

Supplementary material

Table A.1a Conditional probabilities for the best-fitting first-stage latent engagement configurations; age: 55-62

	Conditional probabilities by age and latent class														
	55-56				57-58				59-60			61-62			
	1	2	3	4	1	2	3	4	1	2	3	1	2	3	4
Paid work															
No	0.49	0.68	0.12	0.22	0.31	0.27	0.56	0.58	0.51	0.71	0.33	0.55	0.82	0.81	0.43
PT	0.31	0.25	0.17	0.09	0.14	0.13	0.32	0.26	0.24	0.21	0.11	0.17	0.13	0.15	0.11
FT	0.20	0.07	0.71	0.69	0.55	0.61	0.13	0.16	0.25	0.08	0.56	0.28	0.05	0.04	0.45
Caregiving															
No	0.65	0.44	0.73	0.81	0.71	0.80	0.53	0.67	0.61	0.66	0.84	0.70	0.56	0.69	0.82
Extra-res.	0.20	0.41	0.21	0.14	0.22	0.14	0.31	0.17	0.28	0.16	0.12	0.23	0.30	0.15	0.12
Co-res.	0.15	0.15	0.06	0.05	0.07	0.06	0.16	0.16	0.11	0.19	0.05	0.07	0.13	0.16	0.06
Volunteering															
No	1.00	0.00	0.45	1.00	0.00	1.00	0.45	1.00	0.26	0.98	0.99	0.33	0.00	1.00	1.00
Yes	0.00	1.00	0.55	0.00	1.00	0.00	0.55	0.00	0.75	0.02	0.01	0.67	1.00	0.00	0.00
Civic part.															
No	0.90	0.37	0.31	0.98	0.37	0.91	0.36	1.00	0.26	0.92	0.93	0.45	0.35	0.87	0.95
Yes	0.10	0.63	0.69	0.02	0.63	0.09	0.64	0.00	0.74	0.08	0.07	0.55	0.65	0.13	0.05
Housework															
≤10 hpw	0.09	0.22	0.79	0.87	0.89	0.85	0.01	0.01	0.56	0.12	0.82	0.86	0.00	0.08	0.88
11 to 20	0.50	0.42	0.21	0.13	0.09	0.15	0.61	0.51	0.28	0.45	0.17	0.14	0.57	0.49	0.12
≤10 hpw	0.41	0.36	0.00	0.00	0.02	0.00	0.38	0.49	0.16	0.43	0.01	0.00	0.43	0.43	0.00
Total (N)	813	151	350	1506	234	1516	219	710	394	782	1381	308	167	813	1100
Total (%)	28.8	5.4	12.4	53.4	8.7	56.6	8.2	26.5	15.4	30.6	54	12.9	7	34	46.1

Table A.1b Conditional probabilities for best-fitting first-stage latent engagement configurations; age: 63-70

	63-64			65-66			67-68			69-70			
	1	2	3	1	2	3	1	2	3	1	2	3	4
Paid work													
No	0.74	0.58	0.87	0.92	0.84	0.79	0.95	0.89	0.86	0.88	0.97	0.79	0.88
PT	0.17	0.10	0.10	0.06	0.12	0.10	0.05	0.10	0.07	0.10	0.03	0.16	0.08
FT	0.10	0.32	0.04	0.02	0.04	0.11	0.01	0.02	0.07	0.02	0.00	0.05	0.05
Caregiving													
No	0.66	0.84	0.75	0.72	0.64	0.85	0.71	0.70	0.85	0.73	0.70	0.54	1.00
Extra-res.	0.26	0.10	0.12	0.12	0.24	0.10	0.11	0.24	0.09	0.19	0.12	0.43	0.00
Co-res.	0.08	0.06	0.13	0.16	0.12	0.05	0.18	0.06	0.06	0.08	0.18	0.03	0.00
Volunteering													
No	0.27	0.96	0.93	0.99	0.01	0.99	0.99	0.25	0.97	0.17	0.90	0.53	1.00
Yes	0.73	0.04	0.07	0.02	0.99	0.01	0.01	0.75	0.03	0.83	0.11	0.47	0.00
Civic part.													
No	0.27	0.94	0.88	0.87	0.37	0.88	0.87	0.30	0.93	0.00	0.83	1.00	0.92
Yes	0.73	0.07	0.12	0.13	0.63	0.12	0.13	0.70	0.07	1.00	0.17	0.00	0.08
Housework													
≤10 hpw	0.55	0.92	0.00	0.00	0.49	0.88	0.00	0.52	0.89	0.54	0.33	0.98	0.77
11 to 20	0.30	0.08	0.51	0.52	0.33	0.12	0.51	0.36	0.11	0.28	0.38	0.00	0.23
≤10 hpw	0.15	0.00	0.49	0.48	0.18	0.00	0.49	0.13	0.00	0.18	0.29	0.03	0.00
Total (N)	327	1038	820	765	388	929	710	403	889	196	966	85	640
Total (%)	15	47.5	37.5	36.7	18.6	44.6	35.5	20.1	44.4	10.4	51.2	4.5	33.9

Notes: N=18,600 observations (n=6,068 respondents); the conditional probability refer to the probability of engaging in a given level of an activity for someone who is classified in a given latent class. For example, someone at age 55 or 56 classified in latent class 3 has a high probability of working full-time (0.71). The totals refer to the number and proportion of individuals classified into each class at each age. hpw: hours per week; PT: part-time; FT: full-time.

Source: BHPS (waves: 6, 8, 10, 12, 14, 16 and 18).

Table A.2 Conditional probabilities for the second stage LCA model, for each pathway

LCA stage 1: latent classes by age		2nd stage LCA		
		Pathway 1, FT to low engagement	Pathway 2, PT work and in- home engagement	Pathway 3, Multiple engagements
Age: 55/56	1	0.06	0.76	0.09
	2	0.00	0.06	0.21
	3	0.07	0.00	0.51
	4	0.87	0.18	0.19
57/58	1	0.03	0.00	0.41
	2	0.92	0.17	0.30
	3	0.00	0.12	0.25
	4	0.05	0.71	0.04
59/60	1	0.03	0.06	0.68
	2	0.08	0.75	0.10
	3	0.89	0.19	0.23
61/62	1	0.06	0.02	0.50
	2	0.00	0.08	0.23
	3	0.10	0.81	0.12
	4	0.83	0.10	0.15
63/64	1	0.03	0.05	0.62
	2	0.84	0.12	0.21
	3	0.13	0.82	0.17
65/66	1	0.17	0.79	0.10
	2	0.05	0.07	0.72
	3	0.79	0.14	0.19
67/68	1	0.14	0.78	0.11
	2	0.07	0.06	0.75
	3	0.79	0.16	0.14
69/70	1	0.03	0.03	0.42
	2	0.32	0.85	0.35
	3	0.05	0.00	0.12
	4	0.61	0.13	0.11

Notes: N=6068; the conditional probability refer to the probability of being classified in a given latent class in the first stage for someone who is classified in a given pathway. The conditional probabilities in tables A.1a and A.1b can be combined with the expected probabilities in this table to produce the figure 2 graphs. For example, to calculate the expected probability of working full-time at age 55-56 for the *FT to low engagement* pathway:

$0.66 \approx (0.06*0.20) + (0*0.07) + (0.07*0.71) + (0.87*0.69)$. ; PT: part-time; FT: full-time.

Source: BHPS (waves: 6, 8, 10, 12, 14, 16 and 18).