Accessing the New Earnings Survey Panel

Efficient techniques and applications

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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
WIRSWorkplace Industrial Relations Survey

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