

Changes in Subjective Well-being with Retirement: Assessing Savings Adequacy

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Retirement and Changes in Well-Being

- Retirement associated with unexpected prosperity or unanticipated hardship ?
- Do Australians effectively smooth their well-being across the retirement transition ?
 - do Australians make adequate financial provision for retirement ?
 - effectiveness of retirement income policy
 - heightened in the context of population ageing

Retirement and Changes in Well-Being

- Policy activism around private retirement provision: SG, Henry Review (2009)
- Debate premised on belief that households do not make sufficient private provision
- Potential reasons for failure to smooth well-being:
 - myopic behaviour / misunderstanding of needs
institutional constraints
 - concerns not unique to Aust policymakers

Research Question

- Evaluate whether households successfully smooth their well-being across working - retirement transition
 - assess retirement savings adequacy
- Use individual reports of changes in SWB pre- and post-retirement to evaluate extent to which individuals successful smooth their well-being
 - novel use of relative SWB to assess smoothing / savings adequacy
 - contribute to literature on SWB measures of individual welfare; complementary to traditional economic measures
- Caveat: assessing 'welfare smoothing' and 'savings adequacy' - *not* evaluating whether overall level of well-being is adequate or meets a minimal standard.

Modeling Framework

- Informed by the Lifecycle Model (LCM) of intertemporal choice: households choose $\{C_t, L_t\}$ profile to maximize expected utility given lifetime budget constraint
- ⇒ Households smooth Expected MU wealth
- ⇒ extra structure: smooth well-being through time against anticipated income shocks (such as retirement)

Related Research

i. Retirement and Well-Being: Expenditures

- Retirement - Consumption Puzzle: Banks, Blundell, Tanner (1998)
 - Browning and Crossley (2001) - work costs, household composition
 - Aguiar and Hurst (2005) - expenditure v consumption; home production
 - Smith (2009) - expectations error, involuntary early retirement

Related Research

ii. Retirement and SWB

- SWB literature: Frey and Stutzer (2002), Layard (2005), Kahneman and Krueger (2006),
- SWB and Retirement:
 - Alan, Atalay and Crossley (2008) - assess savings adequacy

iii. Aust research on RC Puzzle

- Barrett and Brzozowski (2012): HILDA w1-w7
 - significant decline in grocery, food expenditures with retirement
 - key role of 'involuntary' retirement = unexpected wealth shock, not retirement per se
- Current research: extends - direct reports of relative SWB, reasons for retirement, expectations errors

Main Results:

- Alternative measures of RSWB cover different domains of well-being, provide complementary results
- On average individuals successfully smooth their well-being across working-retirement states
 - for most, not evident could be made better off by shifting their resources into the future
- Important minority not succeed in smoothing

Focus on information HILDA Survey Retirement Module **W7**

Key questions in module asked of individuals:

- i. Aged 45 years +
- ii. Completely retired from LF, and
- iii. Worked post 1990 (hence retired in past 17 years)

Key Variables

Analyse responses to the following questions:

Would you say the following are better or worse since you retired ?

- *Your standard of living?*
- *Your financial security?*
- *Your overall happiness?*

(Showcard: 1=much worse, 2=worse, 3=same, 4=better, 5=much better).

Key Variables

- Restrict attention to ordinal information:

$$\Delta SWB = \{ \text{worse, same, better} \}$$

- avoid imposing interpersonal cardinality on magnitude of changes
 - framing removes heterogeneity in absolute level of SWB \rightarrow difference out individual variation in absolute scale of SWB
 - use ordinal information on *direction of change* in SWB with retirement
- Concept of well-being underlying each SWB measure:
 - Financial Security \subset Standard of Living \subset Overall Happiness

Key Explanatory Variables

- Use richness of HILDA - individual and family characteristics:
 - age, gender, partnered, housing tenure, location,
 - educational attainment
 - years since retired (insight into adaptation)
 - main reason for retirement, forced / voluntary,
 - degree to which retirement income *expectations* were met
 - self-reported changes in own health with retirement

Descriptive statistics

Sample Means: Retirees ($n=1344$)

Variables	worse	same	better
<i>Standard of Living</i>	0.187	0.563	0.250
<i>Financial Security</i>	0.272	0.502	0.227
<i>Overall Happiness</i>	0.073	0.326	0.601

Descriptive statistics

Sample Means

Variables	Retirees
Age	66.885
Female	0.488
Partnered	0.717
Home Owner	0.851
Educ: < Yr12	0.467
Years Since Retired	7.404
<i>Income less than Expected</i>	0.350
<i>Forced Retirement</i>	0.342
Voluntary	0.658
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<i>n</i>	1344

Descriptive statistics

Sample Means

Variables	Retirees
<i>Reason Retired:</i>	
AP eligible	0.039
Financially able	0.161
Job Loss	0.124
Work Stress	0.127
Own Health	0.255
Partner Health	0.037
Other Family Member Health	0.014
Partner Retire	0.047
Spent Leisure Time	0.147
Other	0.048
<i>n</i>	1344

Ordered Response Model

- Underlying change in well-being with retirement:

$$\Delta SWB_i^* = x_i' \beta + e_i$$

- Observe rank-ordered categories for ΔSWB_i^*

$$\Delta SWB_i = \begin{cases} 1 & \text{if } \Delta SWB_i^* < 0 \\ 2 & \text{if } \Delta SWB_i^* = 0 \\ 3 & \text{if } \Delta SWB_i^* > 0 \end{cases}$$

- Ordered Probit Model: FIML, recover β
- Trivariate ordered probit system

- includes estimation of $\Sigma = \begin{bmatrix} 1 & & \\ \sigma_{21} & 1 & \\ \sigma_{31} & \sigma_{31} & 1 \end{bmatrix}$

- Non-linear model: Calculate Marginal Effects:
 $\partial \Pr(\Delta SWB_i = j) / \partial x_{ik} \quad j = 1, 2, 3$

Results: 1. Reliability of Relative SWB Measures

Relative SWB for Observed Retirements (n=211)

$$RSWB_i^t = SWB_i^{post} - SWB_i^{pre}$$

	<i>RSoL</i>			<i>RFinSec</i>			<i>ROHapp</i>		
Δ_t	worse	same	better	worse	same	better	worse	same	better
LS_t	-.018	-.008	.026	-.011	-.002	.013	-.015	-.028	.042
FS_t	-.020	-.009	.029	-.022	-.003	.025	-.007	-.013	.020
Y_t	.003	.001	-.004	.002	.000	-.002	-.002	-.003	-.005

Results: 1. Reliability of Relative SWB Measures

Change in Relative SWB for Continuously Retired (n=536)

$$\Delta(RSWB_i^t) = SWB_i^{07} - SWB_i^{03}$$

Δ_t	$\Delta RSoL$			$\Delta RFinSec$			$\Delta ROHapp$		
	worse	same	better	worse	same	better	worse	same	better
LS_t	-.005	-.001	.007	-.008	-.003	.011	-.047	-.002	.049
FS_t	-.024	-.005	.029	-.031	-.014	.045	-.023	-.001	.023
Y_t	-.003	-.001	.003	.006	.003	-.009	.009	.000	-.009

Results: 2. Relative Standard of Living

	Coefficients		Marginal Effect (4)		
	(2)	(4)	Worse	Same	Better
Partnered	0.190	0.154	-0.034	-0.007	0.041
Home Owner	0.193	0.118			
<i>Main Reason Retired</i>					
Pension Eligible	-0.356	-0.148			
Job Loss	-0.651	-0.287	0.068	0.005	-0.073
Work Stress	-0.014	0.052			
Own Health	-0.626	-0.165			
Partner Health	-0.468	-0.132			
Partner Retire	-0.131	0.047			
Spent Leisure Time	0.096	0.181			
Forced		-0.271	0.062	0.010	-0.072
<i>LLF / Predicted Pr</i>	-3401	-3162	<i>0.190</i>	<i>0.555</i>	<i>0.255</i>

+ controls for Age, Female, Yrs Retired, Education, *Location*.

Results: 2. Relative Standard of Living continued

Variable	$\hat{\beta}$ (4)	Marginal Effect		
		Worse	Same	Better
<i>Income more / less Expected</i>				
Much less	-0.947	0.271	-0.072	-0.199
Less	-0.206	0.047	0.008	-0.054
More	0.511	-0.096	-0.053	0.150
Much More	0.811	-0.131	-0.124	0.255
<i>Own Health Since Retired</i>				
Worse	-0.129	0.030	0.006	-0.035
Better	0.625	-0.117	-0.067	0.184
<i>LLF / Predicted Pr</i>		<i>0.188</i>	<i>0.561</i>	<i>0.251</i>

+ controls for Age, Female, Yrs Retired, Education, *Location*.

Results: 3. Relative Financial Security

Variable	$\hat{\beta}$ (4)	Marginal Effect		
		Worse	Same	Better
Partnered	0.065			
Home Owner	0.125			
<i>Main Reason Retired</i>				
Pension Eligible	-0.457	0.132	-0.033	-0.099
Job Loss	-0.555	0.161	-0.040	-0.121
Work Stress	-0.321	0.089	-0.014	-0.074
Own Health	-0.435	0.124	-0.022	-0.102
Partner Health	-0.267			
Partner Retire	-0.161			
Spent Leisure Time	-0.170			
Forced	-0.178	0.049	-0.005	-0.044
<i>LLF / Predicted Pr</i>	-3162	<i>0.278</i>	<i>0.492</i>	<i>0.230</i>

+ controls for Age, Female, Yrs Retired, Education, Location.

Results: 3. Relative Financial Security continued

Variable	$\hat{\beta}$ (4)	Marginal Effect		
		Worse	Same	Better
<i>Income more / less Expected</i>				
Much less	-1.080	0.352	-0.157	-0.196
Less	-0.346	0.096	-0.013	-0.082
More	0.583	-0.140	-0.024	0.164
Much More	1.081	-0.209	0.122	0.331
<i>Own Health Since Retired</i>				
Worse	-0.192	0.053	-0.005	-0.047
Better	0.427	-0.107	-0.008	0.115
<i>LLF / Predicted Pr</i>	-3162	<i>0.278</i>	<i>0.492</i>	<i>0.230</i>

+ controls for Age, Female, Yrs Retired, Education, Location.

Results: 4. Relative Overall Happiness

Variable	$\hat{\beta}$	Marginal Effect		
	(4)	Worse	Same	Better
Partnered	0.306	-0.040	-0.065	0.105
Home Owner	0.107			
<i>Main Reason Retired</i>				
Pension Eligible	-0.046			
Job Loss	-0.300	0.042	0.060	-0.102
Work Stress	0.035			
Own Health	-0.352	0.047	0.074	-0.121
Partner Health	-0.384	0.058	0.073	-0.121
Partner Retire	-0.348	0.051	0.067	-0.040
Spent Leisure Time	-0.118			
Forced	-0.104			
<i>LLF / Predicted Pr</i>	-3162	<i>0.072</i>	<i>0.330</i>	<i>0.598</i>

+ controls for Age, Female, *Yrs Retired*, Education, *Location*.

Results: 4. Relative Overall Happiness continued

Variable	$\hat{\beta}$ (4)	Marginal Effect		
		Worse	Same	Better
<i>Income more / less Expected</i>				
Much less	-0.176	0.023	0.037	-0.060
Less	0.094			
More	0.333	-0.035	-0.074	0.109
Much More	0.520	-0.046	-0.118	0.164
<i>Own Health Since Retired</i>				
Worse	-0.310	0.039	0.068	-0.107
Better	0.872	-0.068	-0.208	0.276
<i>LLF / Predicted Pr</i>	-3162	<i>0.072</i>	<i>0.330</i>	<i>0.598</i>

+ controls for Age, Female, *Yrs Retired*, Education, *Location*.

Error Correlations

Estimated Error Correlations

	<i>Sol</i>	<i>FinSec</i>	<i>Happiness</i>
<i>Sol</i>	1		
<i>FinSec</i>	0.550	1	
<i>Happiness</i>	0.333	0.135	1

Conclusions

- The 3 measures of relative well-being provide different, but complementary information on SWB
 - Find that 19% retirees report ↓ in SoL, 27% report ↓ in FinSec though only 7% report ↓ in Overall Happiness with retirement 60% report ↑ in Overall Happiness with retirement.
 - Most individuals successfully smooth their well-being across the transition from working to retirement; not apparent they could be made better off by shifting their resources through time
 - Significant minority do not succeed in smoothing their well-being: tend to be single, renter, forced to retire at younger age, experience decline in health or job loss
- ⇒ income in retirement much less than expected
- ⇒ not insured against the income shock associated with retirement

Ongoing Analysis

- Exploit the panel dimensions of HILDA: focus on subset of individuals who retire during waves 1-7:
 - compare results with changes in income and expenditures
 - examine patterns within families