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/* Filename:    PANEL.LIM                                */
/* Date:        27 June 1998                             */
/* Project:     Determinants of Youth Employment         */
/* Written by:  Owen Gabbitas (Trade & Economic Studies Branch) */

/* Purpose:     Conducts regressions with panel data techniques */

Open; output=v:\youthemp\time\limdep\panel.out $
Title; output file v:\..\panel.out $

Reset $

/* ==== Read in data - variable names in first line ==== */

Read; file = v:\youthemp\time\limdep\inputdat.wk1
      ; format = wks
      ; names = $

/* y - youth (aged 15 to 19) */
/* a - adults (aged 20 to 64) */
/* m - male */
/* f - female */
/* ie. yf - female youth */

/* list; Cym, Wym, Edym, Mym $ */
/* list; Cyf, Wyf, Edyf, Myf $ */
/* list; Cam, Wam, Edam, Mam $ */
/* list; Caf, Waf, Edaf, Maf $ */
/* list; Ck, r $ */
/* list; Year, Industry, Q $ */

Create; LWym=log(Wym)
      ; LWyf=log(Wyf)
      ; LWam=log(Wam)
      ; LWaf=log(Waf)
      ; LWk=log(r)
      ; lQ=log(Q)
      ; time = Trn(-13,0) $

/* ===== Create industry dummy variables ===== */
/*
/*   A - Agriculture, forestry, fishing & hunting
/*   C - Manufacturing
/*   E - Construction
/*   F - Wholesale trade
/*   G - Retail trade (ommitted as biggest employer of youth)
/*   H - Acommodation, cafes & restuarants
/*   I - Transport, storage & communication services
/*   P - Cultural & personal services
/*   Indx represents the industry dummy for industry X
/*
/* ===== */

Create; if (Industry = 1) Inda = 1; (Else) Inda = 0
      ; if (Industry = 2) Indc = 1; (Else) Indc = 0
      ; if (Industry = 3) Inde = 1; (Else) Inde = 0
      ; if (Industry = 4) Indf = 1; (Else) Indf = 0
      ; if (Industry = 6) Indh = 1; (Else) Indh = 0
      ; if (Industry = 7) Indi = 1; (Else) Indi = 0
      ; if (Industry = 8) Indp = 1; (Else) Indp = 0 $

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Namelist ; Wages = LWym, LWyf, LWam, LWaf
          ; Prices = LWym, LWyf, LWam, LWaf, LWk
          ; Costshar = Cym, Cyf, Cam, Caf
          ; Ed = Edym, Edyf, Edam, Edaf
          ; Ind = Inda, Indc, Inde, Indf, Indh, Indi, Indp $

/* **** Estimation of labour input demand equations **** */

/* === A) One way fixed and random effects models === */

/* --- i) Basic model - own-price term --- */

/* Male youth */
Regress ; LHS = Cym
          ; RHS = LWym, LQ
          ; Panel
          ; Str = Industry
          ; Period = time
          ; Output = 2
          ; Het
          ; Het = Industry
          ; List
          ; Printvc $

/* Female youth */
Regress ; LHS = Cyf
          ; RHS = LWym, LQ
          ; Panel
          ; Str = Industry
          ; Period = time
          ; Output = 2
          ; Het
          ; Het = Industry
          ; List
          ; Printvc $

/* Adult male */
Regress ; LHS = Cam
          ; RHS = LWym, LQ
          ; Panel
          ; Str = Industry
          ; Period = time
          ; Output = 2
          ; Het
          ; Het = Industry
          ; List
          ; Printvc $

/* Adult female */
Regress ; LHS = Caf
          ; RHS = LWym, LQ
          ; Panel
          ; Str = Industry
          ; Period = time
          ; Output = 2
          ; Het

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; Het = Industry
; List
; Printvc $

/* --- ii) Basic model with additional price terms --- */

/* Male youth */
Regress ; LHS = Cym
; RHS = Prices, LQ
; Panel
; Str = Industry
; Period = time
; Output = 2
; Het
; Het = Industry
; List
; Printvc $

/* Female youth */
Regress ; LHS = Cyf
; RHS = Prices, LQ
; Panel
; Str = Industry
; Period = time
; Output = 2
; Het
; Het = Industry
; List
; Printvc $

/* Adult male */
Regress ; LHS = Cam
; RHS = Prices, LQ
; Panel
; Str = Industry
; Period = time
; Output = 2
; Het
; Het = Industry
; List
; Printvc $

/* Adult female */
Regress ; LHS = Caf
; RHS = Price, LQ
; Panel
; Str = Industry
; Period = time
; Output = 2
; Het
; Het = Industry
; List
; Printvc $

/* --- iii) Expanded variable set ---- */

/* Male youth */
Regress ; LHS = Cym

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; RHS = Prices, Ed, LQ, Ind, Time
; Panel
; Str = Industry
; Period = time
; Output = 2
; Het
; Het = Industry
; List
; Printvc $

/* Female youth */
Regress ; LHS = Cyf
; RHS = Prices, Ed, LQ, Ind, Time
; Panel
; Str = Industry
; Period = time
; Output = 2
; Het
; Het = Industry
; List
; Printvc $

/* Adult male */
Regress ; LHS = Cam
; RHS = Prices, Ed, LQ, Ind, Time
; Panel
; Str = Industry
; Period = time
; Output = 2
; Het
; Het = Industry
; List
; Printvc $

/* Adult female */
Regress ; LHS = Caf
; RHS = Prices, Ed, LQ, Ind, Time
; Panel
; Str = Industry
; Period = time
; Output = 2
; Het
; Het = Industry
; List
; Printvc $

/* --- iv) Base model with homogeneity ---- */

/* Male youth */
Regress ; LHS = Cym
; RHS = Prices, LQ
; Rls: B(2) + B(3) + B(4) + B(5) + B(6) = 1$
; Panel
; Str = Industry
; Period = time
; Output = 2
; Het
; Het = Industry
; List

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; Printvc $

/* Female youth */
Regress ; LHS = Cyf
; RHS = Prices, LQ
; Rls: B(2) + B(3) + B(4) +B(5) + B(6) = 1$
; Panel
; Str = Industry
; Period = time
; Output = 2
; Het
; Het = Industry
; List
; Printvc $

/* Adult male */
Regress ; LHS = Cam
; RHS = Prices, LQ
; Rls: B(2) + B(3) + B(4) +B(5) + B(6) = 1$
; Panel
; Str = Industry
; Period = time
; Output = 2
; Het
; Het = Industry
; List
; Printvc $

/* Adult female */
Regress ; LHS = Caf
; RHS = Prices, LQ
; Rls: B(2) + B(3) + B(4) +B(5) + B(6) = 1$
; Panel
; Str = Industry
; Period = time
; Output = 2
; Het
; Het = Industry
; List
; Printvc $

Plot ; Lhs = Cym
; Rhs = Wym
; Title = Male_youth
; regression $

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