

\*\*\*\*\* OUTPUT FILE: LALIVE, VAN OURS, and ZWEIMUELLER  
DATASET\*\*\*\*\*

\* STATA 10.0 CODE  
\* copyright C 2008 by Tito Boeri & Jan van Ours  
\* "LABOR MARKETS, POLICIES, AND INSTITUTIONS"  
\* by Tito Boeri & Jan van Ours (2008)  
\* Princeton University Press

\*Chapter 11 Unemployment Benefit  
\*BOX 11.4 The Effects of Changes of Replacement Rates and Maximum  
Benefit Duration in Austria, pages 242-243

clear

\*VARIABLE DESCRIPTION

*beginn	start of spell (stata mdy format)
*	
*ein_zus	temporary layoff
*sfrau	=1 if female
*age	age at start of spell (years)
*after	=1 if spell starts after Aug 1, 1989
*	
*dur	duration of unemployment spell (weeks)
*	
*nwage_pj	wage in previous job (per month)
*e3_5	=1 if worked 3 out of 5 years
*bdur	potential benefit duration (weeks)
*	
*y1988	=1 if spell starts in 1988
*y1989	=1 if spell starts in 1989
*y1990	=1 if spell starts in 1990
*y1991	=1 if spell starts in 1991
*med_educ	=1 if education, medium (secondary)
*	
*hi_educ	=1 if education, high (tertiary)
*lehre	=1 if apprenticeship
*married	=1 if married
*single	=1 if single
*divorced	=1 if divorced
*f_marr	female * married
*f_single	female * single
*f_divor	female * divorced
*bc	=1 if blue collar
*pnon_10	relative employment, previous 10 years
*	
*q2	=1 if inflow in 2nd quarter
*q3	=1 if inflow in 3rd quarter
*q4	=1 if inflow in 4th quarter
*seasonal	=1 if construction / tourism
*manuf	=1 if manufacturing
*ten72	tenure (years)
*type	type of treatment
*uncc	=1 if spell not censored
*lwage	log(daily wage)
*tr	=1 if replacement rate change
*t39	=1 if PBD 30-39 change
*t52	=1 if PBD 30-52 change
*t39_tr	t39 * tr
*t52_tr	t52 * tr
*after0	= 1 if interval 0 after Aug 1, 1989
*	
*tr_a0	tr * after0
*t39_a0	t39 * after0
*t52_a0	t52 * after0
*t39tra0	t39 * tr * after0

```

*t52tra0          t52 * tr * after0
*after1           = 1 if interval 1 after Aug 1,
*                 1989
*tr_a1            tr * after1
*t39_a1           t39 * after1
*t52_a1           t52 * after1
*t39tra1          t39 * tr * after1
*t52tra1          t52 * tr * after1
*after2           = 1 if interval 2 after Aug 1,
*                 1989
*tr_a2            tr * after2
*t39_a2           t39 * after2
*t52_a2           t52 * after2
*t39tra2          t39 * tr * after2
*t52tra2          t52 * tr * after2
*after3           = 1 if interval 3 after Aug 1,
*                 1989
*tr_a3            tr * after3
*t39_a3           t39 * after3
*t52_a3           t52 * after3
*t39tra3          t39 * tr * after3
*t52tra3          t52 * tr * after3
*after4           = 1 if interval 4 after Aug 1,
*                 1989
*tr_a4            tr * after4
*t39_a4           t39 * after4
*t52_a4           t52 * after4
*t39tra4          t39 * tr * after4
*t52tra4          t52 * tr * after4
*after5           = 1 if interval 5 after Aug 1,
*                 1989
*tr_a5            tr * after5
*t39_a5           t39 * after5
*t52_a5           t52 * after5
*t39tra5          t39 * tr * after5
*t52tra5          t52 * tr * after5
*after6           = 1 if interval 6 after Aug 1,
*                 1989
*tr_a6            tr * after6
*t39_a6           t39 * after6
*t52_a6           t52 * after6
*t39tra6          t39 * tr * after6
*t52tra6          t52 * tr * after6
*after7           = 1 if interval 7 after Aug 1,
*                 1989
*tr_a7            tr * after7
*t39_a7           t39 * after7
*t52_a7           t52 * after7
*t39tra7          t39 * tr * after7
*t52tra7          t52 * tr * after7
*after8           = 1 if interval 8 after Aug 1,
*                 1989
*tr_a8            tr * after8
*t39_a8           t39 * after8
*t52_a8           t52 * after8
*t39tra8          t39 * tr * after8
*t52tra8          t52 * tr * after8
*after9           = 1 if interval 9 after Aug 1,
*                 1989
*tr_a9            tr * after9
*t39_a9           t39 * after9
*t52_a9           t52 * after9
*t39tra9          t39 * tr * after9
*t52tra9          t52 * tr * after9

```

```

*after10          = 1 if interval 10 after Aug 1,
*                  1989
*t39_a10          tr * after10
*t52_a10          t39 * after10
*t39tra10         t52 * after10
*t52tra10         t39 * tr * after10
*after11          t52 * tr * after10
*                  = 1 if interval 11 after Aug 1,
*                  1989
*t39_a11          tr * after11
*t52_a11          t39 * after11
*t39tra11         t52 * after11
*t52tra11         t39 * tr * after11
*after12          t52 * tr * after11
*                  = 1 if interval 12 after Aug 1,
*                  1989
*t39_a12          tr * after12
*t52_a12          t39 * after12
*t39tra12         t52 * after12
*t52tra12         t39 * tr * after12
*after13          t52 * tr * after12
*                  = 1 if interval 13 after Aug 1,
*                  1989
*t39_a13          tr * after13
*t52_a13          t39 * after13
*t39tra13         t52 * after13
*t52tra13         t39 * tr * after13
*after14          t52 * tr * after13
*                  = 1 if interval 14 after Aug 1,
*                  1989
*t39_a14          tr * after14
*t52_a14          t39 * after14
*t39tra14         t52 * after14
*t52tra14         t39 * tr * after14
*after15          t52 * tr * after14
*                  = 1 if interval 15 after Aug 1,
*                  1989
*t39_a15          tr * after15
*t52_a15          t39 * after15
*t39tra15         t52 * after15
*t52tra15         t39 * tr * after15
*dtu0             =1 if spell ends in interval 0
*btu0             spell duration in interval 0
*dtu1             =1 if spell ends in interval 1
*btu1             spell duration in interval 1
*dtu2             =1 if spell ends in interval 2
*btu2             spell duration in interval 2
*dtu3             =1 if spell ends in interval 3
*btu3             spell duration in interval 3
*dtu4             =1 if spell ends in interval 4
*btu4             spell duration in interval 4
*dtu5             =1 if spell ends in interval 5
*btu5             spell duration in interval 5
*dtu6             =1 if spell ends in interval 6
*btu6             spell duration in interval 6
*dtu7             =1 if spell ends in interval 7
*btu7             spell duration in interval 7
*dtu8             =1 if spell ends in interval 8
*btu8             spell duration in interval 8
*dtu9             =1 if spell ends in interval 9
*btu9             spell duration in interval 9
*dtu10            =1 if spell ends in interval 10
*btu10            spell duration in interval 10

```

```

*dtu11          =1 if spell ends in interval 11
*btu11          spell duration in interval 11
*dtu12          =1 if spell ends in interval 12
*btu12          spell duration in interval 12
*dtu13          =1 if spell ends in interval 13
*btu13          spell duration in interval 13
*dtu14          =1 if spell ends in interval 14
*btu14          spell duration in interval 14
*dtu15          =1 if spell ends in interval 15
*btu15          spell duration in interval 15

```

```

set memory 300m
log using "C:\Libro\Van Ours LaliveetalReStud2006\box.log", text
replace
use "C:\Libro\Van Ours LaliveetalReStud2006\Restud2006 dataset.dta",
clear
gen trt39t52=tr*(t39+t52)
capture program drop mllenny
program define mllenny
    args lnf covu lu0 lu1 lu2 lu3 lu4 lu5 lu6 lu7 lu8 lu9
    lu10 lu11 lu12 lu13 lu14 lu15 b
    tempvar hazu survu ua
    quietly gen double `hazu' = `covu'+`lu0'+dtu1*`lu1'+dtu2
*`lu2'+dtu3*`lu3'+dtu4*`lu4'+dtu5*`lu5'+dtu6*`lu6'+dtu7*`lu7'+dtu8
*`lu8'+dtu9*`lu9'+dtu10*`lu10'+dtu11*`lu11'+dtu12*`lu12'+dtu13
*`lu13'+dtu14*`lu14'+dtu15*`lu15'
    quietly gen double `survu' = exp(`covu'+`lu0')*(btu0+btu1
*exp(`lu1') + btu2*exp(`lu2') + btu3*exp(`lu3') + btu4*exp(`lu4')
+btu5*exp(`lu5')+btu6*exp(`lu6')+btu7*exp(`lu7')+btu8*exp(`lu8')+btu9
*exp(`lu9')+btu10*exp(`lu10')+btu11*exp(`lu11')+btu12*exp(`lu12')
+btu13*exp(`lu13')+btu14*exp(`lu14')+btu15*exp(`lu15'))
    quietly gen double `ua' = exp(uncc*(`b'+`hazu')-exp(`b')
*`survu')
    replace `lnf' = log(`ua')
end
ml model lf mllenny (covu: age married single divorced sfrau f_marr
f_single f_divor lehre med_educ hi_educ lwage ein_zus bc seasonal
manuf pnon ten72 y1988 y1989 y1990 y1991 q2 q3 q4, nocons) (lu0: tr
t39 t52 trt39t52 after0 tr_a0 t39_a0 t52_a0 t39tra0 t52tra0, nocons)
(lu1: tr t39 t52 trt39t52 after1 tr_a1 t39_a1 t52_a1 t39tra1 t52tra1)
(lu2: tr t39 t52 trt39t52 after2 tr_a2 t39_a2 t52_a2 t39tra2 t52tra2)
(lu3: tr t39 t52 trt39t52 after3 tr_a3 t39_a3 t52_a3 t39tra3 t52tra3)
(lu4: tr t39 t52 trt39t52 after4 tr_a4 t39_a4 t52_a4 t39tra4 t52tra4)
(lu5: tr t39 t52 trt39t52 after5 tr_a5 t39_a5 t52_a5 t39tra5 t52tra5)
(lu6: tr t39 t52 trt39t52 after6 tr_a6 t39_a6 t52_a6 t39tra6 t52tra6)
(lu7: tr t39 t52 trt39t52 after7 tr_a7 t39_a7 t52_a7 t39tra7 t52tra7)
(lu8: tr t39 t52 trt39t52 after8 tr_a8 t39_a8 t52_a8 t39tra8 t52tra8)
(lu9: tr t39 t52 trt39t52 after9 tr_a9 t39_a9 t52_a9 t39tra9 t52tra9)
(lu10: tr t39 t52 trt39t52 after10 tr_a10 t39_a10 t52_a10 t39tra10
t52tra10) (lu11: tr t39 t52 trt39t52 after11 tr_a11 t39_a11 t52_a11
t39tra11 t52tra11) (lu12: tr t39 t52 trt39t52 after12 tr_a12 t39_a12
t52_a12 t39tra12 t52tra12) (lu13: tr t39 t52 trt39t52 after13 tr_a13
t39_a13 t52_a13 t39tra13 t52tra13) (lu14: tr t39 t52 trt39t52 after14
tr_a14 t39_a14 t52_a14 t39tra14 t52tra14) (lu15: tr t39 t52 trt39t52
after15 tr_a15 t39_a15 t52_a15 t39tra15 t52tra15) /b, technique(bhhh)
ml init -0.013848 0.155817 0.013952 -0.107398 -0.028855 -0.083597
0.136333 0.054599 -0.052923 -0.157314 -0.243438 0.115567 0.355257
0.395319 0.352472 -0.094110 -0.101384 -0.578761E-02 0.014887 0.029697
-0.727319E-02 -0.060828 0.014414 -0.212013 -0.232698 0.064286
0.087518 -0.089786 0.138918 0.240458E-02 -0.030219 -0.030089 0.103865
-0.038875 -0.160945 0.692462 -0.175283 -0.030297 0.110782 -0.028345 -
0.035029 -0.016075 0.030086 -0.118208 0.018446 -0.092155 1.20731 -
0.261122 -0.059827 0.105265 -0.206939 0.031318 -0.012285 0.053121 -

```

0.129459 0.050749 0.056018 1.40590 -0.473773 0.029604 0.327682 -  
0.163259 -0.101252 0.035342 0.038540 -0.249061 0.106310E-02 -0.035025  
1.49137 -0.013276 -0.041687 0.303893 -0.433919 -0.285547 -0.105115 -  
0.082823 -0.476793 0.221630 0.209212 1.45296 0.154856 -0.323327  
0.043365 -0.320020 -0.295220 0.127508 -0.077037 -0.481208 0.117728  
0.066397 1.26871 0.163408 -0.244529 -0.028392 -0.355637 -0.325149  
0.093315 -0.063595 -0.482638 0.081418 0.298109 1.50268 0.316675  
0.075275 0.237036 -0.264128 -0.408410 -0.089185 -0.551168 -1.00683  
0.171635 0.122471 1.23347 0.155673 -0.944448E-02 -0.090578 0.031968 -  
0.385483 0.023882 -0.292588 -0.683093 -0.234875 -0.324760 0.855553  
0.135278 0.167866 0.102201 -0.122356 -0.239977 -0.032314 0.184563 -  
0.770241 0.187842 -0.018239 0.789877 -0.062094 -0.031949 -0.256169 -  
0.058335 -0.382624 -0.917242E-02 0.445079 -0.276103 0.269326 0.181757  
0.516545 0.142399 0.051888 -0.123198 -0.021944 -0.360879 -0.179073  
0.380200 -0.116542 -0.071040 -0.128216E-02 0.423153 -0.411507 -  
0.192536 -0.152794 0.487615 -0.550710 0.575704 0.558680 1.21520 -  
0.408446 -0.490633 0.434017 -0.031529 0.109600 -0.456879 -0.122654 -  
0.444347 0.073835 0.120104 1.72576 0.237979 0.386672 0.279665  
0.113940 0.091753 -0.104087 -0.340935 -0.309888 -0.063385 0.025765  
0.687510 0.101013 0.749270 -0.379610 -0.250850 -0.141560 -0.028546  
0.126648 -0.297467 0.230471 0.063676 -0.050187 -0.216106 0.090619 -  
4.18519,copy  
ml maximize  
log close