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2 * A Practical Guide to Using Panel Data
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5 * Chapter 12
6 *****
7
8 version 12
9 clear all
10 set more off
11 capture log close
12
13 cd "C:\My Documents\"
14
15 global datadir "S:\final"
16 global dir "C:\My Documents\"
17
18 log using "$dir\Example_Chapter12.log", replace
19
20 * 12.1. Merging Data on Previous Spell to Data on Current Spell
21 *-----*
22
23 use pid ajspno ajhstat ajhbgm ajhbggy4 ajhstpy ajhendd ajhendm ajhendy4 ///
24     ajha9ly      ///
25     using "$datadir/ajobhist", clear
26 generate wave = 1
27 renpfix a
28 mvdecode _all, mv(-9/-1)
29 describe
30
31 * What is the maximum number of spells?
32 tabulate jspno
33 * How many respondents have only one recorded spell?
34 bysort pid: generate TotSpells = _N
35 tabulate TotSpells
36
37 * Month and year in which the spell started and ended
38
39 generate previous_spellbegin = ym(jhbggy4, jhbgm)
40 tabulate previous_spellbegin
41 format previous_spellbegin %tm
42 tabulate previous_spellbegin
43
44 generate spellend = ym(jhendy4, jhendm)
45 format spellend %tm
46
47 recode jspno (. = 0)
48
49 save "$dir\ajobhistory", replace
50
51 * OPEN THE INDRESP FILE AND MERGE WITH THE JOB HISTORY FILE
52 *-----*
53
54 use ahid pid asex aage ajbstat aqfachi apaygu ajbsemp ajbft ajbbgm ajbbgy4 ///
55     using "$datadir/aindresp", clear
56 renpfix a
57 generate wave = 1
58 mvdecode _all, mv(-9/-1)
59 generate current_spellbegin = ym(jbbgy4, jbbgm)
60 format current_spellbegin %tm
61
62 joinby pid using "$dir\ajobhistory.dta", unmatched(both)
63
64 tabulate _merge
65 drop _merge
66
67 save "$dir\ajobhistory.dta", replace
68
69 * GENERALISATION TO MULTIPLE WAVES *
70 *-----*
71
72 * Open the job history files
73 * Merge with the indresp files
74
75 foreach wave in a b c d e f {

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76 * Job history files
77 use pid `wave' jspno `wave' jhstat `wave' jhbgm `wave' jhbgy4 `wave' jhstpy ///
78 `wave' jhstpy `wave' jhendd `wave' jhendm `wave' jhendy4 `wave' jha9ly ///
79 using "$datadir/`wave'jobhist", clear
80 renpfix `wave'
81 generate wave = index("abcdef", "`wave'")
82 mvdecode _all, mv(-9/-1)
83 replace jhbgm = . if jhbgm > 12
84 replace jhendm = . if jhendm > 12
85 save "$dir/`wave'jobhistory_junk", replace
86 * Individual respondent files
87 use `wave' hid pid `wave' sex `wave' age `wave' jbstat `wave' qfachi ///
88 `wave' paygu `wave' jbsemp `wave' jbfte `wave' jbbgm `wave' jbbgy4 ///
89 using "$datadir/`wave'indresp", clear
90 renpfix `wave'
91 generate wave = index("abcdef", "`wave'")
92 mvdecode _all, mv(-9/-1)
93 replace jbbgm = . if jbbgm > 12
94 * Merge individual respondent file with job history file
95 joinby pid using "$dir/`wave'jobhistory_junk.dta", unmatched(both)
96 tabulate _merge
97 drop _merge
98 * Generate the dates of beginning and end of the spell
99 generate previous_spellbegin = ym(jhbgy4, jhbgm)
100 format previous_spellbegin %tm
101 generate spellend = ym(jhendy4, jhendm)
102 format spellend %tm
103 generate current_spellbegin = ym(jbbgy4, jbbgm)
104 format current_spellbegin %tm
105 recode jspno (. = 0)
106 compress
107 save "$dir/`wave'jobhistory.dta", replace
108 }
109
110 foreach wave in a b c d e f {
111 use "$dir/`wave'jobhistory.dta", clear
112 if indexnot("a", "`wave'") append using "$dir/jobhistory_final.dta"
113 * There is no append for the first wave of the data
114 compress
115 save "$dir/jobhistory_final.dta", replace
116 }
117
118 *****
119 * EXTRACT VARIABLES FROM THE JOB HISTORY FILE *
120 * AND RUN A REGRESSION *
121 *****
122
123 tabulate jhstat
124 tabulate jhstat jbsemp
125
126 * Keep those who have at most one recoded spell in the job history file
127 bysort pid wave: generate TotSpells = _N
128 drop if TotSpells > 1
129 tabulate jspno
130
131 tsset pid wave
132 generate NewJob = 0 if jbstat == 2 & L.jbstat == 2
133 replace NewJob = 1 if jhstat == 2
134
135 * What is the impact of a job change on wages?
136 * Note that you have to generate the dummy variables again
137 generate age2 = age^2
138 generate Female = 1 if sex == 2
139 replace Female = 0 if sex == 1
140 label var Female "Dummy for women"
141 generate PartTime = 1 if jbfte == 2
142 replace PartTime = 0 if jbfte == 1
143 label var PartTime "Part-time dummy"
144 tabulate qfachi, gen(Q)
145 label var Q1 "higher degree"
146 label var Q2 "1st degree"
147 label var Q3 "hnd,hnc,teaching"
148 label var Q4 "a level"
149 label var Q5 "o level"
150 label var Q6 "cse"

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151 label var Q7 "none of these qualif"
152 generate year = wave + 1990
153 tabulate year, gen(Y)
154
155 generate LnW = ln(paygu) if jbsemp == 1
156
157 * Declare the data to be panel
158 tsset pid year, yearly
159
160 xtreg LnW age age2 sex PartTime NewJob Q1-Q6 Y2-Y6, fe vce(robust)
161 test NewJob
162
163
164
165 * 12.3. Appending Data on Previous Spell to Data on Current Spell
166 *****
167 * 12.3.1. Merging Files
168 *-----
169
170 foreach wave in a b c d e f {
171     * Job history files
172     use pid `wave' jspno `wave' jhstat `wave' jhbgm `wave' jhbgy4 `wave' jhstpy ///
173         `wave' jhstpy `wave' jhendd `wave' jhendm `wave' jhendy4 `wave' jha9ly ///
174         using "$datadir/`wave' jobhist", clear
175     renpfix `wave'
176     generate wave = index("abcdef", "`wave'")
177     mvdecode _all, mv(-9/-1)
178     replace jhbgm = . if jhbgm > 12
179     replace jhendm = . if jhendm > 12
180     sort pid jspno
181     save "$dir/`wave' jobhistory_junk", replace
182     * Individual respondent files
183     use `wave' hid pid `wave' sex `wave' age `wave' jbstat `wave' qfachi ///
184         `wave' paygu `wave' jbsemp `wave' jbft `wave' jbbgm `wave' jbbgy4 ///
185         using "$datadir/`wave' indresp", clear
186     renpfix `wave'
187     generate wave = index("abcdef", "`wave'")
188     generate jspno = 0
189     mvdecode _all, mv(-9/-1)
190     replace jbbgm = . if jbbgm > 12
191     sort pid jspno
192     * Merge individual respondent file with job history file
193     merge 1:m pid jspno using "$dir/`wave' jobhistory_junk.dta"
194     tabulate _merge
195     drop _merge
196     compress
197     save "$dir/`wave' jobhistory.dta", replace
198 }
199
200 foreach wave in a b c d e f {
201     use "$dir/`wave' jobhistory.dta", clear
202     if indexnot("a", "`wave'") append using "$dir/jobhistory_final.dta"
203     * There is no append for the first wave of the data
204     compress
205     save "$dir/jobhistory_final.dta", replace
206 }
207
208
209 * 12.3.2. Imputing Missing Values
210 *-----
211
212 foreach var of varlist sex age qfachi {
213     bysort pid wave (jspno): ///
214         replace `var' = ///
215         cond(jspno > 0 & `var' == ., `var'[_n-1], `var')
216 }
217
218 generate Status = 1 if jbstat == 1 | jbstat == 2 | jhstat == 1 | jhstat == 2
219 replace Status = 2 if jbstat == 3 | jhstat == 3
220 replace Status = 3 if (jbstat >= 4 & jbstat <= 10) | ///
221     (jhstat >= 4 & jhstat <= 10)
222 label var Status "Employment Status"
223 label define ES 1 "Employed" 2 "Unemployed" 3 "Inactive"
224 label value Status ES
225

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226
227 * 12.3.3. Addressing Inconsistencies
228 *-----
229
230 generate JBSpellStart = ym(jbbgy4, jbbgm)
231 generate JHSpellStart = ym(jhbgy4, jhbgm)
232 generate JHSpellEnd = ym(jhendy4, jhendm)
233
234 bysort pid wave (jspno): generate Cronjspno = _N - jspno
235
236 generate SpellBegin = JBSpellStart if jspno == 0
237 replace SpellBegin = JHSpellStart if jspno > 0 & jspno ~= .
238
239 generate SpellEnd = JHSpellEnd
240
241 * If there has been no change and dates do not match
242 bysort pid (wave Cronjspno): replace SpellBegin = SpellBegin[_n-1] if ///
243     SpellBegin ~= SpellBegin[_n-1] & SpellBegin[_n-1] ~= . & ///
244     jspno == 0 & Cronjspno == 1 & wave > 1
245 * If there have been intervening spells but the dates do not match
246 * the windresp file overrides the w+1 job history file
247 * JHSpellStart of the oldest spell in the job history file must be >=
248 * JBSpellStart in the indresp file
249 bysort pid (wave Cronjspno): replace SpellBegin = JBSpellStart[_n-1] if ///
250     SpellBegin < JBSpellStart[_n-1] & SpellBegin ~= . & ///
251     JBSpellStart[_n-1] ~= . & Status == Status[_n-1] & wave > 1
252 bysort pid (wave Cronjspno): replace SpellBegin = JHSpellStart if ///
253     SpellBegin == . & JHSpellStart ~= . & ///
254     jspno ~= 0 & Cronjspno == 1 & wave > 1
255 bysort pid (wave Cronjspno): replace SpellBegin = SpellBegin[_n-1] if ///
256     SpellBegin == . & SpellBegin[_n-1] ~= . & ///
257     JHSpellStart == . & Status == Status[_n-1] & ///
258     jspno ~= 0 & Cronjspno == 1 & wave > 1
259 * This would be the oldest spell in case of multiple spells
260
261 foreach var of varlist JBSpellStart JHSpellStart JHSpellEnd ///
262     SpellBegin SpellEnd {
263     format `var' %tm
264 }
265
266
267 save "$dir\jobhistory_final.dta", replace
268
269 log close
270

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