

The Wellbeing Implications of Financial Hardship: Pathways, Resources and the Durability of Recovery in Australia

Dr Peter Ngigi and Dr Campbell Heggen

Deakin Business School



Background and Motivation

- Financial hardship records concrete experiences of being short of money.
- An observed exit tells us that these events are no longer reported at that wave.
- It does not establish whether the exit will be maintained or how people evaluate their lives and financial circumstances.
- We follow hardship transitions, subjective outcomes and resource conditions together.

Financial Hardship and Wellbeing

- Financial hardship: concrete experiences of being short of money, representing a stressful life experience (Utz & Maaß, 2018).
- Wellbeing: examined through life satisfaction, how people evaluate their lives overall, and perceived financial position, how they assess their financial circumstances (Brown & Gray, 2016).
- Ending a reported hardship event and experiencing subjective improvement are related but distinct.

Purpose of this Study

- RQ1: How do wellbeing outcomes differ across entry, persistence, recovery and stable non-hardship within people over time?
- RQ2: Is observed recovery maintained at the following wave, and how does wellbeing evolve around it?
- RQ3: Which resource levels during hardship and changes up to exit are associated with subsequent relapse?
- RQ4: How are those resource conditions associated with wellbeing in the wave following exit?

Theoretical Perspectives

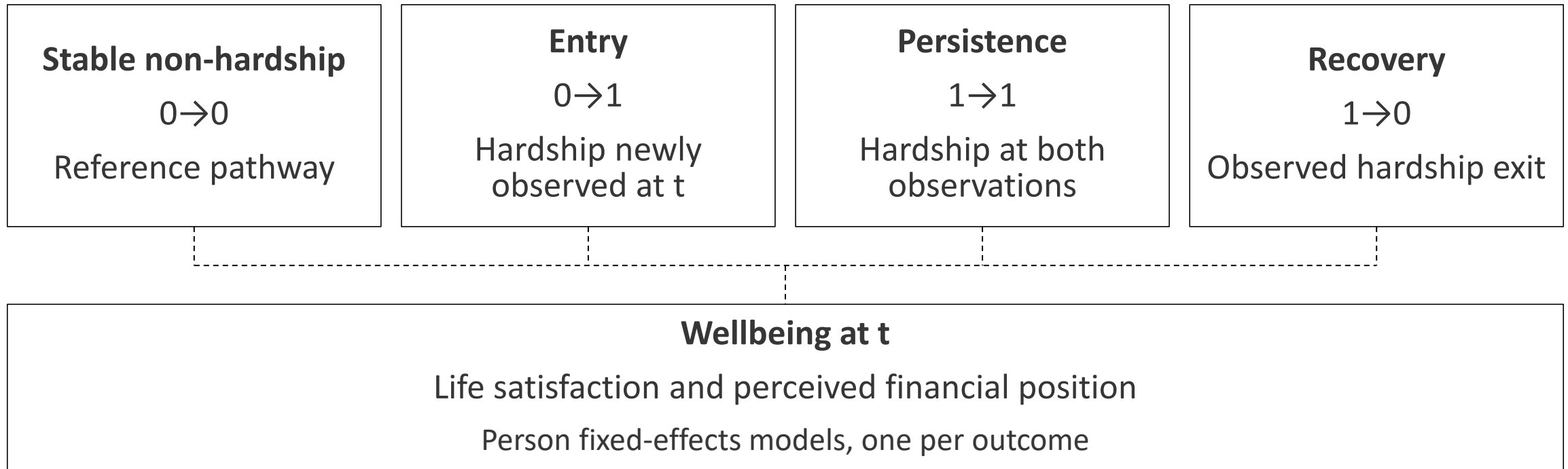
- Stress Process: hardship can be understood as a stress exposure with implications for wellbeing (Pearlin et al., 1981).
- Adaptation: wellbeing may change following adverse experiences, and a return to previous levels is not guaranteed (Luhmann et al., 2012).
- Conservation of Resources: threats to valued resources help explain stress, motivating our examination of financial, social and health conditions around hardship exit (Hobfoll, 1989).

These perspectives guide what we examine: Stress Process highlights hardship exposure; Adaptation highlights change over time; Conservation of Resources highlights the conditions people bring into recovery.

Conceptual framework

A. HARDSHIP PATHWAYS AND WITHIN-PERSON WELLBEING

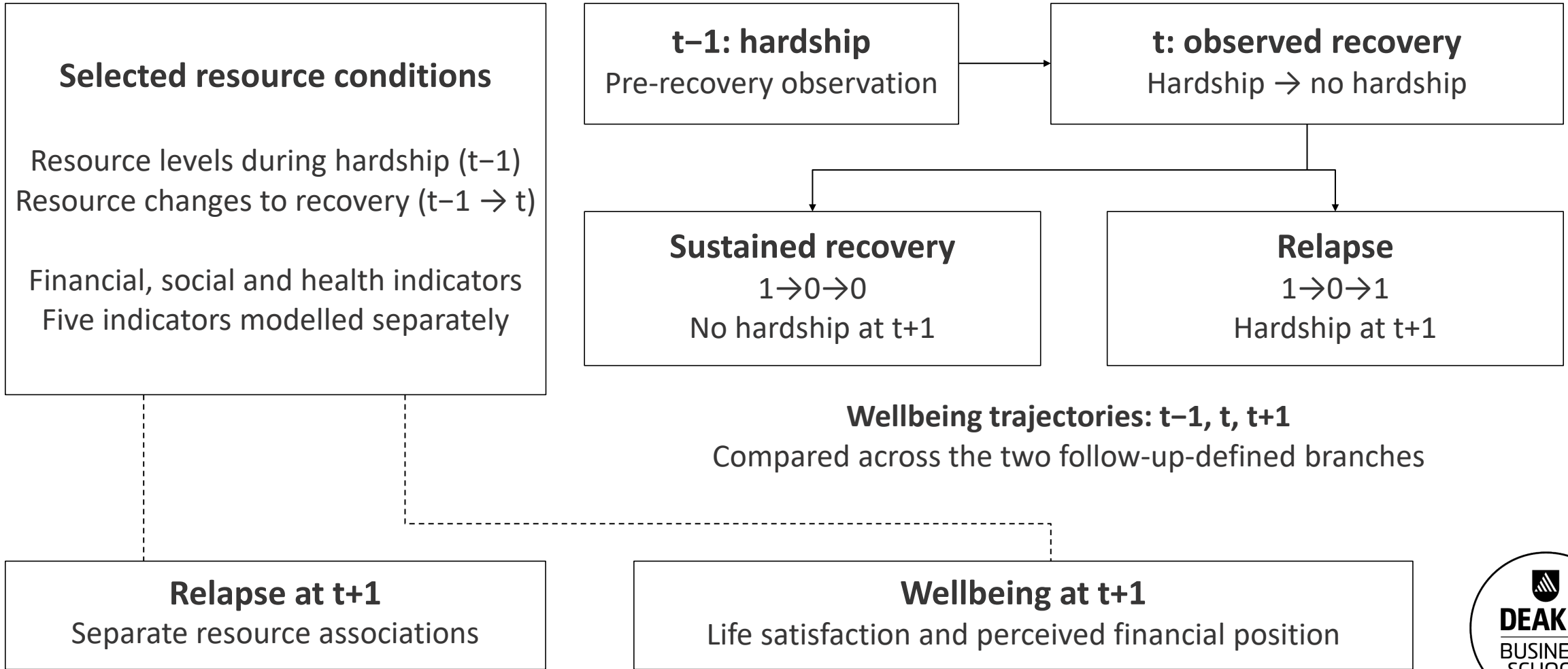
Alternative adjacent-wave classifications: $t-1 \rightarrow t$



Supplementary person fixed-effects models describe resource profiles across the same hardship pathways.

Conceptual framework

B. RECOVERY DURABILITY, RESOURCES AND FOLLOW-UP WELLBEING



Data

- Household, Income and Labour Dynamics in Australia Survey, Release 210c, Waves 1–21, covering 2001–2021.
- Annual panel observations allow us to follow the same people and identify consecutive-wave hardship transitions.
- Hardship is not observed in Wave 10. Transitions are not constructed by bridging that gap.
- Hardship classification requires seven valid item responses. Model samples additionally require the variables needed for that analysis.

Measuring financial hardship

Seven events attributed to a shortage of money:

- Unable to pay utility or telephone bills on time.
- Unable to pay mortgage or rent on time.
- Pawned or sold possessions.
- Went without meals.
- Unable to heat the home.
- Sought financial help from friends or family.
- Sought help from welfare or community organisations.

Classification requires valid responses to all seven items:

- Hardship = 1: at least one event reported.
- No hardship = 0: no events reported.
- Sensitivity check: a stricter threshold of at least two event types.

Measuring wellbeing

- Life satisfaction is based on the question “*All things considered, how satisfied are you with your life?*” - measured on a ten-point scale, where higher values are associated with being more satisfied
- Financial prosperity is based on the question, “*Given your current needs and financial responsibilities, would you say that you and your family are . . .*” measured on a six-point scale from “*Very poor*” to “*Prosperous*”

Measuring resources

Indicator	Operational content	Scale	Direction	Timing / reference
Emergency-fund difficulty	Capacity to raise emergency money within one week	1 easily; 2 with sacrifices; 3 drastic action; 4 unable	Higher = weaker financial resource	\$2,000 in Waves 1-8; \$3,000 in Waves 9-19; \$4,000 from Wave 20
Support availability	Mean of three negatively worded support items (<i>Issupac</i> , <i>Issuplt</i> and <i>Issupnh</i>), each reverse-coded as 8 minus the valid item response. Calculated only when all three responses are valid.	1-7	Higher = stronger social resource	Wave-specific self-completion social-support items; harmonised variables <i>Issupac</i> , <i>Issuplt</i> and <i>Issupnh</i> .
Vitality	HILDA-derived SF-36 vitality score	0-100	Higher = greater vitality	Four vitality items; supplied transformed score
General health	HILDA-derived SF-36 general-health score	0-100	Higher = better health	Supplied transformed score
Physical functioning	HILDA-derived SF-36 physical-functioning score	0-100	Higher = better functioning	Supplied transformed score

Descriptive statistics

Panel A. Study variables

Variable	Observations	Persons	Mean	SD	Min	Max	Scale / direction
Life satisfaction	206,488	25,480	7.96	1.40	0	10	0-10; higher scores indicate greater life satisfaction
Perceived financial position	206,287	25,470	3.12	0.80	1	6	1-6; higher scores indicate a worse perceived financial position
Emergency-fund difficulty	172,761	22,001	1.65	0.99	1	4	Higher values indicate greater difficulty and a weaker financial resource
Support availability	171,324	22,010	5.74	1.35	1	7	Higher values indicate stronger perceived support availability
Vitality	175,356	22,208	59.60	19.88	0	100	0-100; higher scores indicate better vitality
General health	172,062	22,103	68.16	20.73	0	100	0-100; higher scores indicate better general health
Physical functioning	171,819	22,069	83.76	22.54	0	100	0-100; higher scores indicate better physical functioning

Descriptive statistics

Panel B. Hardship-pathway distribution in the common adjusted sample

Pathway	Person-waves	Percent	Persons	Reference / definition
Stable no hardship	149,454	72.47	25,468	Stable no hardship is the reference
Entry into hardship	14,784	7.17	25,468	Adjacent-wave pathway
Persistent hardship	25,472	12.35	25,468	Adjacent-wave pathway
Recovery from hardship	16,505	8.00	25,468	Adjacent-wave pathway
All four pathways	206,215	100.00	25,468	Common adjusted pathway sample

Panel C. Recovery episodes classified at the following wave

Recovery branch	Episodes	Percent	Persons	Definition
Sustained recovery	9,043	70.98	7,190	Recovery at t classified by hardship status at adjacent t+1
Relapse into hardship	3,698	29.02	2,911	Recovery at t classified by hardship status at adjacent t+1
All classifiable recovery episodes	12,741	100.00	8,476	Episode denominator; persons may contribute more than one episode

Empirical methods for RQ1 and RQ2

- RQ1: person and wave fixed-effects models, with six lagged covariates and person-clustered standard errors.
- RQ2: pooled models of wellbeing across $t-1$, t and $t+1$, including follow-up branch by time interactions, recovery-wave indicators and the six lagged covariates.
- Focal tests use Holm adjustment within five defined families; confidence intervals remain pointwise 95% intervals.

The pathway models compare people with themselves over time, accounting for stable personal characteristics. The trajectory models are different: they compare adjusted patterns around recovery between the eventual follow-up branches. Repeated observations from the same person are accounted for in the standard errors.

Results - Hardship pathways and within-person wellbeing

Panel A. Life satisfaction

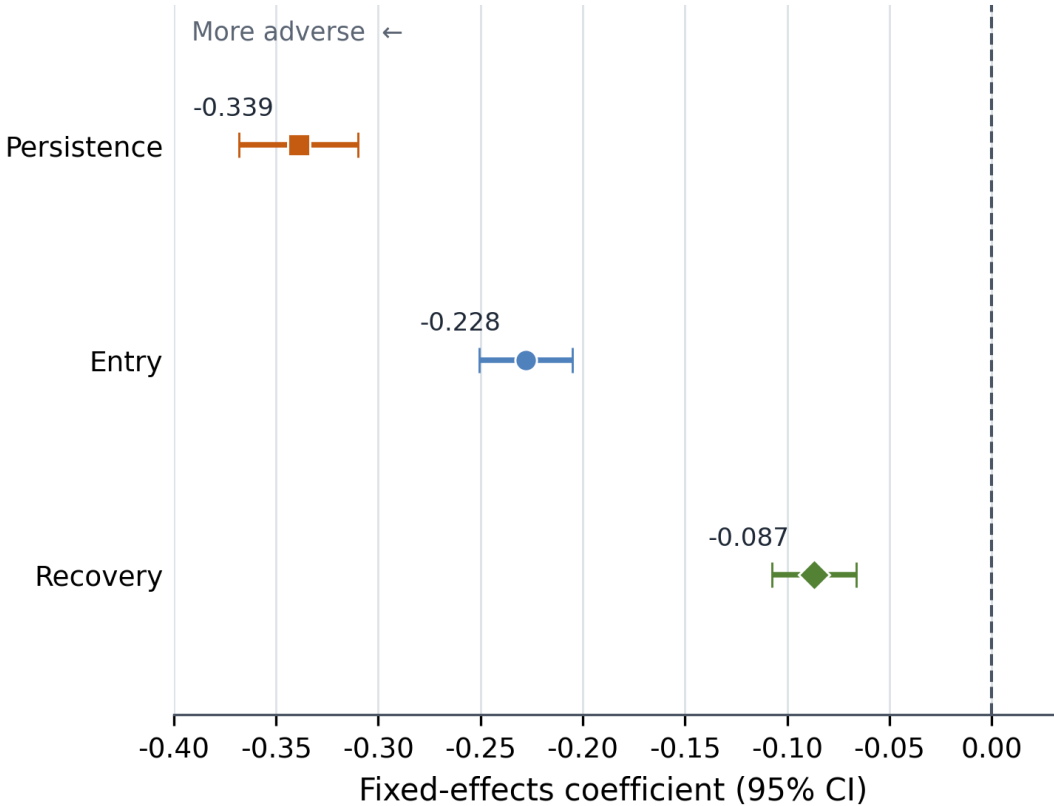
Hardship pathway	Estimate	Clustered SE	95% CI	Unadj. p / Holm p	Observations	Persons
Entry into hardship	-0.228	0.012	[-0.251, -0.205]	p<.001	206,488	25,480
Persistent hardship	-0.339	0.015	[-0.368, -0.310]	p<.001	206,488	25,480
Recovery from hardship	-0.087	0.010	[-0.107, -0.066]	p<.001	206,488	25,480

Panel B. Perceived financial position

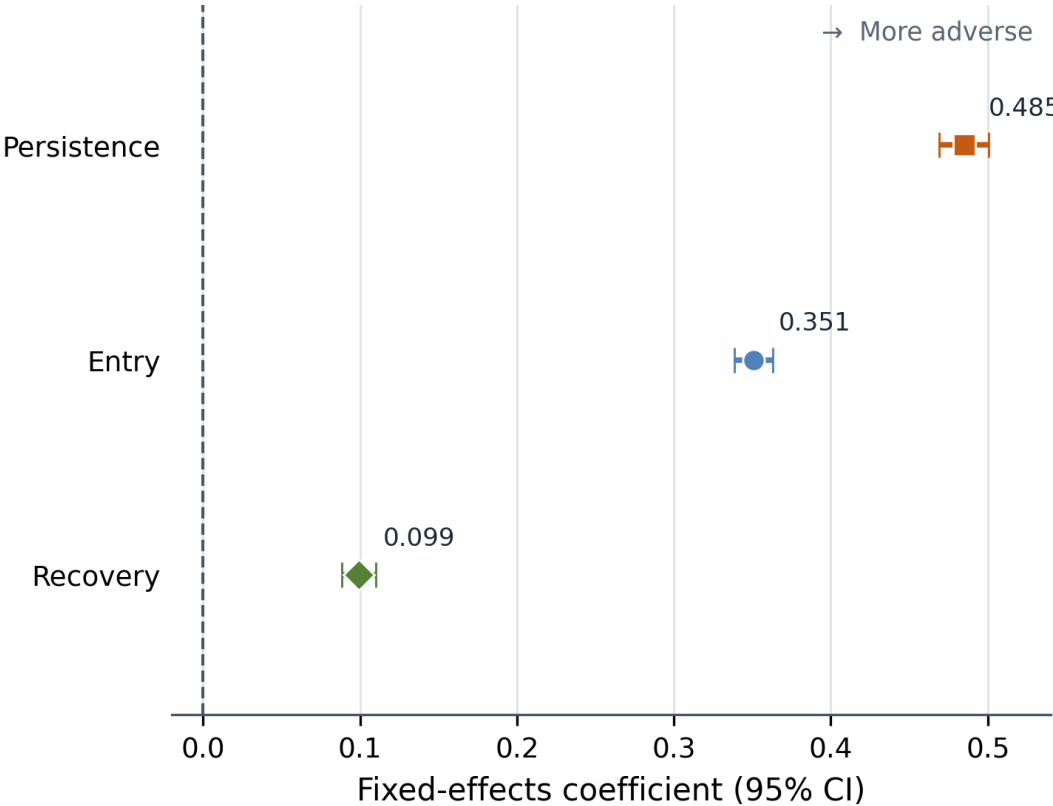
Hardship pathway	Estimate	Clustered SE	95% CI	Unadj. p / Holm p	Observations	Persons
Entry into hardship	0.351	0.006	[0.338, 0.363]	p<.001	206,287	25,470
Persistent hardship	0.485	0.008	[0.469, 0.501]	p<.001	206,287	25,470
Recovery from hardship	0.099	0.005	[0.088, 0.110]	p<.001	206,287	25,470

Results - Hardship pathways and within-person wellbeing

A. Life satisfaction



B. Perceived financial position



Results - Pairwise hardship-pathway contrasts

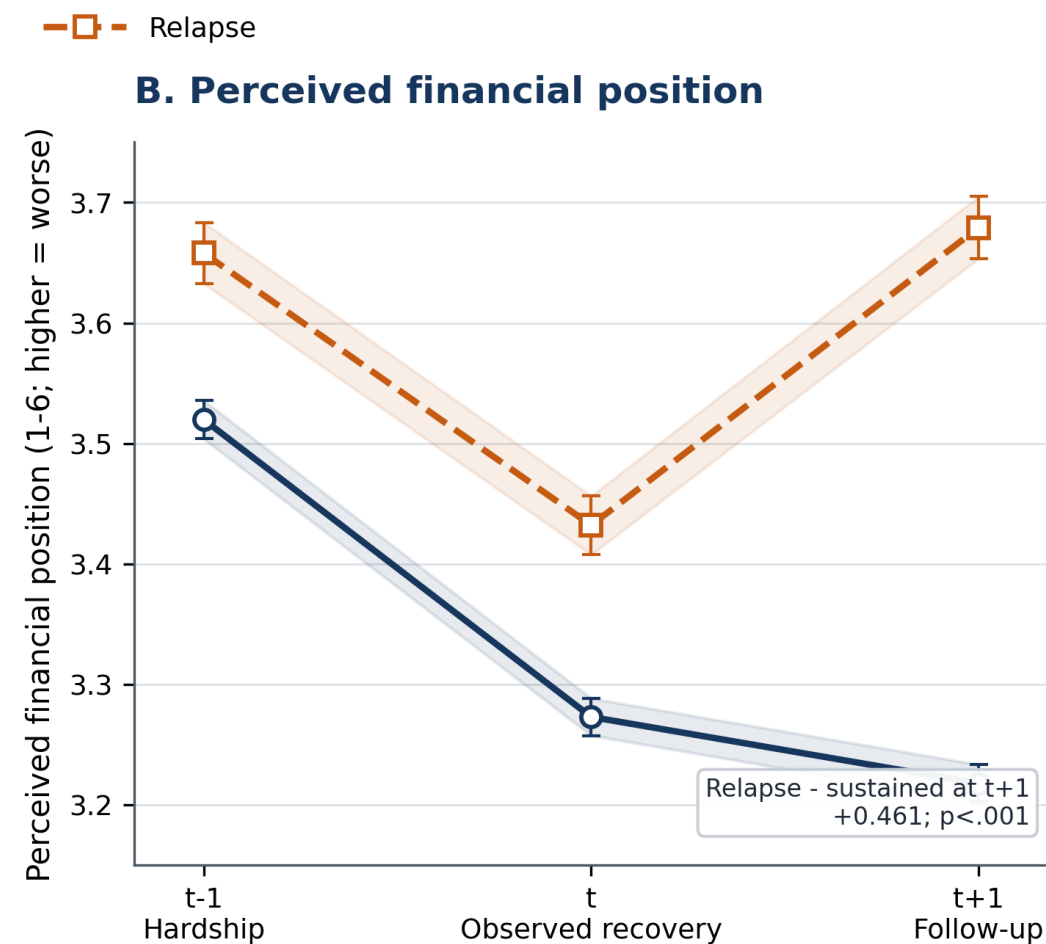
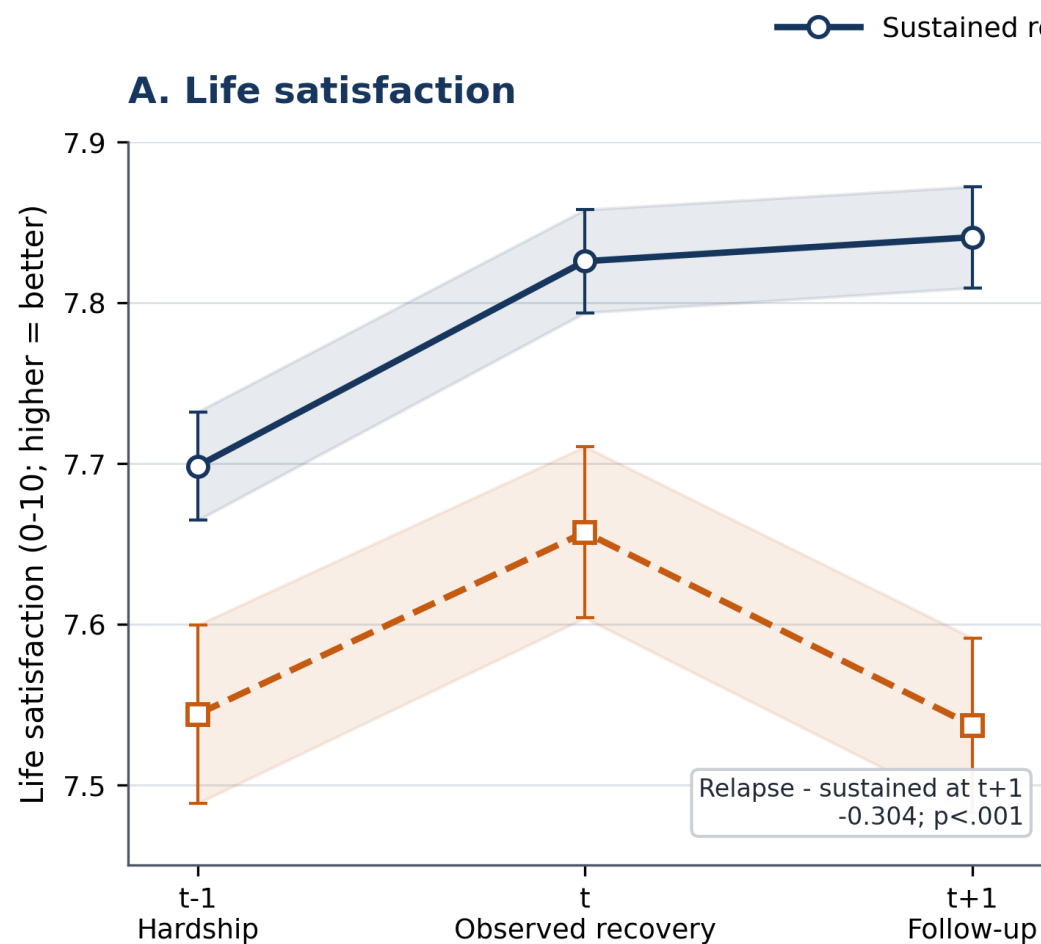
Panel A. Life satisfaction

Comparison	Estimate	Clustered SE	95% CI	Unadjusted p	Holm p (12 tests)	Observations	Persons
Persistent minus entry	-0.111	0.016	[-0.142, -0.081]	p<.001	p<.001	206,488	25,480
Recovery minus entry	0.141	0.012	[0.117, 0.165]	p<.001	p<.001	206,488	25,480
Recovery minus persistent	0.252	0.015	[0.223, 0.282]	p<.001	p<.001	206,488	25,480

Panel B. Perceived financial position

Comparison	Estimate	Clustered SE	95% CI	Unadjusted p	Holm p (12 tests)	Observations	Persons
Persistent minus entry	0.134	0.008	[0.118, 0.150]	p<.001	p<.001	206,287	25,470
Recovery minus entry	-0.252	0.006	[-0.264, -0.239]	p<.001	p<.001	206,287	25,470
Recovery minus persistent	-0.386	0.008	[-0.401, -0.370]	p<.001	p<.001	206,287	25,470

Results - Wellbeing around observed recovery



Empirical methods for RQ3 and RQ4

- One model per resource, including its level during hardship at $t-1$ and its change up to exit at t .
- RQ3: linear-probability models of relapse at $t+1$.
- RQ4: linear models of wellbeing at $t+1$, conditional on wellbeing at exit; the focal specification also includes hardship status at $t+1$.
- Recovery-wave indicators, six lagged covariates and person-clustered standard errors are included.

We have two wellbeing outcomes. Relapse is an additional binary transition outcome, answering a different question. The resource models examine associations prospectively, but they are not person fixed-effects or mediation models. Each resource's level and change are included together.

Results - Resources associated with relapse

Panel A. Pre-recovery resource levels, early change, and relapse at t+1

Resource	Pre b (pp)	95% CI	Unadj. p / Holm p	Change b (pp)	95% CI	Unadj. p / Holm p	Joint unadj. p / Holm p	Episodes	Persons	Relapse rate
Financial difficulty	7.38	[6.331, 8.431]	p<.001	3.39	[2.436, 4.350]	p<.001	p<.001	12,486	8,352	29.1%
Support availability	2.24	[1.267, 3.211]	p<.001	1.63	[0.691, 2.570]	p<.001 H=.003	p<.001	12,451	8,320	29.1%
Vitality	4.19	[3.295, 5.087]	p<.001	1.82	[0.934, 2.697]	p<.001	p<.001	12,633	8,408	29.1%
General health	3.19	[2.268, 4.119]	p<.001	0.76	[-0.105, 1.629]	p=.085	p<.001	12,500	8,338	29.1%
Physical functioning	1.94	[0.906, 2.964]	p<.001 H=.001	0.97	[0.050, 1.888]	p=.039 H=.077	p=.001 H=.003	12,456	8,336	29.1%

Results - Resources associated with follow-up wellbeing

Panel B. Life satisfaction at t+1

Resource	Pre b	95% CI	Unadj. p / Holm p	Change b	95% CI	Unadj. p / Holm p	Joint unadj. p / Holm p	Relapse b	95% CI	Unadj. p	Obs. / persons
Financial difficulty	-0.053	[-0.082, -0.024]	p<.001 H=.003	-0.030	[-0.056, -0.005]	p=.020 H=.085	p=.001 H=.009	-0.208	[-0.256, -0.160]	p<.001	12,479 / 8,348
Support availability	-0.180	[-0.209, -0.151]	p<.001	-0.091	[-0.118, -0.063]	p<.001	p<.001	-0.200	[-0.247, -0.152]	p<.001	12,444 / 8,316
Vitality	-0.227	[-0.255, -0.199]	p<.001	-0.079	[-0.105, -0.054]	p<.001	p<.001	-0.188	[-0.235, -0.141]	p<.001	12,626 / 8,404
General health	-0.236	[-0.265, -0.208]	p<.001	-0.074	[-0.099, -0.049]	p<.001	p<.001	-0.198	[-0.245, -0.151]	p<.001	12,494 / 8,334
Physical functioning	-0.135	[-0.166, -0.104]	p<.001	-0.048	[-0.075, -0.022]	p<.001 H=.003	p<.001	-0.199	[-0.246, -0.151]	p<.001	12,449 / 8,332

Panel C. Perceived financial position at t+1

Resource	Pre b	95% CI	Unadj. p / Holm p	Change b	95% CI	Unadj. p / Holm p	Joint unadj. p / Holm p	Relapse b	95% CI	Unadj. p	Obs. / persons
Financial difficulty	0.086	[0.072, 0.101]	p<.001	0.023	[0.010, 0.037]	p<.001 H=.006	p<.001	0.361	[0.335, 0.386]	p<.001	12,448 / 8,332
Support availability	0.036	[0.023, 0.050]	p<.001	0.014	[0.000, 0.027]	p=.043 H=.130	p<.001	0.375	[0.350, 0.401]	p<.001	12,409 / 8,298
Vitality	0.050	[0.038, 0.063]	p<.001	0.005	[-0.008, 0.017]	p=.476	p<.001	0.369	[0.343, 0.394]	p<.001	12,591 / 8,386
General health	0.059	[0.046, 0.072]	p<.001	0.007	[-0.005, 0.020]	p=.234 H=.467	p<.001	0.371	[0.346, 0.397]	p<.001	12,458 / 8,316
Physical functioning	0.035	[0.019, 0.050]	p<.001	0.016	[0.003, 0.030]	p=.017 H=.085	p<.001	0.373	[0.347, 0.398]	p<.001	12,412 / 8,313

Targeted robustness and sensitivity analyses

No.	Robustness test	Estimates compared	Direction changes	Unadjusted significance changes	Maximum % change	Conclusion
1	Strict hardship definition	6	0	0	40.0	All directions and unadjusted $p < .001$ classifications were preserved; the stricter hardship threshold produced larger coefficient magnitudes.
2	Exclusion of waves 20 and 21	6	0	0	4.7	All directions and unadjusted $p < .001$ classifications were preserved; every coefficient remained within 5% of the primary estimate.
3	Survey-weight suitability audit	Audit	N/A	N/A	N/A	No supplied HILDA survey weight directly matches the within-person associations estimated from this unbalanced panel; the primary models remain unweighted.
4	Linear probability models versus logit average marginal effects	10	0	0	6.5	Logit average marginal effects preserved every direction and unadjusted $p < .05$ classification; all magnitude changes were below 10%.
5	Resource-specific versus common sample	10	0	1	21.0	All directions were preserved. General-health change had unadjusted $p = .044$ on the common sample; it remains unsupported in the focal Holm analysis.
6	Recovery follow-up selection weighting	10	0	0	4.1	Follow-up selection weighting preserved every direction and unadjusted $p < .05$ classification; the maximum estimate change was 4.05%.

Contributions and implications

- An observed hardship exit is distinct from recovery maintained at the next wave.
- Wellbeing improves at exit in both eventual follow-up groups, then their adjusted trajectories diverge.
- Financial, social and health conditions provide a theory-informed account of conditions associated with recovery durability and subsequent wellbeing.
- Assessment after exit may benefit from attention to these conditions alongside wellbeing; the practical value of such assessment requires evaluation.

The contribution is to connect the durability of hardship exit with subjective outcomes and observable resource conditions. About three in ten classifiable recovery episodes relapse at the following wave. We identify conditions associated with what follows, rather than demonstrating why a particular person succeeds or fails.

Thank you for your time!

Comments and suggestions are welcome at:

p.ngigi@deakin.edu.au

