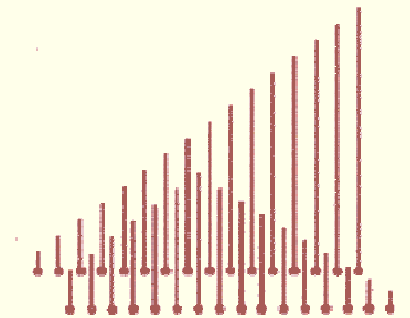


# Further data linking with WERS 2004

John Forth

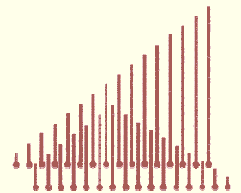
WERS 2004 Information & Advice Service



National Institute  
of Economic and  
Social Research

# Rationale for data linking

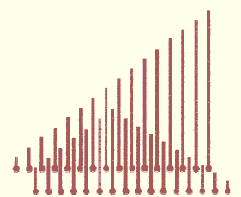
- Rationale 1:
  - Extend the information set for each workplace or employee (e.g. WERS + ARD2 / TTWA)
- Rationale 2:
  - Reduce measurement error in a particular item (e.g. WERS + BSD)
- Rationale 3:
  - Extend the information set for another dataset (e.g. ASHE + WERS)



# Issues in data linking

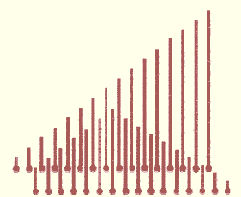
- Confidentiality
- Extent and reliability of links
- Measurement error
- Loss of information

See also: Chesher and Nesheim (2006) DTI  
Occasional Paper No. 3.



# State of play

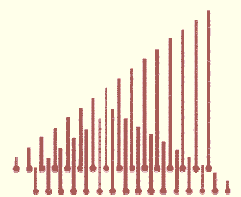
- Linked and available:
  - WERS and ARD2
  - WERS and BSD
  - WERS and TTWA
- Recently linked:
  - ASHE and WERS
  - WERS and EUKLEMS
- In progress:
  - WERS and SOC



# WERS and ARD2

ONS Annual Respondent Database (ARD2) matched onto WERS 2004

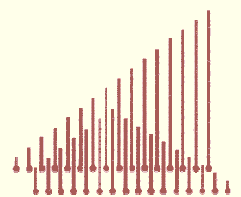
- Data on financial performance of business units (from ABI)
- Issue: many returns (~80%) concern whole enterprise
- But can be combined with FPQ data
- Further info: Forth and McNabb (2007) WIAS Technical Papers Nos.1 and 2



# WERS and BSD

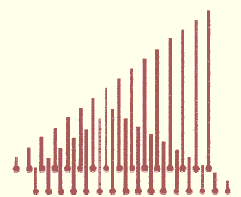
## ONS Business Structure Database matched onto WERS 2004

- Version of the IDBR prepared for research use
- Provides info on legal status and country of ownership
- Provides info on demographic events: birth, death, merger, takeover
- BSD record available for 2,143 (93%) of XS workplaces
- One potential use: identify siblings for 714 (45%) of the XS workplaces that belong to multi-plant enterprises



# WERS and TTWA

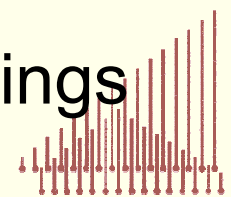
- Local labour market variables matched onto WERS 2004
  - Unemployment and vacancy rates for travel-to-work area (TTWA)
  - Ethnic minority share in TTWA
  - Urban-rural indicator
- Unemployment and vacancy rates also derived for WERS98 and 1998-2004 Panel



# New: ASHE and WERS

## WERS 2004 matched onto the ONS Annual Survey of Earnings and Hours (ASHE)

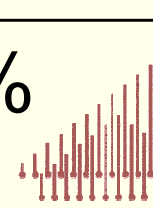
- Annual survey of 165,000 employees
- Detailed information about hours and earnings (basic, overtime, incentive payments, pension arrangements)
- WERS can provide more information about the employer
- Around 5,000 ASHE records (3%) link to XS workplaces
- Around 500 WERS workplaces link to 2+ ASHE records
- Technical paper describes matching
- One potential use: examine impact of EO on earnings



# New: ASHE and WERS

- Examine effect of workplaces monitoring gender in pay reviews on the gender wage gap

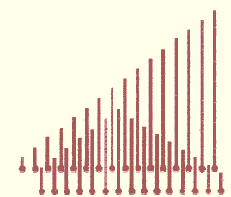
|                      | £/hr (excl overtime) | Unadjusted Differential | Multivariate Differential |
|----------------------|----------------------|-------------------------|---------------------------|
| Males – no monitor   | 12.91                | Ref                     | Ref                       |
| Males – monitor      | 18.08                | 40.0%                   | 8.7%                      |
| Females – no monitor | 9.87                 | -23.5%                  | -13.8%                    |
| Females – monitor    | 12.73                | -1.4%                   | -6.3%                     |



# New: WERS and EUKLEMS

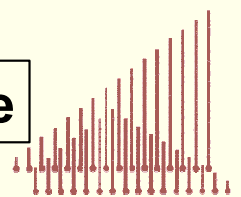
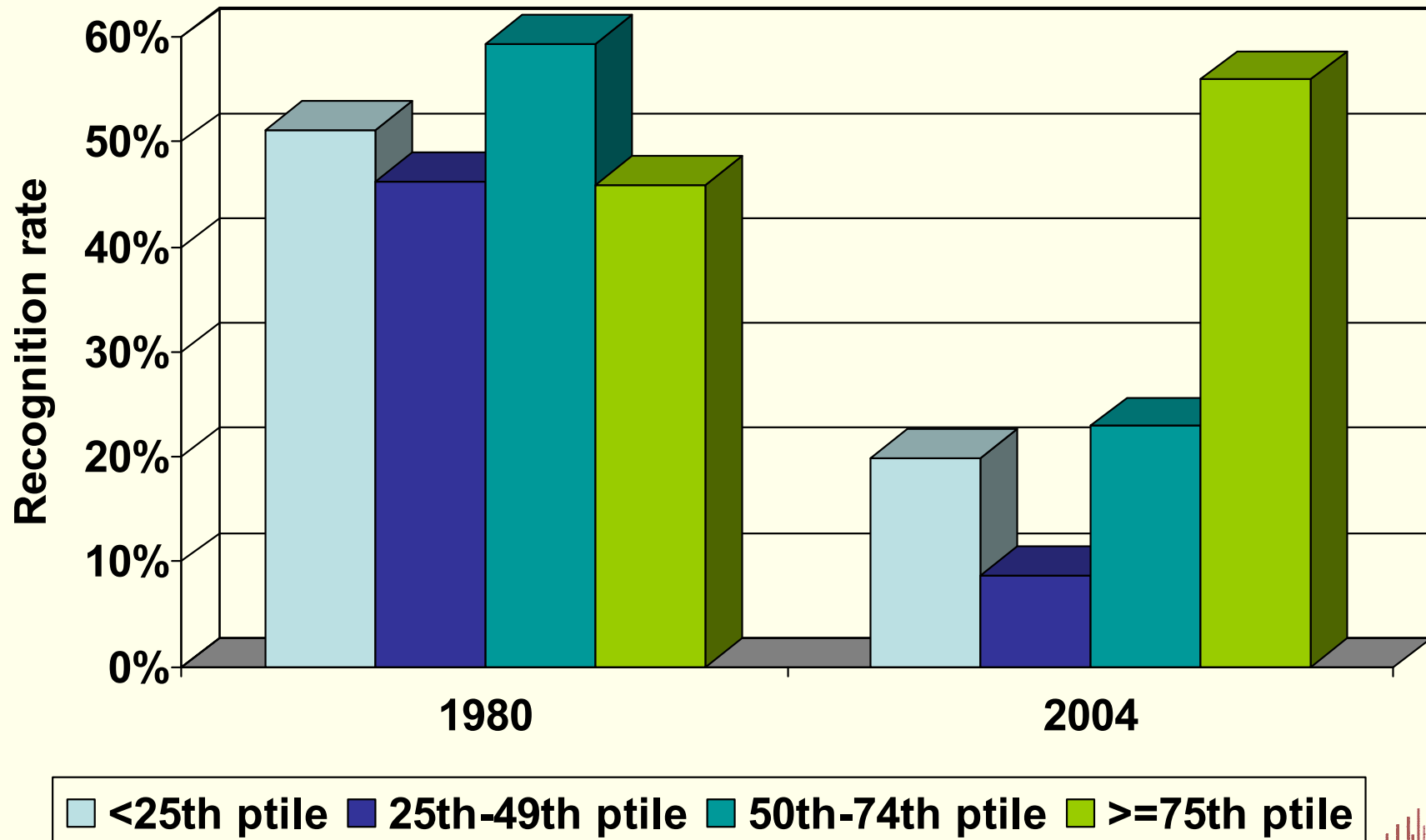
WERS 2004 matched onto industry-level database on inputs and outputs (EUKLEMS)

- Inputs: employment, hours, skills, ICT and non-ICT capital
- Outputs: turnover, value-added, profits
- 71 industry groups (broadly 2-digit SIC), 1970-2004
- Can be matched to each of the five WERS surveys
- One potential use: examine HR practices in high/low profit sectors
- Further information: <http://www.euklems.net>



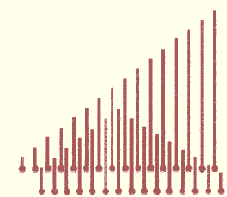
# New: WERS and EUKLEMS

## Union recognition and industry profitability



# In progress: WERS and SOC

- Compiling aggregate data on occupations
  - From the Labour Force Survey:
    - Occupational composition - gender, age, disability and ethnicity
    - Highest educational qualification – proportion of occupational group with qualifications at each NVQ level
    - Gross average hourly pay
  - Also:
    - National Statistics Socio-Economic Classifications (NS-SEC)
    - Male and female CAMSIS scores (which measure social interaction and stratification)
- Linkable to WERS 2004 SEQ data on SOC
- Expect to deposit in November 2007



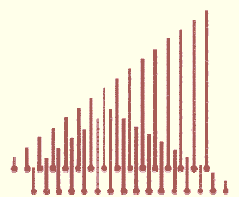
# Comments and suggestions

WERS Information and Advice Service

URL: <http://www.wers2004.info>

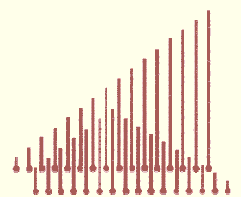
Email: [wers2004@niesr.ac.uk](mailto:wers2004@niesr.ac.uk)

Telephone: +44(0) 20 7654 1933



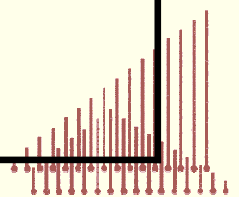
# ONS Virtual Micro-data Lab

- VML provides on site secure access to confidential micro-data
- Data cannot be released outside of ONS (e.g. data archive)
- Applications approved on ONS and WERS team
- Within VML researchers get full access to identifiable data
- Flexibility to merge between surveys



# Further links?

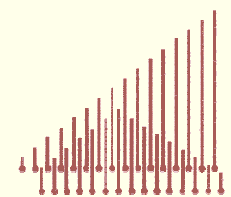
| ONS Business Survey                            | Matches to WERS MQ |
|--|--------------------|
| Business Expenditure on Research & Development | 280                |
| Business Spending on Capital Items             | 464                |
| Community Innovation Survey                    | 345                |
| E-Commerce Survey                              | 580                |



# Limitations of ONS Data

- ‘Ministry for adding things up’ – micro quality suffers
  - statistical editing and block adjustment
- longitudinal integrity
  - crucial to micro analysis, irrelevant to macro numbers
  - not designed into repeat surveys
- lack of coverage among small firms
- linking between surveys reduces sample sizes
- does require commitment, expertise
- It’s not easy and not always worthwhile

....but often is



# Contact VML

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Telephone: +44 (0) 1633 455844

