 44 & 28 & . \\
 39 & 43 & 42 & 39 & 32 & 38 & 44 & . \\
 43 & 44 & 42 & 47 & 61 & . & . & . \\
 48 & 43 & 49 & 28 & 33 & . & . & . \\
 44 & 50 & 40 & . & . & . & . & . \\
 56 & 43 & 31 & . & . & . & . & . \\
 52 & 77 & 42 & 68 & . & . & . & . \\
 21 & . & . & . & . & . & . & .
 \end{pmatrix}$$

- 1981 cohort final ranks as a function of
  - job changes (vertical direction downward) and
  - internal promotions (horizontal direction)

$$\begin{pmatrix} 52 & 58 & 67 & 61 & 49 & 45 & . & 97 \\ 49 & 54 & 53 & 56 & 67 & 61 & 66 & . \\ 48 & 58 & 62 & 60 & 54 & 48 & 39 & . \\ 54 & 59 & 55 & 65 & 81 & . & . & . \\ 62 & 63 & 62 & 63 & 63 & . & . & . \\ 57 & 69 & 67 & . & . & . & . & . \\ 60 & 63 & 71 & . & . & . & . & . \\ 66 & 75 & 94 & 84 & . & . & . & . \\ 32 & . & . & . & . & . & . & . \end{pmatrix}$$