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1 *****
2 * A Practical Guide to Using Panel Data
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5 * Chapter 13
6 *****
7
8 version 12
9 clear all
10 set more off
11 capture log close
12
13 global datadir "S:\final"
14 cd "C:\My Documents"
15
16 log using Example_Chapter13.log, replace
17
18
19 * Section 13.1
20 *-----
21
22 use "$datadir/xwavedat", clear
23 keep pid racel doby dobm
24 duplicates report pid
25 sort pid
26 save temp, replace
27
28 use "$datadir/bindresp", clear
29 keep pid bsex bdoi bdoim bregion2
30 duplicates report pid
31 sort pid
32 merge 1:1 pid using temp
33 keep if _merge==3
34 drop _merge
35 save temp, replace
36
37 use "$datadir/blifemst.dta", clear
38 duplicates report pid
39 duplicates report pid bleshno
40 describe
41 summarize
42 sort pid
43 merge m:1 pid using temp
44 keep if _merge==3
45
46 fre racel
47 recode racel 1/5=1 6/18=0 -9/-1=., gen(white)
48 label var white "ethnic group"
49 label define white 1 "white" 0 "non-white"
50 label values white white
51 tabulate racel white, m
52
53 fre bsex
54 recode bsex 1=0 2=1 -9/-1=., gen(female)
55 label var female "gender"
56 label define female 1 "female" 0 "male"
57 label values female female
58 tabulate bsex female, m
59
60 generate london=bregion2==7
61 generate north=inlist(bregion2,1,2,3)
62 generate midlands=inlist(bregion2,4,5)
63 generate stheast=inlist(bregion2,6,8,9)
64 generate wales=bregion2==10
65 generate scotland=bregion2==11
66 foreach v in london north midlands stheast wales scotland {
67     replace `v'=. if bregion2<0
68     tabulate bregion2 `v', missing
69     label var `v' "region of residence: `v'"
70 }
71
72 rename bleshsy4 start_year
73 rename bleshsm start_month
74 rename bleshey4 end_year
75 rename bleshem end_month

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76 rename bleshno spellno
77 rename bleshst activity_status
78 rename bleshne spell_ongoing
79 rename bdoiyear intv_year
80 rename bdoiyear intv_month
81
82 label copy bleshsy4 start_year
83 label copy bleshsm start_month
84 label copy bleshey4 end_year
85 label copy bleshem end_month
86 label copy bleshst activity_status
87 label copy bleshne spell_ongoing
88 label copy bdoiyear intv_year
89 label copy bdoiyear intv_month
90
91 foreach v in start_year start_month end_year end_month activity_status ///
92     spell_ongoing intv_year intv_month {
93     lab val `v' `v'
94 }
95 drop bleshey bleshsy bhid bpno _merge bleslen
96 describe
97 summarize
98
99 sort pid spellno
100 save duration, replace
101
102 replace intv_year=intv_year+1900
103
104 replace end_month=intv_month if spell_ongoing==1
105 replace end_year=intv_year if spell_ongoing==1
106
107 foreach v in start end {
108     replace `v'_month = 1 if `v'_month==13 & `v'_year<. & `v'_year>0
109     replace `v'_month = 4 if `v'_month==14 & `v'_year<. & `v'_year>0
110     replace `v'_month = 7 if `v'_month==15 & `v'_year<. & `v'_year>0
111     replace `v'_month = 10 if `v'_month==16 & `v'_year<. & `v'_year>0
112     replace `v'_month = 6 if `v'_month==1 & `v'_year<. & `v'_year>0
113 }
114
115 fre activity_status
116 generate unempdur=((end_year-start_year)*12) + ///
117     (end_month-start_month) if activity_status==4 ///
118     & start_year>0 & end_year>0 & start_month>0 & end_month>0 ///
119     & start_year<. & end_year<. & start_month<. & end_month<.
120
121 generate censored=1 if spell_ongoing==1
122 replace censored=0 if spell_ongoing==0
123
124 tabulate unempdur if unempdur<0
125
126 * browse pid spellno activity_status unempdur activity_status start_year ///
127 start_month end_year end_month if unempdur<0
128
129 fre activity_status if unempdur==.
130
131 drop if unempdur<0
132 drop if unempdur==.
133
134 keep if activity_status==4
135
136 bysort pid (spellno): keep if _n==1
137 list pid spellno unempdur activity_status censored in 1/10, sepby(pid)
138 duplicates report pid
139
140 generate age=(start_year-doby)+((start_month-dobm)*12) ///
141     if start_year>=0 & doby>=0 & start_month>=0 & dobm>=0 ///
142     & start_year<. & doby<. & start_month<. & dobm<.
143
144 save duration_continuous, replace
145
146 expand unempdur
147 bysort pid: generate monthid=_n
148 generate spellended=0
149 bysort pid (monthid): replace spellended =1 if _n==_N & censored==0
150

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151 save duration_discrete, replace
152
153 erase temp.dta
154
155
156 * Seccion 13.2.1
157 *-----
158
159 use duration_continuous, clear
160 stset unempdur, failure(censored==0)
161 st
162
163 * Seccion 13.2.2
164 *-----
165
166 sts list
167 sts graph
168 sts graph, saving(surv1, replace) scheme(s2mono)
169 sts graph, failure saving(faill1, replace) scheme(s2mono)
170 sts graph, cumhaz saving(cumhaz1, replace) scheme(s2mono)
171 sts graph, hazard saving(haz1, replace) scheme(s2mono)
172
173 ltable unempdur
174
175 * Seccion 13.2.3
176 *-----
177
178 streg age female white north midlands stheast wales scotland, ///
179     distribution(weibull)
180 stcurve, hazard saving(haz2, replace)
181
182 stcurve, at1(female=1) at2(female=0) cumhaz saving(cumhaz3, replace) ///
183     scheme(s2mono)
184 stcurve, at1(female=1) at2(female=0) survival saving(surv3, replace) ///
185     scheme(s2mono)
186 stcurve, at1(female=1) at2(female=0) hazard saving(haz3, replace) ///
187     scheme(s2mono)
188
189 stcurve, at1(white=1) at2(white=0) cumhaz saving(cumhaz4, replace) ///
190     scheme(s2mono)
191 stcurve, at1(white=1) at2(white=0) survival saving(surv4, replace) ///
192     scheme(s2mono)
193 stcurve, at1(white=1) at2(white=0) hazard saving(haz4, replace) scheme(s2mono)
194
195 predict predHaz, hazard
196 predict survMd, median time
197
198 list unempdur _t survMd if female==1 & age==30 & white==1
199
200 list unempdur _t survMd if female==1 & age==30 & white==1 & north==1
201 list unempdur _t survMd if female==1 & age==30 & white==1 & stheast==1
202
203 summarize survMd if female==1 & age==30 & white==1
204
205
206 list unempdur _t survMd if female==0 & age==30 & white==1
207 summarize survMd if female==0 & age==30 & white==1
208
209
210 * Seccion 13.2.4
211 *-----
212
213 streg age female white, distribution(weibull) frailty(gamma)
214 streg age female white north midlands stheast wales scotland, ///
215     distribution(weibull) frailty(gamma)
216
217
218 * Seccion 13.2.5
219 *-----
220
221 sts generate baselinesurv1=s
222 stcox, estimate
223 predict baselinesurv2, basesurv
224 list baselinesurv1 baselinesurv2 in 1/10
225

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226 stcox age female white north midlands stheast wales scotland, ///
227     basesurv(baseline1)
228 stcox age white north midlands stheast wales scotland, basesurv(baseline2) ///
229     strata(female) nolog
230
231 label var _t "time"
232 twoway line baseline2 _t if female==1 & e(sample) & _t<30, sort || ///
233     line baseline2 _t if female==0 & e(sample) & _t<30, sort || ///
234     line baseline1 _t if female!=. & e(sample) & _t<30, sort ///
235     legend(label(1 women) label(2 men) label(3 all)) scheme(s2mono)
236
237
238 * Seccion 13.3
239 *-----
240
241 use duration_discrete, clear
242
243 generate logdur=log(monthid)
244 logit spellended logdur age female white north midlands ///
245     stheast wales scotland
246 margins, dydx(*)
247
248 logit spellended c.logdur##i.female age white north midlands ///
249     stheast wales scotland
250 margins, dydx(*)
251
252 xtset pid monthid
253 xtlogit spellended logdur age female white north midlands ///
254     stheast wales scotland, re
255 margins, dydx(*) predict(pu0)
256
257
258 clear
259 log close
260

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