Wage Insurance and Labor Market Trajectories

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Severe Consequences of Job Displacement

- Large earnings and wage declines (Jacobson LaLonde Sullivan 1993, Stevens 1997, Kletzer 1998, Couch and Placzek 2010, Schmeider von Wachter 2010, White 2010, Davis and von Wachter 2011, von Wachter Handwerker Hildreth 2012, Flaaen Shapiro Sorkin 2019, Schmeider von Wachter Heining 2019)
- Persistent non/unemployment (Ruhm 1991, Chan and Stevens 2001, Song von Wachter 2014)
- Lower wealth (Stevens and Moulton 2013)
- Increased mortality (Sullivan and von Wachter 2009)
- Higher divorce rates (Charles and Stephens 2004)
- Lower educational achievement of children (Stevens and Schaller 2011)

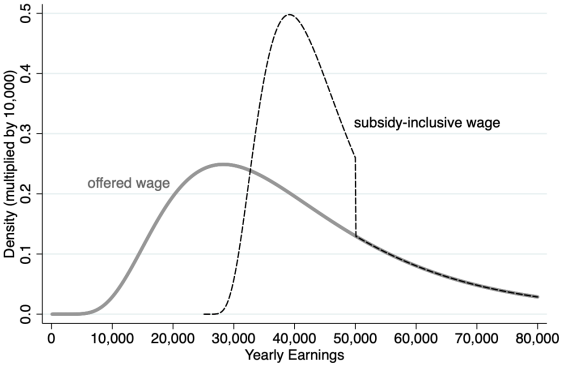
Wage Insurance for Displaced Workers

- Wage Insurance
  - Proposals since at least mid-1980s (Lawrence and Litan 1986, "earnings insurance")
  - Workers whose reemployment wages are lower than their pre-displacement wages receive a temporary subsidy covering a portion of the wage decline

- Motivations (e.g. Kletzer (2001) Senate testimony)
  - Address earnings losses of displaced workers
  - Support workers for whom training is ineffective
  - Incentivize speedy reemployment
  - Implicitly subsidize on-the-job training

Wage Insurance Example

- Example with 50% subsidy rate (TEGL 22-08)
  - Pre-displacement yearly earnings \$50,000
  - Post-displacement yearly earnings \$20,000
  - Yearly wage subsidy = $0.5 \cdot (\$50,000 - \$20,000) = \$15,000$
- Implications in McCall (1970) search model
  - Lower offered reservation wage, higher subsidy-inclusive reservation wage
  - Shorter unemployment duration



Wage Insurance in the US

- Part of the Trade Adjustment Assistance (TAA) program
  - Benefits workers displaced due to import competition or offshoring (certified by DoL)
  - Extended UI payments and job training costs (up to 3 years)
- Wage insurance demonstration program (ATAA) in 2002, permanent (RTAA) 2009
  - $>$36,000 participants since 2002
- Reemployment Trade Adjustment Assistance
  - 50% subsidy rate for up to 2 years (s.t. max benefit cap and max reemployment earnings)
  - Workers affected by TAA-certified displacement
  - Age 50 or over

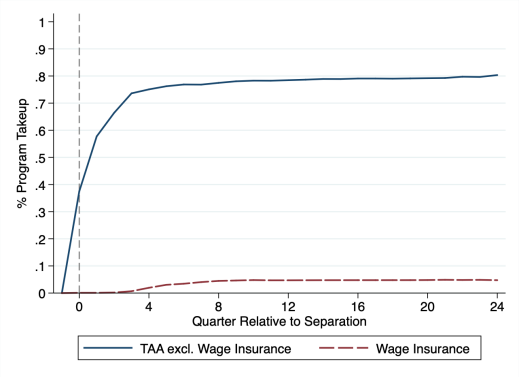
Research Agenda: Wage Insurance Impacts and Program Design

- Primary empirical approach (Hyman Kovak Leive 2021)
  - LEHD matched to TAA administrative data identifying eligible workers
  - Age-at-displacement regression discontinuity design

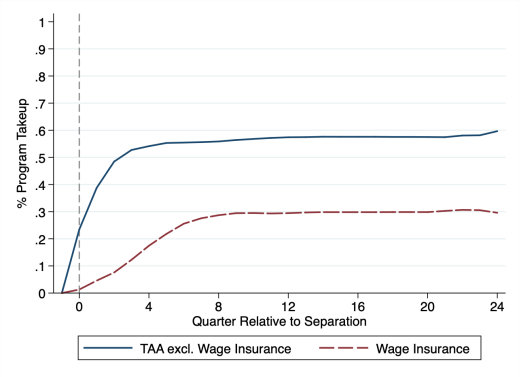
- This paper: complementary event study design w/ Virginia data
  - VA Employment Commission data on all TAA-eligible workers receiving DoL services
  - Merged quarterly UI earnings, 2005-2018
  - Compare earnings and employment trajectories for
    - RTAA eligible at displacement: age 50-54
    - RTAA ineligible at displacement: age 45-49
    - Note: both groups eligible for standard TAA (training and extended UI)

Older Displaced Workers More Likely to Take Up Wage Insurance

(a) Program takeup: Ages 45-49



(b) Program takeup: Ages 50-54



Comparison yields effect of wage insurance eligibility beyond effects of TAA eligibility (Hyman 2018).

Sample

- TAA-eligible VA workers receiving DoL services (includes TAA and wage insurance)
- TAA petition filed on or after May 18, 2009 (RTAA period)
- Displaced prior to 2018 (ensures observed post-separation)
- Age 45-54 at separation date
- High labor force attachment
  - Earned $\geq$ \$3,000 in each quarter 8-5 quarters prior to separation

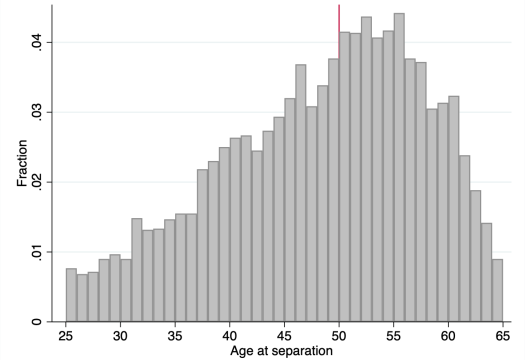
Potential Limitations

- Only one state (Virginia) Comparison to Rest of US
- Eligibility rules for SSI/SSDI change at 50 (Chen and van der Klaauw 2008)
- VA data omit eligible workers who did not take up standard TAA or wage insurance
  - Potential endogenous sample selection
  - e.g. quickly reemployed workers omitted if age 45-49 but included if age 50-54 and take up wage insurance

No Evidence for Sample Selection Concern

- No break in the density of separation-age at 50
- Well balanced observables (except those mechanically affected by age)

TAA Participants (incl. RTAA), by Separation Age



RTAA Take-Up by Separation Age

No Evidence for Sample Selection Concern

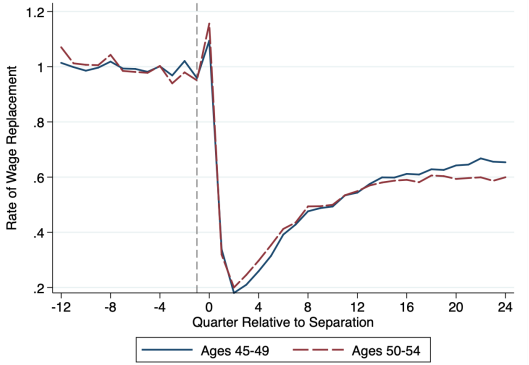
	Separation Age: 45-49			Separation Age: 50-54			(50-54) - (45-49)	
	Mean (1)	SD (2)	# Workers (3)	Mean (4)	SD (5)	# Workers (6)	Δ (7)	SE (8)
Age at Separation	47.5	[1.44]	1,027	52.0	[1.15]	1,003	4.44	(0.058)
Wage Insurance Takeup	0.049	[0.22]	1,027	0.30	[0.46]	1,003	0.25	(0.016)
Employer Tenure (Years)	13.3	[8.45]	836	18.7	[10.9]	841	5.46	(0.48)
Year of Separation	2010.6	[1.97]	1,027	2010.8	[1.95]	1,003	0.19	(0.087)
Earnings, Quarters -8 to -5	12,645	[6,971]	1,027	12,542	[6,619]	1,003	-103	(301)
Less than High School	0.093	[0.29]	839	0.099	[0.30]	840	0.0058	(0.014)
High School	0.59	[0.49]	839	0.60	[0.49]	840	0.0088	(0.024)
Some Postsecondary	0.24	[0.43]	839	0.24	[0.43]	840	0.0045	(0.021)
College or Higher	0.081	[0.27]	839	0.062	[0.24]	840	-0.019	(0.013)
Female	0.38	[0.49]	839	0.36	[0.48]	841	-0.020	(0.024)
Black	0.28	[0.45]	810	0.28	[0.45]	822	0.0045	(0.022)
White	0.66	[0.47]	810	0.67	[0.47]	822	0.011	(0.023)

Notes: Sample is restricted to highly-attached workers. T-tests in (7) and (8) use heteroskedastic-robust standard errors. Observation counts vary due to incomplete demographic data (treated as missing in regressions with controls).

Employment and Earnings Replacement Trajectories

(a) Employment Share

(b) Earnings Replacement Rate



(a) Short-run employment differences, but long-run employment convergence

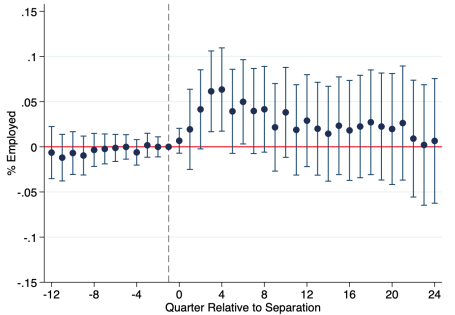
(b) Lower long-run earnings replacement

Earnings if Employed

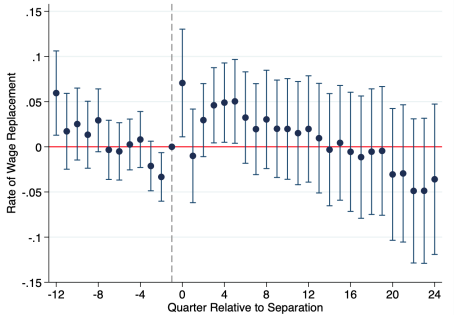
Employment and Earnings Replacement Event Study Estimates

$$Y_{it} = \alpha D_i + \sum_{\tau \neq -1} [\delta_\tau * 1\{t - s_i = \tau\} + \beta_\tau * 1\{t - s_i = \tau\} * D_i] + \mathbf{X}_{it}^{'}\gamma + \varepsilon_{it}$$

(a) Employment Share Event Study



(b) Earnings Replacement Event Study



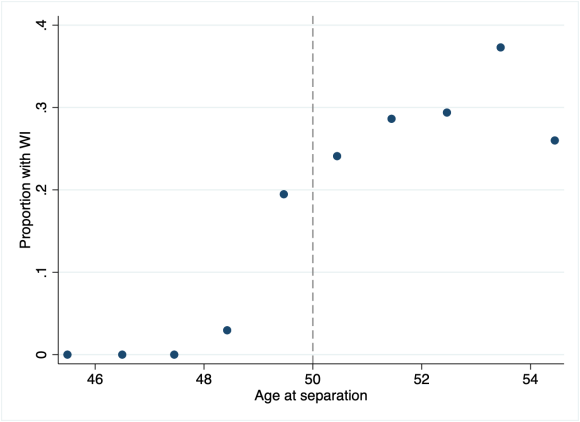
- Controls: separation qtr. FE, race, gender, education, pre-displacement tenure, quadratic in age
- Standard errors clustered by worker

Discussion

- Wage insurance eligible workers have...
  - modestly higher employment probability during benefit period
  - similar long-run earnings and employment
- Comparison is standard TAA (training and extended UI) rather than baseline UI
  - Standard TAA training precludes short-run full-time employment
  - Positive impact of standard TAA on long-run earnings and employment (Hyman 2018)
- Future work
  - Compare results using alternative data and research design (RD in LEHD)
  - Given similar long-run outcomes of standard TAA and wage insurance, compare social costs

Appendix

RTAA Takeup Rate Among TAA-Takers



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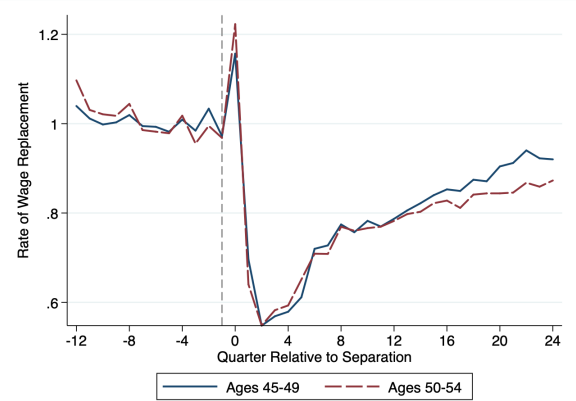
Earnings Replacement for Employed Workers



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Virginia vs. Rest of US: Trade Act Participants

	TAPR for VA		TAPR for Rest		Rest - Virginia	
	Mean	SD	Mean	SD	Difference	P-Value
HS or Less	0.71	0.45	0.65	0.48	-0.07	0.00
Female	0.38	0.49	0.41	0.49	0.03	0.00
Asian	0.036	0.19	0.052	0.22	0.02	0.00
Black	0.25	0.43	0.18	0.38	-0.08	0.00
Hispanic	0.011	0.10	0.076	0.26	0.06	0.00
White	0.71	0.45	0.78	0.42	0.06	0.00
Veteran Status	0.098	0.30	0.083	0.28	-0.01	0.00
Tenure	149.8	125.1	135.4	123.1	-14.44	0.00
Age at Separation	47.0	9.89	46.3	10.4	-0.63	0.00
Prior Earnings (3Q)	8,853.4	5,851.1	7,874.6	7,365.0	-978.72	0.00
Prior Earnings (2Q)	8,834.1	6,467.4	7,299.7	7,840.8	-1534.37	0.00
Prior Earnings (1Q)	7,563.2	6,794.0	6,177.2	7,979.6	-1,386.04	0.00
Δ Prior Earnings	1,339.3	7,057.1	1,692.4	14,570.4	353.09	0.00
Observations	6,973		150,990		157,963	

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