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1  /* Author: Flor Picado Garro
2  Master thesis: To what extent are stated preferences consistent with satisfaction?An
   empirical exercise for Belgium */
3
4  clear all
5  cd "C:\Users\Flor\Documents\UCLouvain\professional\tesis\Meqin_public\overall_satisfaction"
6  use "C:\Users\Flor\Documents\UCLouvain\professional\tesis\Meqin_public\overall
   satisfaction\Meqin_public.dta"
7
8  *****
9  *****
10 *Section 1: Previous steps to use the data
11
12 *1.1) Complete hh information
13 foreach var of varlist V400902-V400914_1 {
14     replace `var' = `var'[_n-1] if hhid[_n-1]==hhid[_n]
15 }
16 foreach var of varlist V40092101-V40092103 {
17     replace `var' = `var'[_n-1] if hhid[_n-1]==hhid[_n]
18 }
19 foreach var of varlist V40092104-V40092105 {
20     replace `var' = `var'[_n-1] if hhid[_n-1]==hhid[_n]
21 }
22 foreach var of varlist V401503-V401511_01 {
23     replace `var' = `var'[_n-1] if hhid[_n-1]==hhid[_n]
24 }
25 replace WTP_hous = WTP_hous[_n-1] if hhid[_n-1]==hhid[_n]
26
27 *1.2) Generating dummy variables
28 *Socio-demographics
29     generate female=gen_resp==2
30     generate young=age_cl_resp==4
31     generate adults_over60=inrange(age_cl_resp, 8,10)
32     generate adults_over70=inrange(age_cl_resp, 9,10)
33     generate high_edu=education==3
34     generate ucompleta=inrange(V400301, 13,15)
35     generate relationship=V400204==1
36     generate equivalised_income=hh_income/oecd_eqsc
37     generate ln_equivalised_income=ln(equivalised_income)
38     generate children_hh=nchild>0
39     generate born_NOBelgium=V40020101==2
40
41 *Health variables
42     generate chronic_di=V400512==1
43     generate limited_func=inrange(V40052102, 0,30)
44
45 *Work variables
46     generate unemployment=inrange(V400703, 2,3)
47     generate physical_effort_job=inrange(V40070701_1, 4,6)
48     generate mental_effort_job=inrange(V40070701_2, 4,6)
49     generate dangerous_job=inrange(V40070701_3, 4,6)
50     generate high_speed_job=inrange(V40070701_4, 4,6)
51     generate make_dirty_job=inrange(V40070701_5, 4,6)
52     generate show_cap_job=inrange(V40070702_1, 4,6)
53     generate freedom_do_job=inrange(V40070702_2, 4,6)
54     generate freedom_howmuch_job=inrange(V40070702_3, 4,6)
55     generate freedom_kind_job=inrange(V40070702_4, 4,6)
56     generate challenging_job=inrange(V40070702_5, 4,6)
57     generate worthwhile_job=inrange(V40070702_6, 4,6)
58     generate part_time=paid_work>0 & paid_work<30
59
60     * to generate a variable where 0= no unemployed, 0.5=part_time job and 1=unemployed
61     generate part_time_scaled= part_time -0.5 if part_time==1
62     generate work_condition= part_time_scaled
63     replace work_condition = unemployment if part_time_scaled==.
64
65 *Housing
66     generate own_house=V400902==1
67
68 * step before cleaning the sample to determine why a 15% of the sample is lost
69 sum equivalised_income V4004031_1 V4004031_4 V4004032_4 V40052101 V40052104 V4009072_4
   V4009071_1 V400404_1
70
71 *1.3) Cleaning the data (only the relevant variables)
72     drop if V4004031_1==9999
73     drop if V4004031_2==9999
74     drop if V4004031_3==9999

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75 drop if V4004031_4==9999
76 drop if V4004031_5==7777
77 drop if V4004031_5==9999
78 drop if V4004032_1==9999
79 drop if V4004032_3==9999
80 drop if V4004032_2==7777
81 drop if V4004032_2==9999
82 drop if V4004032_4==9999
83 drop if V4004032_5==9999
84 drop if age_cl_resp==.
85
86 * BoxCox doesn't allow 0 values, dimmensions were scaled from 1 to 101
87 drop if V40052101==.d
88 drop if V40052102==.d
89 drop if V40052103==.d
90 drop if V40052104==.d
91 drop if V40052105==.d
92 drop if V40092101==.d
93 drop if V40092102==.d
94 drop if V40092103==.d
95 drop if V40092104==.d
96 drop if V40092105==.d
97 drop if ln_equivalised_income==.
98 drop if leisure==.
99 drop if V400404_1==.
100 drop if V400301==.
101
102 replace V40052101= V40052101 + 1
103 replace V40052102= V40052102 + 1
104 replace V40052103= V40052103 + 1
105 replace V40052104= V40052104 + 1
106 replace V40052105= V40052105 + 1
107 replace V40092101= V40092101 + 1
108 replace V40092102= V40092102 + 1
109 replace V40092103= V40092103 + 1
110 replace V40092104= V40092104 + 1
111 replace V40092105= V40092105 + 1
112 replace leisure= leisure + 0.1
113 sum equivalised_income V4004031_1 V4004031_4 V4004032_4 V40052101 V40052104 V4009072_4
V4009071_1 V400404_1
114
115 *****
116 *****
117 * 2. First set of regressions
118 * 2.1) 5 subdimensions of health and transformed income
119 * 2.1.a) Base line regression, regression for chapter of sensibility
120 nl (V400402_1 = {b0} + {gama1=0.1}*V4004031_1 + {gama4=0.1}*V4004031_4 + {gama9=0.1}*
V4004032_4 ///
121 + {gama11=0.1}*young + {gama12=0.1}*adults_over60 + {gama13=0.1}*relationship + {gama14=
0.1}*V400404_1 + {gama15=0.1}*part_time + {gama16=0.1}*V400301 ///
122 + ({phi1=1}+ {phi11=0.1}*young + {phi12=0.1}*high_edu + {phi13=0.1}*female + {phi14=0.1}*
region_WAL )*unemployment ///
123 + ({phi2=1}+ {phi21=0.1}*young + {phi22=0.1}*high_edu + {phi23=0.1}*female + {phi24=0.1}*
region_WAL )*((equivalised_income^{zeta2=0.1})-1)/{zeta2=0.1} ///
124 + ({phi3=1}+ {phi31=0.1}*young + {phi32=0.1}*high_edu + {phi33=0.1}*female + {phi34=0.1}*
region_WAL )*((leisure^{zeta3=0.1})-1)/{zeta3=0.1} ///
125 + ({beta1=1}+ {delta11=0.1}*young + {delta12=0.1}*high_edu + {delta13=0.1}*female + {
delta14=0.1}*region_WAL )*((V40052101^{lambda1=0.1})-1)/{lambda1=0.1} ///
126 + ({beta2=1}+ {delta21=0.1}*young + {delta22=0.1}*high_edu + {delta23=0.1}*female + {
delta24=0.1}*region_WAL )*((V40052102^{lambda2=0.1})-1)/{lambda2=0.1} ///
127 + ({beta3=1}+ {delta31=0.1}*young + {delta32=0.1}*high_edu + {delta33=0.1}*female + {
delta34=0.1}*region_WAL )*((V40052103^{lambda3=0.1})-1)/{lambda3=0.1} ///
128 + ({beta4=1}+ {delta41=0.1}*young + {delta42=0.1}*high_edu + {delta43=0.1}*female + {
delta44=0.1}*region_WAL )*((V40052104^{lambda4=0.1})-1)/{lambda4=0.1} ///
129 + ({beta5=1}+ {delta51=0.1}*young + {delta52=0.1}*high_edu + {delta53=0.1}*female + {
delta54=0.1}*region_WAL )*((V40052105^{lambda5=0.1})-1)/{lambda5=0.1} ///
130 + ({miu1=1}+ {eta11=0.1}*young + {eta12=0.1}*high_edu + {eta13=0.1}*female + {eta14=0.1}*
region_WAL )*((V40092101^{rho1=0.1})-1)/{rho1=0.1} ///
131 + ({miu2=1}+ {eta21=0.1}*young + {eta22=0.1}*high_edu + {eta23=0.1}*female + {eta24=0.1}*
region_WAL )*((V40092102^{rho2=0.1})-1)/{rho2=0.1} ///
132 + ({miu3=1}+ {eta31=0.1}*young + {eta32=0.1}*high_edu + {eta33=0.1}*female + {eta34=0.1}*
region_WAL )*((V40092103^{rho3=0.1})-1)/{rho3=0.1} ///
133 + ({miu4=1}+ {eta41=0.1}*young + {eta42=0.1}*high_edu + {eta43=0.1}*female + {eta44=0.1}*
region_WAL )*((V40092104^{rho4=0.1})-1)/{rho4=0.1} ///
134 + ({miu5=1}+ {eta51=0.1}*young + {eta52=0.1}*high_edu + {eta53=0.1}*female + {eta54=0.1}*
region_WAL )*((V40092105^{rho5=0.1})-1)/{rho5=0.1} ///
135 + ({omega1=1}+ {theta11=0.1}*young + {theta12=0.1}*high_edu + {theta13=0.1}*female + {

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theta14=0.1}*region_WAL )*physical_effort_job ///
136 + ({omega2=1}+ {theta21=0.1}*young + {theta22=0.1}*high_edu +{theta23=0.1}*female + {
theta24=0.1}*region_WAL )*dangerous_job ///
137 + ({omega3=1}+ {theta31=0.1}*young + {theta32=0.1}*high_edu +{theta33=0.1}*female + {
theta34=0.1}*region_WAL )*make_dirty_job ///
138 + ({omega4=1}+ {theta41=0.1}*young + {theta42=0.1}*high_edu +{theta43=0.1}*female + {
theta44=0.1}*region_WAL )*mental_effort_job ///
139 + ({omega5=1}+ {theta51=0.1}*young + {theta52=0.1}*high_edu +{theta53=0.1}*female + {
theta54=0.1}*region_WAL )*worthwhile_job ///
140 ), vce(robust)
141
142 * 2.1.b) Current and ideal state
143 *If ratio_XX=0 is because the ratio was negative, it would have been a violation to
monotonicity of preferences. So the domain is restricted to say WTP=0 for that
individual. To do that the ratio must be 0.
144 generate ratioH1_reg1a= (([/beta1] + [/delta11]*young + [/delta12]*high_edu + [/delta13]*
female + [/delta14]*region_WAL ) ///
145 /([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
146 (([/beta1] + [/delta11]*young + [/delta12]*high_edu + [/delta13]*female + [/delta14]*
region_WAL ) ///
147 /([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
148 replace ratioH1_reg1a = 0 if ratioH1_reg1a==.
149
150 generate ratioH2_reg1a= (([/beta2] + [/delta21]*young + [/delta22]*high_edu + [/delta23]*
female + [/delta24]*region_WAL ) ///
151 /([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
152 (([/beta2] + [/delta21]*young + [/delta22]*high_edu + [/delta23]*female + [/delta24]*
region_WAL ) ///
153 /([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
154 replace ratioH2_reg1a = 0 if ratioH2_reg1a==.
155
156 generate ratioH3_reg1a= (([/beta3] + [/delta31]*young + [/delta32]*high_edu + [/delta33]*
female + [/delta34]*region_WAL ) ///
157 /([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
158 (([/beta3] + [/delta31]*young + [/delta32]*high_edu + [/delta33]*female + [/delta34]*
region_WAL ) ///
159 /([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
160 replace ratioH3_reg1a = 0 if ratioH3_reg1a==.
161
162 generate ratioH4_reg1a= (([/beta4] + [/delta41]*young + [/delta42]*high_edu + [/delta43]*
female + [/delta44]*region_WAL ) ///
163 /([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
164 (([/beta4] + [/delta41]*young + [/delta42]*high_edu + [/delta43]*female + [/delta44]*
region_WAL ) ///
165 /([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
166 replace ratioH4_reg1a = 0 if ratioH4_reg1a==.
167
168 generate ratioH5_reg1a= (([/beta5] + [/delta51]*young + [/delta52]*high_edu + [/delta53]*
female + [/delta54]*region_WAL ) ///
169 /([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
170 (([/beta5] + [/delta51]*young + [/delta52]*high_edu + [/delta53]*female + [/delta54]*
region_WAL ) ///
171 /([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
172 replace ratioH5_reg1a = 0 if ratioH5_reg1a==.
173
174 *transforming the variables
175 generate t1aV40052101 = (((V40052101^_b[/lambda1])-1)/_b[/lambda1])
176 generate t1aV40052102 = (((V40052102^_b[/lambda2])-1)/_b[/lambda2])
177 generate t1aV40052103 = (((V40052103^_b[/lambda3])-1)/_b[/lambda3])
178 generate t1aV40052104 = (((V40052104^_b[/lambda4])-1)/_b[/lambda4])
179 generate t1aV40052105 = (((V40052105^_b[/lambda5])-1)/_b[/lambda5])
180 generate t1aV40092101 = (((V40092101^_b[/rho1])-1)/_b[/rho1])
181 generate t1aV40092102 = (((V40092102^_b[/rho2])-1)/_b[/rho2])
182 generate t1aV40092103 = (((V40092103^_b[/rho3])-1)/_b[/rho3])
183 generate t1aV40092104 = (((V40092104^_b[/rho4])-1)/_b[/rho4])
184 generate t1aV40092105 = (((V40092105^_b[/rho5])-1)/_b[/rho5])
185 generate t1aincome = (((equivalised_income^_b[/zeta2])-1)/_b[/zeta2])
186 generate t1aleisure = (((leisure^_b[/zeta3])-1)/_b[/zeta3])
187
188 scalar ideal_t1aV40052101 = (((101^_b[/lambda1])-1)/_b[/lambda1])
189 scalar ideal_t1aV40052102 = (((101^_b[/lambda2])-1)/_b[/lambda2])
190 scalar ideal_t1aV40052103 = (((101^_b[/lambda3])-1)/_b[/lambda3])

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191 scalar ideal_t1aV40052104 = (((101^_b[/lambda4])-1)/_b[/lambda4])
192 scalar ideal_t1aV40052105 = (((101^_b[/lambda5])-1)/_b[/lambda5])
193 scalar lambda_y1a=_b[/zeta2] //lambda_y1=-.2031282
194
195 generate dif1a_H1 =(t1aV40052101 - ideal_t1aV40052101)
196 generate dif1a_H2 =(t1aV40052102 - ideal_t1aV40052102)
197 generate dif1a_H3 =(t1aV40052103 - ideal_t1aV40052103)
198 generate dif1a_H4 =(t1aV40052104 - ideal_t1aV40052104)
199 generate dif1a_H5 =(t1aV40052105 - ideal_t1aV40052104)
200
201 * 2.1.c) equivalent income and WTP from SE
202 generate EI_SE_reg1a= (equivalised_income^(lambda_y1a) + lambda_y1a*ratioH1_reg1a*dif1a_H1
+ lambda_y1a*ratioH2_reg1a*dif1a_H2 ///
203 + lambda_y1a*ratioH3_reg1a*dif1a_H3 + lambda_y1a*ratioH4_reg1a*dif1a_H4 + lambda_y1a*
ratioH5_reg1a*dif1a_H5)^(1/lambda_y1a)
204
205 *checking equivalised_income>=EI
206 twoway (scatter equivalised_income EI_SE_reg1a ), || line EI_SE_reg1a EI_SE_reg1a, sort
///
207 ylabel(, format(%9.0fc)) xlabel(, format(%9.0fc )) ytitle(equivalised_income) xtitle(
EI_SE_reg1a) legend(off)
208
209 *computing WTP from satisfaction data
210 generate WTP_SE_reg1a = equivalised_income - EI_SE_reg1a
211
212 * 2.1.d) inconsistencies in WTP (excluding 2 extreme cases)
213 twoway (scatter WTP_SE_reg1a WTP_health ) if WTP_SE_reg1a<12000 || line WTP_health
WTP_health, sort ///
214 ylabel(, format(%9.0fc)) xlabel(, format(%9.0fc )) ytitle(WTP from satisfaction) xtitle(
Stated WTP) legend(off) ///
215 ylabel(0(3000)12000) title(5 scores - Income(Boxcox) - No constraints) name(I_WTP_reg1a)
216 count if WTP_SE_reg1a>12000
217
218 *Variable inconsistencies
219 generate I_reg1a = WTP_SE_reg1a - WTP_health
220
221 *****
222 *****
223 * 2.2) 5 subdimensions of health and transformed income, constrained lambdas
224 *Second iteration: constraining V40052103
225 *Third iteration: constraining V40052103
226 * 2.2.a)Final regression, regression for chapter 4
227 nl (V400402_1 = {b0} + {gama1=0.1}*V4004031_1 + {gama4=0.1}*V4004031_4 + {gama9=0.1}*
V4004032_4 ///
228 + {gama11=0.1}*young + {gama12=0.1}*adults_over60 + {gama13=0.1}*relationship + {gama14=
0.1}*V400404_1 + {gama15=0.1}*part_time + {gama16=0.1}*V400301 ///
229 + ({phi1=1}+ {phi11=0.1}*young + {phi12=0.1}*high_edu +{phi13=0.1}*female + {phi14=0.1}*
region_WAL )*unemployment ///
230 + ({phi2=1}+ {phi21=0.1}*young + {phi22=0.1}*high_edu +{phi23=0.1}*female + {phi24=0.1}*
region_WAL )*((equivalised_income^{zeta2=0.1})-1)/{zeta2=0.1} ///
231 + ({phi3=1}+ {phi31=0.1}*young + {phi32=0.1}*high_edu +{phi33=0.1}*female + {phi34=0.1}*
region_WAL )*((leisure^{zeta3=0.1})-1)/{zeta3=0.1} ///
232 + ({beta1=1}+ {delta11=0.1}*young + {delta12=0.1}*high_edu +{delta13=0.1}*female + {
delta14=0.1}*region_WAL )*((V40052101^{lambda1=0.1})-1)/{lambda1=0.1} ///
233 + ({beta2=1}+ {delta21=0.1}*young + {delta22=0.1}*high_edu +{delta23=0.1}*female + {
delta24=0.1}*region_WAL )*((V40052102^{lambda2=0.1})-1)/{lambda2=0.1} ///
234 + ({beta3=1}+ {delta31=0.1}*young + {delta32=0.1}*high_edu +{delta33=0.1}*female + {
delta34=0.1}*region_WAL )*((V40052103^-3)-1)/-3 ///
235 + ({beta4=1}+ {delta41=0.1}*young + {delta42=0.1}*high_edu +{delta43=0.1}*female + {
delta44=0.1}*region_WAL )*((V40052104^{lambda4=0.1})-1)/{lambda4=0.1} ///
236 + ({beta5=1}+ {delta51=0.1}*young + {delta52=0.1}*high_edu +{delta53=0.1}*female + {
delta54=0.1}*region_WAL )*((V40052105^-3)-1)/-3 ///
237 + ({miu1=1}+ {eta11=0.1}*young + {eta12=0.1}*high_edu +{eta13=0.1}*female + {eta14=0.1}*
region_WAL )*((V40092101^{rho1=0.1})-1)/{rho1=0.1} ///
238 + ({miu2=1}+ {eta21=0.1}*young + {eta22=0.1}*high_edu +{eta23=0.1}*female + {eta24=0.1}*
region_WAL )*((V40092102^{rho2=0.1})-1)/{rho2=0.1} ///
239 + ({miu3=1}+ {eta31=0.1}*young + {eta32=0.1}*high_edu +{eta33=0.1}*female + {eta34=0.1}*
region_WAL )*((V40092103^{rho3=0.1})-1)/{rho3=0.1} ///
240 + ({miu4=1}+ {eta41=0.1}*young + {eta42=0.1}*high_edu +{eta43=0.1}*female + {eta44=0.1}*
region_WAL )*((V40092104^{rho4=0.1})-1)/{rho4=0.1} ///
241 + ({miu5=1}+ {eta51=0.1}*young + {eta52=0.1}*high_edu +{eta53=0.1}*female + {eta54=0.1}*
region_WAL )*((V40092105^{rho5=0.1})-1)/{rho5=0.1} ///
242 + ({omega1=1}+ {theta11=0.1}*young + {theta12=0.1}*high_edu +{theta13=0.1}*female + {
theta14=0.1}*region_WAL )*physical_effort_job ///
243 + ({omega2=1}+ {theta21=0.1}*young + {theta22=0.1}*high_edu +{theta23=0.1}*female + {
theta24=0.1}*region_WAL )*dangerous_job ///
244 + ({omega3=1}+ {theta31=0.1}*young + {theta32=0.1}*high_edu +{theta33=0.1}*female + {

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theta34=0.1}*region_WAL )*make_dirty_job ///
245 + ({omega4=1}+ {theta41=0.1}*young + {theta42=0.1}*high_edu +{theta43=0.1}*female + {
theta44=0.1}*region_WAL )*mental_effort_job ///
246 + ({omega5=1}+ {theta51=0.1}*young + {theta52=0.1}*high_edu +{theta53=0.1}*female + {
theta54=0.1}*region_WAL )*worthwhile_job ///
247 ), vce(robust)
248
249 * 2.2.b) Current and ideal state
250 *If ratio_XX=0 is because the ratio was negative, it would have been a violation to
monotonicity of preferences. So the domain is restricted to say WTP=0 for that
individual. To do that the ratio must be 0.
251 generate ratioH1_reg1b= (([/beta1] + [/delta11]*young + [/delta12]*high_edu + [/delta13]*
female + [/delta14]*region_WAL ) ///
252 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
253 (([/beta1] + [/delta11]*young + [/delta12]*high_edu + [/delta13]*female + [/delta14]*
region_WAL ) ///
254 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
255 replace ratioH1_reg1b = 0 if ratioH1_reg1b==.
256
257 generate ratioH2_reg1b= (([/beta2] + [/delta21]*young + [/delta22]*high_edu + [/delta23]*
female + [/delta24]*region_WAL ) ///
258 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
259 (([/beta2] + [/delta21]*young + [/delta22]*high_edu + [/delta23]*female + [/delta24]*
region_WAL ) ///
260 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
261 replace ratioH2_reg1b = 0 if ratioH2_reg1b==.
262
263 generate ratioH3_reg1b= (([/beta3] + [/delta31]*young + [/delta32]*high_edu + [/delta33]*
female + [/delta34]*region_WAL ) ///
264 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
265 (([/beta3] + [/delta31]*young + [/delta32]*high_edu + [/delta33]*female + [/delta34]*
region_WAL ) ///
266 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
267 replace ratioH3_reg1b = 0 if ratioH3_reg1b==.
268
269 generate ratioH4_reg1b= (([/beta4] + [/delta41]*young + [/delta42]*high_edu + [/delta43]*
female + [/delta44]*region_WAL ) ///
270 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
271 (([/beta4] + [/delta41]*young + [/delta42]*high_edu + [/delta43]*female + [/delta44]*
region_WAL ) ///
272 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
273 replace ratioH4_reg1b = 0 if ratioH4_reg1b==.
274
275 generate ratioH5_reg1b= (([/beta5] + [/delta51]*young + [/delta52]*high_edu + [/delta53]*
female + [/delta54]*region_WAL ) ///
276 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
277 (([/beta5] + [/delta51]*young + [/delta52]*high_edu + [/delta53]*female + [/delta54]*
region_WAL ) ///
278 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
279 replace ratioH5_reg1b = 0 if ratioH5_reg1b==.
280
281 *transforming the variables
282 generate t1bV40052101 = (((V40052101^_b[/lambda1])-1)/_b[/lambda1])
283 generate t1bV40052102 = (((V40052102^_b[/lambda2])-1)/_b[/lambda2])
284 generate t1bV40052103 = (((V40052103^-3)-1)/-3)
285 generate t1bV40052104 = (((V40052104^_b[/lambda4])-1)/_b[/lambda4])
286 generate t1bV40052105 = (((V40052105^-3)-1)/-3)
287 generate t1bV40092101 = (((V40092101^_b[/rho1])-1)/_b[/rho1])
288 generate t1bV40092102 = (((V40092102^_b[/rho2])-1)/_b[/rho2])
289 generate t1bV40092103 = (((V40092103^_b[/rho3])-1)/_b[/rho3])
290 generate t1bV40092104 = (((V40092104^_b[/rho4])-1)/_b[/rho4])
291 generate t1bV40092105 = (((V40092105^_b[/rho5])-1)/_b[/rho5])
292 generate t1bincome = (((equivalised_income^_b[/zeta2])-1)/_b[/zeta2])
293 generate t1bleisure = (((leisure^_b[/zeta3])-1)/_b[/zeta3])
294
295 scalar ideal_t1bV40052101 = (((101^_b[/lambda1])-1)/_b[/lambda1])
296 scalar ideal_t1bV40052102 = (((101^_b[/lambda2])-1)/_b[/lambda2])
297 scalar ideal_t1bV40052103 = (((101^-3)-1)/-3)
298 scalar ideal_t1bV40052104 = (((101^_b[/lambda4])-1)/_b[/lambda4])
299 scalar ideal_t1bV40052105 = (((101^-3)-1)/-3)
300
301 generate dif1b_H1 =(t1bV40052101 - ideal_t1bV40052101)

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302 generate dif1b_H2 =(t1bV40052102 - ideal_t1bV40052102)
303 generate dif1b_H3 =(t1bV40052103 - ideal_t1bV40052103)
304 generate dif1b_H4 =(t1bV40052104 - ideal_t1bV40052104)
305 generate dif1b_H5 =(t1bV40052105 - ideal_t1bV40052104)
306
307 *scalar lambda_y1b=_b[/zeta2]
308 *lambda_y2=-.2039477
309
310 * 2.2.c) equivalent income and WTP from SE
311 generate EI_SE_reg1b= (equivalised_income^(-.2039477) + -.2039477*ratioH1_reg1b*dif1b_H1 +
- .2039477*ratioH2_reg1b*dif1b_H2 ///
312 + -.2039477*ratioH3_reg1b*dif1b_H3 + -.2039477*ratioH4_reg1b*dif1b_H4 + -.2039477*
ratioH5_reg1b*dif1b_H5)^(1/-.2039477)
313
314 *checking equivalised_income>=EI
315 twoway (scatter equivalised_income EI_SE_reg1b), || line EI_SE_reg1b EI_SE_reg1b, sort ///
316 ylabel(, format(%9.0fc)) xlabel(, format(%9.0fc )) ytitle(equivalised_income) xtitle(
EI_SE_reg1b) legend(off)
317
318 *computing WTP from satisfaction data
319 generate WTP_SE_reg1b = equivalised_income - EI_SE_reg1b
320
321 * 2.2.d) inconsistencies in WTP (excluding 2 extreme cases)
322 twoway (scatter WTP_SE_reg1b WTP_health if WTP_SE_reg1b<12000), || line WTP_health
WTP_health, sort ///
323 ylabel(, format(%9.0fc)) xlabel(, format(%9.0fc )) ytitle(WTP from satisfaction) xtitle(
Stated WTP) legend(off) ///
324 ylabel(0(3000)12000) title(5 scores - Income(Boxcox) - Lambda constrained) name(
I_WTP_reg1b)
325 count if WTP_SE_reg1b>12000
326
327 *Variable inconsistencies
328 generate I_reg1b = WTP_SE_reg1b - WTP_health
329
330 *****
331 *****
332 * 2.3) 5 subdimensions of health and ln(income)
333 * 2.3.a)Base line regression, regression for chapter of sensibility
334 nl (V400402_1 = {b0} + {gama1=0.1}*V4004031_1 + {gama4=0.1}*V4004031_4 + {gama9=0.1}*
V4004032_4 ///
335 + {gama11=0.1}*young + {gama12=0.1}*adults_over60 + {gama13=0.1}*relationship + {gama14=
0.1}*V400404_1 + {gama15=0.1}*part_time + {gama16=0.1}*V400301 ///
336 + ({phi1=1}+ {phi11=0.1}*young + {phi12=0.1}*high_edu +{phi13=0.1}*female + {phi14=0.1}*
region_WAL )*unemployment ///
337 + ({phi2=1}+ {phi21=0.1}*young + {phi22=0.1}*high_edu +{phi23=0.1}*female + {phi24=0.1}*
region_WAL )*ln_equivalised_income ///
338 + ({phi3=1}+ {phi31=0.1}*young + {phi32=0.1}*high_edu +{phi33=0.1}*female + {phi34=0.1}*
region_WAL )*((leisure^({zeta3=0.1})-1)/{zeta3=0.1}) ///
339 + ({beta1=1}+ {delta11=0.1}*young + {delta12=0.1}*high_edu +{delta13=0.1}*female + {
delta14=0.1}*region_WAL )*((V40052101^({lambda1=0.1})-1)/{lambda1=0.1}) ///
340 + ({beta2=1}+ {delta21=0.1}*young + {delta22=0.1}*high_edu +{delta23=0.1}*female + {
delta24=0.1}*region_WAL )*((V40052102^({lambda2=0.1})-1)/{lambda2=0.1}) ///
341 + ({beta3=1}+ {delta31=0.1}*young + {delta32=0.1}*high_edu +{delta33=0.1}*female + {
delta34=0.1}*region_WAL )*((V40052103^({lambda3=0.1})-1)/{lambda3=0.1}) ///
342 + ({beta4=1}+ {delta41=0.1}*young + {delta42=0.1}*high_edu +{delta43=0.1}*female + {
delta44=0.1}*region_WAL )*((V40052104^({lambda4=0.1})-1)/{lambda4=0.1}) ///
343 + ({beta5=1}+ {delta51=0.1}*young + {delta52=0.1}*high_edu +{delta53=0.1}*female + {
delta54=0.1}*region_WAL )*((V40052105^({lambda5=0.1})-1)/{lambda5=0.1}) ///
344 + ({miu1=1}+ {eta11=0.1}*young + {eta12=0.1}*high_edu +{eta13=0.1}*female + {eta14=0.1}*
region_WAL )*((V40092101^({rho1=0.1})-1)/{rho1=0.1}) ///
345 + ({miu2=1}+ {eta21=0.1}*young + {eta22=0.1}*high_edu +{eta23=0.1}*female + {eta24=0.1}*
region_WAL )*((V40092102^({rho2=0.1})-1)/{rho2=0.1}) ///
346 + ({miu3=1}+ {eta31=0.1}*young + {eta32=0.1}*high_edu +{eta33=0.1}*female + {eta34=0.1}*
region_WAL )*((V40092103^({rho3=0.1})-1)/{rho3=0.1}) ///
347 + ({miu4=1}+ {eta41=0.1}*young + {eta42=0.1}*high_edu +{eta43=0.1}*female + {eta44=0.1}*
region_WAL )*((V40092104^({rho4=0.1})-1)/{rho4=0.1}) ///
348 + ({miu5=1}+ {eta51=0.1}*young + {eta52=0.1}*high_edu +{eta53=0.1}*female + {eta54=0.1}*
region_WAL )*((V40092105^({rho5=0.1})-1)/{rho5=0.1}) ///
349 + ({omega1=1}+ {theta11=0.1}*young + {theta12=0.1}*high_edu +{theta13=0.1}*female + {
theta14=0.1}*region_WAL )*physical_effort_job ///
350 + ({omega2=1}+ {theta21=0.1}*young + {theta22=0.1}*high_edu +{theta23=0.1}*female + {
theta24=0.1}*region_WAL )*dangerous_job ///
351 + ({omega3=1}+ {theta31=0.1}*young + {theta32=0.1}*high_edu +{theta33=0.1}*female + {
theta34=0.1}*region_WAL )*make_dirty_job ///
352 + ({omega4=1}+ {theta41=0.1}*young + {theta42=0.1}*high_edu +{theta43=0.1}*female + {
theta44=0.1}*region_WAL )*mental_effort_job ///
353 + ({omega5=1}+ {theta51=0.1}*young + {theta52=0.1}*high_edu +{theta53=0.1}*female + {

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theta54=0.1}*region_WAL )*worthwhile_job  ///
354 ), vce(robust)
355
356 * 2.3.b) Current and ideal state
357 *If ratio_XX=0 is because the ratio was negative, it would have been a violation to
monotonicity of preferences. So the domain is restricted to say WTP=0 for that
individual. To do that the ratio must be 0.
358 generate ratioH1_reg2a= (([/beta1] + [/delta11]*young + [/delta12]*high_edu + [/delta13]*
female + [/delta14]*region_WAL ) ///
359 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
360 (([/beta1] + [/delta11]*young + [/delta12]*high_edu + [/delta13]*female + [/delta14]*
region_WAL ) ///
361 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
362 replace ratioH1_reg2a = 0 if ratioH1_reg2a==.
363
364 generate ratioH2_reg2a= (([/beta2] + [/delta21]*young + [/delta22]*high_edu + [/delta23]*
female + [/delta24]*region_WAL ) ///
365 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
366 (([/beta2] + [/delta21]*young + [/delta22]*high_edu + [/delta23]*female + [/delta24]*
region_WAL ) ///
367 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
368 replace ratioH2_reg2a = 0 if ratioH2_reg2a==.
369
370 generate ratioH3_reg2a= (([/beta3] + [/delta31]*young + [/delta32]*high_edu + [/delta33]*
female + [/delta34]*region_WAL ) ///
371 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
372 (([/beta3] + [/delta31]*young + [/delta32]*high_edu + [/delta33]*female + [/delta34]*
region_WAL ) ///
373 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
374 replace ratioH3_reg2a = 0 if ratioH3_reg2a==.
375
376 generate ratioH4_reg2a= (([/beta4] + [/delta41]*young + [/delta42]*high_edu + [/delta43]*
female + [/delta44]*region_WAL ) ///
377 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
378 (([/beta4] + [/delta41]*young + [/delta42]*high_edu + [/delta43]*female + [/delta44]*
region_WAL ) ///
379 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
380 replace ratioH4_reg2a = 0 if ratioH4_reg2a==.
381
382 generate ratioH5_reg2a= (([/beta5] + [/delta51]*young + [/delta52]*high_edu + [/delta53]*
female + [/delta54]*region_WAL ) ///
383 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
384 (([/beta5] + [/delta51]*young + [/delta52]*high_edu + [/delta53]*female + [/delta54]*
region_WAL ) ///
385 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
386 replace ratioH5_reg2a = 0 if ratioH5_reg2a==.
387
388 *transforming the variables
389 generate t2aV40052101 = (((V40052101^_b[/lambda1])-1)/_b[/lambda1])
390 generate t2aV40052102 = (((V40052102^_b[/lambda2])-1)/_b[/lambda2])
391 generate t2aV40052103 = (((V40052103^_b[/lambda3])-1)/_b[/lambda3])
392 generate t2aV40052104 = (((V40052104^_b[/lambda4])-1)/_b[/lambda4])
393 generate t2aV40052105 = (((V40052105^_b[/lambda5])-1)/_b[/lambda5])
394 generate t2aV40092101 = (((V40092101^_b[/rho1])-1)/_b[/rho1])
395 generate t2aV40092102 = (((V40092102^_b[/rho2])-1)/_b[/rho2])
396 generate t2aV40092103 = (((V40092103^_b[/rho3])-1)/_b[/rho3])
397 generate t2aV40092104 = (((V40092104^_b[/rho4])-1)/_b[/rho4])
398 generate t2aV40092105 = (((V40092105^_b[/rho5])-1)/_b[/rho5])
399 generate t2aleisure = (((leisure^_b[/zeta3])-1)/_b[/zeta3])
400
401 scalar ideal_t2aV40052101 = (((101^_b[/lambda1])-1)/_b[/lambda1])
402 scalar ideal_t2aV40052102 = (((101^_b[/lambda2])-1)/_b[/lambda2])
403 scalar ideal_t2aV40052103 = (((101^_b[/lambda3])-1)/_b[/lambda3])
404 scalar ideal_t2aV40052104 = (((101^_b[/lambda4])-1)/_b[/lambda4])
405 scalar ideal_t2aV40052105 = (((101^_b[/lambda5])-1)/_b[/lambda5])
406
407 generate dif2a_H1 =(t2aV40052101 - ideal_t2aV40052101)
408 generate dif2a_H2 =(t2aV40052102 - ideal_t2aV40052102)
409 generate dif2a_H3 =(t2aV40052103 - ideal_t2aV40052103)
410 generate dif2a_H4 =(t2aV40052104 - ideal_t2aV40052104)
411 generate dif2a_H5 =(t2aV40052105 - ideal_t2aV40052104)
412

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413 * 2.3.c) equivalent income and WTP from SE
414 generate EI_SE_reg2a= equivalised_income*exp(ratioH1_reg2a*dif2a_H1 + ratioH2_reg2a*
dif2a_H2 + ratioH3_reg2a*dif2a_H3 + ratioH4_reg2a*dif2a_H4 + ratioH5_reg2a*dif2a_H5)
415 *checking equivalised_income>=EI
416 twoway (scatter equivalised_income EI_SE_reg2a ), || line EI_SE_reg2a EI_SE_reg2a, sort
///
417 ylabel(, format(%9.0fc)) xlabel(, format(%9.0fc )) ytitle(equivalised_income) xtitle(
EI_SE_reg2a) legend(off)
418
419 *computing WTP from satisfaction data
420 generate WTP_SE_reg2a = equivalised_income - EI_SE_reg2a
421
422 * 2.3.d) inconsistencies in WTP
423 twoway (scatter WTP_SE_reg2a WTP_health if WTP_SE_reg2a<12000), || line WTP_health
WTP_health, sort ///
424 ylabel(, format(%9.0fc)) xlabel(, format(%9.0fc )) ytitle(WTP from satisfaction) xtitle(
Stated WTP) legend(off) ///
425 ylabel(0(3000)12000) title(5 scores - ln(income) - No constraints) name(I_WTP_reg2a)
426
427 generate I_reg2a = WTP_SE_reg2a - WTP_health
428
429 *****
430 *****
431 * 2.4) 5 subdimensions of health and ln(income), constrained lambdas
432 *Second iteration: constraining V40052103
433 *Third iteration: constraining V40052103
434 * 2.4.a)Final regression, regression for chapter 4
435 nl (V400402_1 = {b0} + {gama1=0.1}*V4004031_1 + {gama4=0.1}*V4004031_4 + {gama9=0.1}*
V4004032_4 ///
436 + {gama11=0.1}*young + {gama12=0.1}*adults_over60 + {gama13=0.1}*relationship + {gama14=
0.1}*V400404_1 + {gama15=0.1}*part_time + {gama16=0.1}*V400301 ///
437 + ({phi1=1}+ {phi11=0.1}*young + {phi12=0.1}*high_edu +{phi13=0.1}*female + {phi14=0.1}*
region_WAL )*unemployment ///
438 + ({phi2=1}+ {phi21=0.1}*young + {phi22=0.1}*high_edu +{phi23=0.1}*female + {phi24=0.1}*
region_WAL )*ln_equivalised_income ///
439 + ({phi3=1}+ {phi31=0.1}*young + {phi32=0.1}*high_edu +{phi33=0.1}*female + {phi34=0.1}*
region_WAL )*((leisure^{zeta3=0.1})-1)/{zeta3=0.1} ///
440 + ({beta1=1}+ {delta11=0.1}*young + {delta12=0.1}*high_edu +{delta13=0.1}*female + {
delta14=0.1}*region_WAL )*((V40052101^{lambda1=0.1})-1)/{lambda1=0.1} ///
441 + ({beta2=1}+ {delta21=0.1}*young + {delta22=0.1}*high_edu +{delta23=0.1}*female + {
delta24=0.1}*region_WAL )*((V40052102^{lambda2=0.1})-1)/{lambda2=0.1} ///
442 + ({beta3=1}+ {delta31=0.1}*young + {delta32=0.1}*high_edu +{delta33=0.1}*female + {
delta34=0.1}*region_WAL )*((V40052103^{lambda3=0.1})-1)/{lambda3=0.1} ///
443 + ({beta4=1}+ {delta41=0.1}*young + {delta42=0.1}*high_edu +{delta43=0.1}*female + {
delta44=0.1}*region_WAL )*((V40052104^{lambda4=0.1})-1)/{lambda4=0.1} ///
444 + ({beta5=1}+ {delta51=0.1}*young + {delta52=0.1}*high_edu +{delta53=0.1}*female + {
delta54=0.1}*region_WAL )*((V40052105^{lambda5=0.1})-1)/{lambda5=0.1} ///
445 + ({miu1=1}+ {eta11=0.1}*young + {eta12=0.1}*high_edu +{eta13=0.1}*female + {eta14=0.1}*
region_WAL )*((V40092101^{rho1=0.1})-1)/{rho1=0.1} ///
446 + ({miu2=1}+ {eta21=0.1}*young + {eta22=0.1}*high_edu +{eta23=0.1}*female + {eta24=0.1}*
region_WAL )*((V40092102^{rho2=0.1})-1)/{rho2=0.1} ///
447 + ({miu3=1}+ {eta31=0.1}*young + {eta32=0.1}*high_edu +{eta33=0.1}*female + {eta34=0.1}*
region_WAL )*((V40092103^{rho3=0.1})-1)/{rho3=0.1} ///
448 + ({miu4=1}+ {eta41=0.1}*young + {eta42=0.1}*high_edu +{eta43=0.1}*female + {eta44=0.1}*
region_WAL )*((V40092104^{rho4=0.1})-1)/{rho4=0.1} ///
449 + ({miu5=1}+ {eta51=0.1}*young + {eta52=0.1}*high_edu +{eta53=0.1}*female + {eta54=0.1}*
region_WAL )*((V40092105^{rho5=0.1})-1)/{rho5=0.1} ///
450 + ({omega1=1}+ {theta11=0.1}*young + {theta12=0.1}*high_edu +{theta13=0.1}*female + {
theta14=0.1}*region_WAL )*physical_effort_job ///
451 + ({omega2=1}+ {theta21=0.1}*young + {theta22=0.1}*high_edu +{theta23=0.1}*female + {
theta24=0.1}*region_WAL )*dangerous_job ///
452 + ({omega3=1}+ {theta31=0.1}*young + {theta32=0.1}*high_edu +{theta33=0.1}*female + {
theta34=0.1}*region_WAL )*make_dirty_job ///
453 + ({omega4=1}+ {theta41=0.1}*young + {theta42=0.1}*high_edu +{theta43=0.1}*female + {
theta44=0.1}*region_WAL )*mental_effort_job ///
454 + ({omega5=1}+ {theta51=0.1}*young + {theta52=0.1}*high_edu +{theta53=0.1}*female + {
theta54=0.1}*region_WAL )*worthwhile_job ///
455 ), vce(robust)
456
457 * 2.4.b) Current and ideal state
458 *If ratio_XX=0 is because the ratio was negative, it would have been a violation to
monotonicity of preferences. So the domain is restricted to say WTP=0 for that
individual. To do that the ratio must be 0.
459 generate ratioH1_reg2b= ([/beta1] + [/delta11]*young + [/delta12]*high_edu + [/delta13]*
female + [/delta14]*region_WAL ) ///
460 /([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL )
if ///

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461 (([/beta1] + [/delta11]*young + [/delta12]*high_edu + [/delta13]*female + [/delta14]*
region_WAL ) ///
462 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
463 replace ratioH1_reg2b = 0 if ratioH1_reg2b==.
464
465 generate ratioH2_reg2b= (([/beta2] + [/delta21]*young + [/delta22]*high_edu + [/delta23]*
female + [/delta24]*region_WAL ) ///
466 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
467 (([/beta2] + [/delta21]*young + [/delta22]*high_edu + [/delta23]*female + [/delta24]*
region_WAL ) ///
468 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
469 replace ratioH2_reg2b = 0 if ratioH2_reg2b==.
470
471 generate ratioH3_reg2b= (([/beta3] + [/delta31]*young + [/delta32]*high_edu + [/delta33]*
female + [/delta34]*region_WAL ) ///
472 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
473 (([/beta3] + [/delta31]*young + [/delta32]*high_edu + [/delta33]*female + [/delta34]*
region_WAL ) ///
474 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
475 replace ratioH3_reg2b = 0 if ratioH3_reg2b==.
476
477 generate ratioH4_reg2b= (([/beta4] + [/delta41]*young + [/delta42]*high_edu + [/delta43]*
female + [/delta44]*region_WAL ) ///
478 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
479 (([/beta4] + [/delta41]*young + [/delta42]*high_edu + [/delta43]*female + [/delta44]*
region_WAL ) ///
480 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
481 replace ratioH4_reg2b = 0 if ratioH4_reg2b==.
482
483 generate ratioH5_reg2b= (([/beta5] + [/delta51]*young + [/delta52]*high_edu + [/delta53]*
female + [/delta54]*region_WAL ) ///
484 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
485 (([/beta5] + [/delta51]*young + [/delta52]*high_edu + [/delta53]*female + [/delta54]*
region_WAL ) ///
486 /(([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
487 replace ratioH5_reg2b = 0 if ratioH5_reg2b==.
488
489 *transforming the variables
490 generate t2bV40052101 = (((V40052101^_b[/lambda1])-1)/_b[/lambda1])
491 generate t2bV40052102 = (((V40052102^_b[/lambda2])-1)/_b[/lambda2])
492 generate t2bV40052103 = (((V40052103^-3)-1)/-3)
493 generate t2bV40052104 = (((V40052104^_b[/lambda4])-1)/_b[/lambda4])
494 generate t2bV40052105 = (((V40052105^-3)-1)/-3)
495 generate t2bV40092101 = (((V40092101^_b[/rho1])-1)/_b[/rho1])
496 generate t2bV40092102 = (((V40092102^_b[/rho2])-1)/_b[/rho2])
497 generate t2bV40092103 = (((V40092103^_b[/rho3])-1)/_b[/rho3])
498 generate t2bV40092104 = (((V40092104^_b[/rho4])-1)/_b[/rho4])
499 generate t2bV40092105 = (((V40092105^_b[/rho5])-1)/_b[/rho5])
500 generate t2bleisure = (((leisure^_b[/zeta3])-1)/_b[/zeta3])
501
502 scalar ideal_t2bV40052101 = (((101^_b[/lambda1])-1)/_b[/lambda1])
503 scalar ideal_t2bV40052102 = (((101^_b[/lambda2])-1)/_b[/lambda2])
504 scalar ideal_t2bV40052103 = (((101^-3)-1)/-3)
505 scalar ideal_t2bV40052104 = (((101^_b[/lambda4])-1)/_b[/lambda4])
506 scalar ideal_t2bV40052105 = (((101^-3)-1)/-3)
507
508 generate dif2b_H1=(t2bV40052101 - ideal_t2bV40052101)
509 generate dif2b_H2=(t2bV40052102 - ideal_t2bV40052102)
510 generate dif2b_H3=(t2bV40052103 - ideal_t2bV40052103)
511 generate dif2b_H4=(t2bV40052104 - ideal_t2bV40052104)
512 generate dif2b_H5=(t2bV40052105 - ideal_t2bV40052104)
513
514 * 2.4.c) equivalent income and WTP from SE
515 generate EI_SE_reg2b= equivalised_income*exp(ratioH1_reg2b*dif2b_H1 + ratioH2_reg2b*
dif2b_H2 + ratioH3_reg2b*dif2b_H3 + ratioH4_reg2b*dif2b_H4 + ratioH5_reg2b*dif2b_H5)
516 *checking equivalised_income>=EI
517 twoway (scatter equivalised_income EI_SE_reg2b ), || line EI_SE_reg2b EI_SE_reg2b, sort
///
518 ylabel(, format(%9.0fc)) xlabel(, format(%9.0fc)) ytitle(equivalised_income) xtitle(
EI_SE_reg2b) legend(off)
519
520 *computing WTP from satisfaction data
521 generate WTP_SE_reg2b = equivalised_income - EI_SE_reg2b

```

```

522
523 * 2.4.d) inconsistencies in WTP
524 twoway (scatter WTP_SE_reg2b WTP_health if WTP_SE_reg2b<12000), || line WTP_health
WTP_health, sort ///
525 ylabel(, format(%9.0fc)) xlabel(, format(%9.0fc )) ytitle(WTP from satisfaction) xtitle(
Stated WTP) legend(off) ///
526 ylabel(0(3000)12000) title(5 scores - ln(income) - Lambda constrained) name(I_WTP_reg2b)
527
528 generate I_reg2b = WTP_SE_reg2b - WTP_health
529
530 *****
531 *****
532 * 3. Second set of regressions
533 * 3.1) 1 subdimensions of health and transformed income
534 * 3.1.a) Base line regression, no need of constraints.
535 nl (V400402_1 = {b0} + {gama1=0.1}*V4004031_1 + {gama4=0.1}*V4004031_4 + {gama9=0.1}*
V4004032_4 ///
536 + {gama11=0.1}*young + {gama12=0.1}*adults_over60 + {gama13=0.1}*relationship + {gama14=
0.1}*V400404_1 + {gama15=0.1}*part_time + {gama16=0.1}*V400301 ///
537 + ({phi1=1}+ {phi11=0.1}*young + {phi12=0.1}*high_edu + {phi13=0.1}*female + {phi14=0.1}*
region_WAL )*unemployment ///
538 + ({phi2=1}+ {phi21=0.1}*young + {phi22=0.1}*high_edu + {phi23=0.1}*female + {phi24=0.1}*
region_WAL )*((equivalised_income^{zeta2=0.1})-1)/{zeta2=0.1} ///
539 + ({phi3=1}+ {phi31=0.1}*young + {phi32=0.1}*high_edu + {phi33=0.1}*female + {phi34=0.1}*
region_WAL )*((leisure^{zeta3=0.1})-1)/{zeta3=0.1} ///
540 + ({beta1=1}+ {delta11=0.1}*young + {delta12=0.1}*high_edu + {delta13=0.1}*female + {
delta14=0.1}*region_WAL )*((V40052101^{lambda1=0.1})-1)/{lambda1=0.1} ///
541 + ({miu1=1}+ {eta11=0.1}*young + {eta12=0.1}*high_edu + {eta13=0.1}*female + {eta14=0.1}*
region_WAL )*((V40092101^{rho1=0.1})-1)/{rho1=0.1} ///
542 + ({miu2=1}+ {eta21=0.1}*young + {eta22=0.1}*high_edu + {eta23=0.1}*female + {eta24=0.1}*
region_WAL )*((V40092102^{rho2=0.1})-1)/{rho2=0.1} ///
543 + ({miu3=1}+ {eta31=0.1}*young + {eta32=0.1}*high_edu + {eta33=0.1}*female + {eta34=0.1}*
region_WAL )*((V40092103^{rho3=0.1})-1)/{rho3=0.1} ///
544 + ({miu4=1}+ {eta41=0.1}*young + {eta42=0.1}*high_edu + {eta43=0.1}*female + {eta44=0.1}*
region_WAL )*((V40092104^{rho4=0.1})-1)/{rho4=0.1} ///
545 + ({miu5=1}+ {eta51=0.1}*young + {eta52=0.1}*high_edu + {eta53=0.1}*female + {eta54=0.1}*
region_WAL )*((V40092105^{rho5=0.1})-1)/{rho5=0.1} ///
546 + ({omega1=1}+ {theta11=0.1}*young + {theta12=0.1}*high_edu + {theta13=0.1}*female + {
theta14=0.1}*region_WAL )*physical_effort_job ///
547 + ({omega2=1}+ {theta21=0.1}*young + {theta22=0.1}*high_edu + {theta23=0.1}*female + {
theta24=0.1}*region_WAL )*dangerous_job ///
548 + ({omega3=1}+ {theta31=0.1}*young + {theta32=0.1}*high_edu + {theta33=0.1}*female + {
theta34=0.1}*region_WAL )*make_dirty_job ///
549 + ({omega4=1}+ {theta41=0.1}*young + {theta42=0.1}*high_edu + {theta43=0.1}*female + {
theta44=0.1}*region_WAL )*mental_effort_job ///
550 + ({omega5=1}+ {theta51=0.1}*young + {theta52=0.1}*high_edu + {theta53=0.1}*female + {
theta54=0.1}*region_WAL )*worthwhile_job ///
551 ), vce(robust)
552
553 * 3.1.b) Current and ideal state
554 *If ratio_XX=0 is because the ratio was negative, it would have been a violation to
monotonicity of preferences. So the domain is restricted to say WTP=0 for that
individual. To do that the ratio must be 0.
555 generate ratioH1_reg3a= ([/beta1] + [/delta11]*young + [/delta12]*high_edu + [/delta13]*
female + [/delta14]*region_WAL ) ///
556 /([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL )
if ///
557 ([/beta1] + [/delta11]*young + [/delta12]*high_edu + [/delta13]*female + [/delta14]*
region_WAL ) ///
558 /([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL )>0
559 replace ratioH1_reg3a = 0 if ratioH1_reg3a==.
560
561 *transforming the variables
562 generate t3aV40052101 = (((V40052101^_b[/lambda1])-1)/_b[/lambda1])
563 generate t3aV40092101 = (((V40092101^_b[/rho1])-1)/_b[/rho1])
564 generate t3aV40092102 = (((V40092102^_b[/rho2])-1)/_b[/rho2])
565 generate t3aV40092103 = (((V40092103^_b[/rho3])-1)/_b[/rho3])
566 generate t3aV40092104 = (((V40092104^_b[/rho4])-1)/_b[/rho4])
567 generate t3aV40092105 = (((V40092105^_b[/rho5])-1)/_b[/rho5])
568 generate t3aincome = (((equivalised_income^_b[/zeta2])-1)/_b[/zeta2])
569 generate t3aleisure = (((leisure^_b[/zeta3])-1)/_b[/zeta3])
570
571 scalar ideal_t3aV40052101 = (((101^_b[/lambda1])-1)/_b[/lambda1])
572
573 generate dif3a_H1 =(t3aV40052101 - ideal_t3aV40052101)
574 * lambday3a= -.2131959
575

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```

576 * 3.1.c) equivalent income and WTP from SE
577 generate EI_SE_reg3a1= (equivalised_income^(-.2131959) + -.2131959*ratioH1_reg3a*dif3a_H1
578 )^(1/-.2131959)
579
580 *checking equivalised_income>=EI
581 twoway (scatter equivalised_income EI_SE_reg3a ), || line EI_SE_reg3a EI_SE_reg3a, sort
582 ///
583 ylabel(, format(%9.0fc)) xlabel(, format(%9.0fc )) ytitle(equivalised_income) xtitle(
584 EI_SE_reg3a) legend(off)
585
586 *computing WTP from satisfaction data
587 generate WTP_SE_reg3a = equivalised_income - EI_SE_reg3a
588
589 * 3.1.d) inconsistencies in WTP
590 twoway (scatter WTP_SE_reg3a WTP_health if WTP_SE_reg3a<12000), || line WTP_health
591 WTP_health, sort ///
592 ylabel(, format(%9.0fc)) xlabel(, format(%9.0fc )) ytitle(WTP from satisfaction) xtitle(
593 Stated WTP) legend(off) ///
594 ylabel(0(3000)12000) title(General health - Income(Boxcox) - No constraints) name(
595 I_WTP_reg3a)
596 count if WTP_SE_reg3a>12000
597
598 generate I_reg3a = WTP_SE_reg3a - WTP_health
599
600 * 3.1.e) Indifference curve to illustrate heterogeneity
601
602 *Constructing indifference curves
603 scalar ratio_Hy = ([/delta11] + [/beta1] )/([/phi2] + [/phi21])
604 scalar ratio_Ht = ((_b[/delta12] + _b[/beta1] )/([/phi2] + [/phi22]))
605 scalar ratio_HF = ((_b[/delta13] + _b[/beta1] )/([/phi2] + [/phi23]))
606 scalar ratio_HW = ((_b[/delta14] + _b[/beta1] )/([/phi2] + [/phi24]))
607 scalar ratio_H = ((_b[/beta1] )/([/phi2]))
608
609 *to find the median value
610 sum equivalised_income, detail ///1600
611 tab V40052101 if equivalised_income==1600 //selected values 66
612
613 *plotting the indifference curves
614 twoway function y1=(1600^([/zeta2]) + [/zeta2]*ratio_Hy*(((66^[/zeta2])-1)/[/zeta2]) -
615 (((x^[/zeta2])-1)/[/zeta2]))^(1/[/zeta2]), range(66 101) clp("solid") ///
616 || function y2=(1600^([/zeta2]) + [/zeta2]*ratio_Ht*(((66^[/zeta2])-1)/[/zeta2]) - (((x
617 ^[/zeta2])-1)/[/zeta2]))^(1/[/zeta2]), range(66 101) clp("dash") ///
618 || function y3=(1600^([/zeta2]) + [/zeta2]*ratio_HF*(((66^[/zeta2])-1)/[/zeta2]) - (((x
619 ^[/zeta2])-1)/[/zeta2]))^(1/[/zeta2]), range(66 101) clp("longdash") ///
620 || function y4=(1600^([/zeta2]) + [/zeta2]*ratio_HW*(((66^[/zeta2])-1)/[/zeta2]) - (((x
621 ^[/zeta2])-1)/[/zeta2]))^(1/[/zeta2]), range(66 101) clp("shortdash") ///
622 ||, ///
623 ytitle("Income") ///
624 xtitle("Health") ///
625 legend(label(1 "Young") label(2 "Tertiary education") label(3 "Female") label(4 "Region
626 Wallonia")) name(indif_cuve1)
627
628 *****
629 *****
630
631 * 3.2) 1 subdimensions of health and ln income
632 nl (V400402_1 = {b0} + {gama1=0.1}*V4004031_1 + {gama4=0.1}*V4004031_4 + {gama9=0.1}*
633 V4004032_4 ///
634 + {gama11=0.1}*young + {gama12=0.1}*adults_over60 + {gama13=0.1}*relationship + {gama14=
635 0.1}*V400404_1 + {gama15=0.1}*part_time + {gama16=0.1}*V400301 ///
636 + ({phi1=1}+ {phi11=0.1}*young + {phi12=0.1}*high_edu +{phi13=0.1}*female + {phi14=0.1}*
637 region_WAL )*unemployment ///
638 + ({phi2=1}+ {phi21=0.1}*young + {phi22=0.1}*high_edu +{phi23=0.1}*female + {phi24=0.1}*
639 region_WAL )*ln_equivalised_income ///
640 + ({phi3=1}+ {phi31=0.1}*young + {phi32=0.1}*high_edu +{phi33=0.1}*female + {phi34=0.1}*
641 region_WAL )*(((leisure^[/zeta3=0.1])-1)/[/zeta3=0.1]) ///
642 + ({beta1=1}+ {delta11=0.1}*young + {delta12=0.1}*high_edu +{delta13=0.1}*female + {
643 delta14=0.1}*region_WAL )*(((V40052101^[/lambda1=0.1])-1)/[/lambda1=0.1]) ///
644 + ({miu1=1}+ {eta11=0.1}*young + {eta12=0.1}*high_edu +{eta13=0.1}*female + {eta14=0.1}*
645 region_WAL )*(((V40092101^[/rho1=0.1])-1)/[/rho1=0.1]) ///
646 + ({miu2=1}+ {eta21=0.1}*young + {eta22=0.1}*high_edu +{eta23=0.1}*female + {eta24=0.1}*
647 region_WAL )*(((V40092102^[/rho2=0.1])-1)/[/rho2=0.1]) ///
648 + ({miu3=1}+ {eta31=0.1}*young + {eta32=0.1}*high_edu +{eta33=0.1}*female + {eta34=0.1}*
649 region_WAL )*(((V40092103^[/rho3=0.1])-1)/[/rho3=0.1]) ///
650 + ({miu4=1}+ {eta41=0.1}*young + {eta42=0.1}*high_edu +{eta43=0.1}*female + {eta44=0.1}*
651 region_WAL )*(((V40092104^[/rho4=0.1])-1)/[/rho4=0.1]) ///
652 + ({miu5=1}+ {eta51=0.1}*young + {eta52=0.1}*high_edu +{eta53=0.1}*female + {eta54=0.1}*
653 region_WAL )*(((V40092105^[/rho5=0.1])-1)/[/rho5=0.1]) ///

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```

631 + ({omega1=1}+ {theta11=0.1}*young + {theta12=0.1}*high_edu + {theta13=0.1}*female + {
632 + ({omega2=1}+ {theta21=0.1}*young + {theta22=0.1}*high_edu + {theta23=0.1}*female + {
633 + ({omega3=1}+ {theta31=0.1}*young + {theta32=0.1}*high_edu + {theta33=0.1}*female + {
634 + ({omega4=1}+ {theta41=0.1}*young + {theta42=0.1}*high_edu + {theta43=0.1}*female + {
635 + ({omega5=1}+ {theta51=0.1}*young + {theta52=0.1}*high_edu + {theta53=0.1}*female + {
636 ), vce(robust)
637
638 * 3.2.b) Current and ideal state
639 *If ratio_XX=0 is because the ratio was negative, it would have been a violation to
monotonicity of preferences. So the domain is restricted to say WTP=0 for that
individual. To do that the ratio must be 0.
640 generate ratioH1_reg3b= ((([/beta1] + [/delta11]*young + [/delta12]*high_edu + [/delta13]*
female + [/delta14]*region_WAL ) ///
641 /([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))
if ///
642 ((([/beta1] + [/delta11]*young + [/delta12]*high_edu + [/delta13]*female + [/delta14]*
region_WAL ) ///
643 /([/phi2] + [/phi21]*young + [/phi22]*high_edu + [/phi23]*female + [/phi24]*region_WAL ))>0
644 replace ratioH1_reg3b = 0 if ratioH1_reg3b==.
645
646 *transforming the variables
647 generate t3bV40052101 = (((V40052101^_b[/lambda1])-1)/_b[/lambda1])
648 generate t3bV40092101 = (((V40092101^_b[/rho1])-1)/_b[/rho1])
649 generate t3bV40092102 = (((V40092102^_b[/rho2])-1)/_b[/rho2])
650 generate t3bV40092103 = (((V40092103^_b[/rho3])-1)/_b[/rho3])
651 generate t3bV40092104 = (((V40092104^_b[/rho4])-1)/_b[/rho4])
652 generate t3bV40092105 = (((V40092105^_b[/rho5])-1)/_b[/rho5])
653 generate t3bleisure = (((leisure^_b[/zeta3])-1)/_b[/zeta3])
654
655 scalar ideal_t3bV40052101 = (((101^_b[/lambda1])-1)/_b[/lambda1])
656
657 *Computing the difference between current state and ideal state
658 generate dif3b_H1 =(t3bV40052101 - ideal_t3bV40052101)
659
660 * 3.2.c) equivalent income and WTP from SE
661 generate EI_SE_reg3b= equivalised_income*exp(ratioH1_reg3b*dif3b_H1)
662 *checking equivalised_income>=EI
663 twoway (scatter equivalised_income EI_SE_reg3b ), || line EI_SE_reg3b EI_SE_reg3b, sort
///
664 ylabel(, format(%9.0fc)) xlabel(, format(%9.0fc )) ytitle(equivalised_income) xtitle(
EI_SE_reg3b) legend(off)
665
666 *computing WTP from satisfaction data
667 generate WTP_SE_reg3b = equivalised_income - EI_SE_reg3b
668
669 * 3.2.d) inconsistencies in WTP (excluding 1 extreme cases)
670 twoway (scatter WTP_SE_reg3b WTP_health if WTP_SE_reg3b<12000), || line WTP_health
WTP_health, sort ///
671 ylabel(, format(%9.0fc)) xlabel(, format(%9.0fc )) ytitle(WTP from satisfaction) xtitle(
Stated WTP) legend(off) ///
672 ylabel(0(3000)12000) title(General health - ln(income) - No constraints) name(I_WTP_reg3b)
673
674 generate I_reg3b = WTP_SE_reg3b - WTP_health
675
676 * 3.2.e) Constructing indifference curves
677 *previos step
678 scalar ratio_ln_Hy = ([/delta11] + [/beta1] )/([/phi2] + [/phi21])
679 scalar ratio_ln_Ht = ((_b[/delta12] + _b[/beta1] )/([/phi2] + [/phi22]))
680 scalar ratio_ln_HF = ((_b[/delta13] + _b[/beta1] )/([/phi2] + [/phi23]))
681 scalar ratio_ln_HW= ((_b[/delta14] + _b[/beta1] )/([/phi2] + [/phi24]))
682 scalar ratio_ln_H= ((_b[/beta1] )/([/phi2]))
683
684 *to find the median value
685 sum equivalised_income, detail ///1600
686 tab V40052101 if equivalised_income==1600 ///selected values 66
687
688 *plotting the indifference curves
689 twoway function y1=1600*exp(ratio_ln_Hy*(((66^_b[/lambda1])-1)/_b[/lambda1]) - (((x^_b[/
lambda1])-1)/_b[/lambda1])), range(66 101) clp("solid") ///
690 || function y2=1600*exp(ratio_ln_Ht*(((66^_b[/lambda1])-1)/_b[/lambda1]) - (((x^_b[/
lambda1])-1)/_b[/lambda1])), range(66 101) clp("dash") ///
691 || function y3=1600*exp(ratio_ln_HF*(((66^_b[/lambda1])-1)/_b[/lambda1]) - (((x^_b[/

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lambda1]))-1)/_b[/lambda1]))), range(66 101) clp("longdash") ///
692 || function y4=1600*exp(ratio_ln_HW*(((66^_b[/lambda1]))-1)/_b[/lambda1]) - (((x^_b[/
lambda1]))-1)/_b[/lambda1]))), range(66 101) clp("shortdash") ///
693 ||, ///
694 ytitle("Income") ///
695 xtitle("Health") ///
696 legend(label(1 "Young") label(2 "Tertiary education") label(3 "Female") label(4 "Region
Wallonia")) name(indif_cuve2)

697
698 *****
699 *****
700
701 *histograms for chapter 4.1
702 histogram I_reg1b if WTP_health<64 & quintiles_income==1, bin(100) percent fcolor(dknavy)
lcolor(black) normal normopts(lcolor(red)) ylabel(0(5)20) xtitle(Inconsistencies) title(5
scores - Income(Boxcox) - Lambda constrained) name(I_reg1b_quintil1)
703 histogram I_reg3a if WTP_health<64 & quintiles_income==1, bin(100) percent fcolor(dknavy)
lcolor(black) normal normopts(lcolor(red)) ylabel(0(5)20) xtitle(Inconsistencies) title(
General health - Income(Boxcox) - No constraints) name(I_reg3a_quintil1)
704 histogram I_reg1b if WTP_health<64 & quintiles_income==5 & I_reg1b<12000, bin(100) percent
fcolor(dknavy) lcolor(black) normal normopts(lcolor(red)) ylabel(0(10)30) xtitle(
Inconsistencies) title(5 scores - Income(Boxcox) - Lambda constrained) name(
I_reg1b_quintile5)
705 histogram I_reg3a if WTP_health<64 & quintiles_income==5, bin(100) percent fcolor(dknavy)
lcolor(black) normal normopts(lcolor(red)) ylabel(0(10)30) xtitle(Inconsistencies) title(
General health - Income(Boxcox) - No constraints) name(I_reg3a_quintile5)

706
707 *****
708 *****
709
710 *Exporting the regressions
711 *Regression 2
712 nl (V400402_1 = {b0} + {gama1=0.1}*V4004031_1 + {gama4=0.1}*V4004031_4 + {gama9=0.1}*
V4004032_4 ///
713 + {gama11=0.1}*young + {gama12=0.1}*adults_over60 + {gama13=0.1}*relationship + {gama14=
0.1}*V400404_1 + {gama15=0.1}*part_time + {gama16=0.1}*V400301 ///
714 + ({phi1=1}+ {phi11=0.1}*young + {phi12=0.1}*high_edu +{phi13=0.1}*female + {phi14=0.1}*
region_WAL )*unemployment ///
715 + ({phi2=1}+ {phi21=0.1}*young + {phi22=0.1}*high_edu +{phi23=0.1}*female + {phi24=0.1}*
region_WAL )*t3aincome ///
716 + ({phi3=1}+ {phi31=0.1}*young + {phi32=0.1}*high_edu +{phi33=0.1}*female + {phi34=0.1}*
region_WAL )*t3aleisure ///
717 + ({beta1=1}+ {delta11=0.1}*young + {delta12=0.1}*high_edu +{delta13=0.1}*female + {
delta14=0.1}*region_WAL )*t3aV40052101 ///
718 + ({miu1=1}+ {eta11=0.1}*young + {eta12=0.1}*high_edu +{eta13=0.1}*female + {eta14=0.1}*
region_WAL )*t3aV40092101 ///
719 + ({miu2=1}+ {eta21=0.1}*young + {eta22=0.1}*high_edu +{eta23=0.1}*female + {eta24=0.1}*
region_WAL )*t3aV40092102 ///
720 + ({miu3=1}+ {eta31=0.1}*young + {eta32=0.1}*high_edu +{eta33=0.1}*female + {eta34=0.1}*
region_WAL )*t3aV40092103 ///
721 + ({miu4=1}+ {eta41=0.1}*young + {eta42=0.1}*high_edu +{eta43=0.1}*female + {eta44=0.1}*
region_WAL )*t3aV40092104 ///
722 + ({miu5=1}+ {eta51=0.1}*young + {eta52=0.1}*high_edu +{eta53=0.1}*female + {eta54=0.1}*
region_WAL )*t3aV40092105 ///
723 + ({omega1=1}+ {theta11=0.1}*young + {theta12=0.1}*high_edu +{theta13=0.1}*female + {
theta14=0.1}*region_WAL )*physical_effort_job ///
724 + ({omega2=1}+ {theta21=0.1}*young + {theta22=0.1}*high_edu +{theta23=0.1}*female + {
theta24=0.1}*region_WAL )*dangerous_job ///
725 + ({omega3=1}+ {theta31=0.1}*young + {theta32=0.1}*high_edu +{theta33=0.1}*female + {
theta34=0.1}*region_WAL )*make_dirty_job ///
726 + ({omega4=1}+ {theta41=0.1}*young + {theta42=0.1}*high_edu +{theta43=0.1}*female + {
theta44=0.1}*region_WAL )*mental_effort_job ///
727 + ({omega5=1}+ {theta51=0.1}*young + {theta52=0.1}*high_edu +{theta53=0.1}*female + {
theta54=0.1}*region_WAL )*worthwhile_job ///
728 ), vce(robust)
729 estimates store reg5
730
731 *Regression 5
732 nl (V400402_1 = {b0} + {gama1=0.1}*V4004031_1 + {gama4=0.1}*V4004031_4 + {gama9=0.1}*
V4004032_4 ///
733 + {gama11=0.1}*young + {gama12=0.1}*adults_over60 + {gama13=0.1}*relationship + {gama14=
0.1}*V400404_1 + {gama15=0.1}*part_time + {gama16=0.1}*V400301 ///
734 + ({phi1=1}+ {phi11=0.1}*young + {phi12=0.1}*high_edu +{phi13=0.1}*female + {phi14=0.1}*
region_WAL )*unemployment ///
735 + ({phi2=1}+ {phi21=0.1}*young + {phi22=0.1}*high_edu +{phi23=0.1}*female + {phi24=0.1}*
region_WAL )*t1bincome ///
736 + ({phi3=1}+ {phi31=0.1}*young + {phi32=0.1}*high_edu +{phi33=0.1}*female + {phi34=0.1}*

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region_WAL )*t1bleisure ///
737 + ({beta1=1}+ {delta11=0.1}*young + {delta12=0.1}*high_edu +{delta13=0.1}*female + {
delta14=0.1}*region_WAL )*t1bV40052101 ///
738 + ({beta2=1}+ {delta21=0.1}*young + {delta22=0.1}*high_edu +{delta23=0.1}*female + {
delta24=0.1}*region_WAL )*t1bV40052102 ///
739 + ({beta3=1}+ {delta31=0.1}*young + {delta32=0.1}*high_edu +{delta33=0.1}*female + {
delta34=0.1}*region_WAL )*t1bV40052103 ///
740 + ({beta4=1}+ {delta41=0.1}*young + {delta42=0.1}*high_edu +{delta43=0.1}*female + {
delta44=0.1}*region_WAL )*t1bV40052104 ///
741 + ({beta5=1}+ {delta51=0.1}*young + {delta52=0.1}*high_edu +{delta53=0.1}*female + {
delta54=0.1}*region_WAL )*t1bV40052105 ///
742 + ({miu1=1}+ {eta11=0.1}*young + {eta12=0.1}*high_edu +{eta13=0.1}*female + {eta14=0.1}*
region_WAL )*t1bV40092101 ///
743 + ({miu2=1}+ {eta21=0.1}*young + {eta22=0.1}*high_edu +{eta23=0.1}*female + {eta24=0.1}*
region_WAL )*t1bV40092102 ///
744 + ({miu3=1}+ {eta31=0.1}*young + {eta32=0.1}*high_edu +{eta33=0.1}*female + {eta34=0.1}*
region_WAL )*t1bV40092103 ///
745 + ({miu4=1}+ {eta41=0.1}*young + {eta42=0.1}*high_edu +{eta43=0.1}*female + {eta44=0.1}*
region_WAL )*t1bV40092104 ///
746 + ({miu5=1}+ {eta51=0.1}*young + {eta52=0.1}*high_edu +{eta53=0.1}*female + {eta54=0.1}*
region_WAL )*t1bV40092105 ///
747 + ({omega1=1}+ {theta11=0.1}*young + {theta12=0.1}*high_edu +{theta13=0.1}*female + {
theta14=0.1}*region_WAL )*physical_effort_job ///
748 + ({omega2=1}+ {theta21=0.1}*young + {theta22=0.1}*high_edu +{theta23=0.1}*female + {
theta24=0.1}*region_WAL )*dangerous_job ///
749 + ({omega3=1}+ {theta31=0.1}*young + {theta32=0.1}*high_edu +{theta33=0.1}*female + {
theta34=0.1}*region_WAL )*make_dirty_job ///
750 + ({omega4=1}+ {theta41=0.1}*young + {theta42=0.1}*high_edu +{theta43=0.1}*female + {
theta44=0.1}*region_WAL )*mental_effort_job ///
751 + ({omega5=1}+ {theta51=0.1}*young + {theta52=0.1}*high_edu +{theta53=0.1}*female + {
theta54=0.1}*region_WAL )*worthwhile_job ///
752 ), vce(robust)
753 estimates store reg2
754 estimates table reg2 reg5, stats(r2) star b(%9,3f)
755 outreg2 [reg2 reg5] using output_satisv5, excel
756
757 *****
758 *****
759 *Characterization of the inconsistencies
760 *to select which scenario is better
761 generate better3=1 if I_reg1b>I_reg3a
762 replace better3=0 if better3==.
763
764 *to create selected the inconsistency.
765 generate c_inconsistency=I_reg3a if better3==1
766 replace c_inconsistency=I_reg1b if better3==0
767 xtile percentile_inconsis = c_inconsistency, nquantiles(10) //creating deciles of
inconsistencies
768
769 *Trend between inconsistencies and equivalised income (removes 1 extreme value)
770 twoway (scatter c_inconsistency equivalised_income if equivalised_income<15000 &
c_inconsistency<15000), || line equivalised_income equivalised_income if
equivalised_income<15000, sort ///
771 ylabel(, format(%9.0fc)) xlabel(, format(%9.0fc )) ytitle(Inconsistencies) xtitle(
Equivalised Income) legend(off) ylabel(0(3000)12000)
772
773 *Selecting which is a small inconsistency
774 histogram c_inconsistency if c_inconsistency<15000, bin(100) percent fcolor(dknavy) lcolor
(black) normal normopts(lcolor(red)) ylabel(0(5)20) xtitle(Inconsistencies) title(The
chosen inconsistency)
775 histogram c_inconsistency if c_inconsistency<1500, bin(100) percent fcolor(dknavy) lcolor(
black) normal normopts(lcolor(red)) ylabel(0(5)20) xtitle(Inconsistencies) title(The
chosen inconsistency)
776
777 tabstat c_inconsistency if inrange(percentile_inconsis, 2,3), statistics( min mean p50 max
sd skewness ) by(region)
778

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