Accessing the New Earnings Survey Panel

Efficient techniques and applications

Felix Ritchie

Department of Economics
University of Stirling
## Contents

*Abstract*  
List of abbreviations  
List of tables  
List of figures  
Acknowledgements

### Part I Overview

1. Introduction  
2. Exploiting panel datasets  
3. The New Earnings Survey and the NES Panel Dataset

### Part II Econometric Tools

4. The econometric problem  
5. The linear fixed-effects estimators: matrix creation  
6. Linear estimation and analysis  
7. Observation histories

### Part III Applications

8. Sex, age and transitions - the cohort effect  
10. Female earnings 1977-1990 and the wage gap  
11. Conclusion

*Bibliography*
Abstract

The New Earnings Survey Panel Dataset is one of the largest datasets of its kind in the world. Its size and confidentiality restrictions present considerable difficulties for analysis using standard econometric packages.

This thesis presents a number of methods for accessing the information held within the panel relatively efficiently, based upon the use of cross-product matrices and on data compression techniques. These methods allow, for the first time, the panel aspect of the dataset to be used in analysis. The techniques described here are then employed to produce an overview of changes in the UK labour market from 1975 to 1990 and detailed estimates of male and female earnings over a fourteen year period. These are the first panel estimates on the dataset. The estimates indicate the importance of allowing the parameters of any labour market model to vary over time, which is significant as panel estimators typically impose structural stability on the coefficients. Some preliminary estimates of the male-female wage gap indicate that both heterogeneity and variation over time have an important part to play in accounting for the differences in wages.
List of abbreviations

AVAttrition variable
CSCross-section
DEUK Department of Employment
DEGDepartment of Employment Gazette
FEFixed-effects
FESFamily Expenditure Survey
IVInstrumental variable
LFSLabour Force Survey
NESNew Earnings Survey
NESPDNew Earnings Survey Panel Datasets
NINational Insurance
NiNoNational Insurance number
OHObservation history
QCCQuasi-complete cohort
SCELISocial Change and Economic Life Initiative
TVCSTime-varying cross-section estimator
TVFETime-varying fixed-effects estimator
TFFEIVTime-varying fixed-effects instrumental variable estimator
WCWages Council
WIRSW Workplace Industrial Relations Survey

List of tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A6.1</td>
<td>Degrees of freedom</td>
<td>107</td>
</tr>
<tr>
<td>7.1</td>
<td>Creating the flag vector</td>
<td>109</td>
</tr>
<tr>
<td>7.2</td>
<td>Recovering the observation pattern</td>
<td>110</td>
</tr>
<tr>
<td>8.1</td>
<td>Numbers joining and leaving the NESPD</td>
<td>123</td>
</tr>
<tr>
<td>9.1</td>
<td>T-statistics for the agreement variable</td>
<td>155</td>
</tr>
<tr>
<td>9.2F</td>
<td>F-statistics from specification tests (cross-section)</td>
<td>163</td>
</tr>
<tr>
<td>A9.1</td>
<td>Summary statistics</td>
<td>166</td>
</tr>
<tr>
<td>A9.2</td>
<td>Time-varying fixed-effects regression results (part: 1984)</td>
<td>167</td>
</tr>
<tr>
<td>A9.3</td>
<td>Dummy variable categories and description</td>
<td>168</td>
</tr>
<tr>
<td>10.1</td>
<td>Time-varying fixed-effects regression results (part: 1984)</td>
<td>188</td>
</tr>
</tbody>
</table>
List of figures

2.1 Panel models and specification errors 208
8.1 Numbers observed 209
8.2 Percentages of observed 209
8.3 Disappearance rates 210
8.4 Job held for over one year 210
8.5 Proportions observed 211
8.6 Cohort observation rates 213
8.7 Average age in the NES 213
8.8 Age profiles 214
8.9 Starting ages 216
8.10 Average age in the NES 216
8.11 Average wages 217
8.12 Wage profiles all years 217
8.13 Private sector working 218
8.14 Covered by agreement 219
9.1 Constant term 220
9.2 Region 221
9.3 Division 222
9.4 Manual occupations 223
9.5 Non-manual occupations 224
9.6 Age profiles 225
9.7 Effect of union coverage 226
9.8 Wages Council coverage 226
9.9 Sector 227
9.10 Effect of tenure 227
9.11 Attrition variables 228
10.1 Constant terms 229
10.2 Region 230
10.3 Division 231
10.4 Manual and non-manual occupations 232
10.5 Occupation in 1990 233
10.6 Age profiles 234
10.7 Effect of union coverage 235
10.8 Wages Council coverage 235
10.9 Sector 236
10.10 Effect of tenure 236
10.11 Attrition variables 237
10.12 Oaxaca breakdown 237
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