

Measuring Pension Wealth

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Health and Retirement Study

- **Frequently used for retirement studies**
- **Wealth, income, and demographic info**
- **Self-reported pension characteristics**

Problems with Self-Reports

- **Many Respondents unable to articulate key attributes**
- **Substantial Measurement Error**
 - Plan type
 - Plan values (specially for DB plans)
- **Measurement error correlated with plan values**
- **Missing values**

Matched Administrative Data

- **HRS also has matched administrative data**
 - **SSA covered-earnings records, 1951-91 (97)**
 - **Pension SPDs from employers**
 - **W-2 earnings records, 1980-91 (97)**
 - **Includes earnings above FICA cap**
 - **Includes pre-tax employee deferrals**

Project Objective

- **Make improved estimates of DC wealth**
 - **Exploit fully administrative data**
 - **Design new pension wealth calculator**
 - **Analyze HRS original and WB cohorts**
 - **Extend methods to EBB cohort**

Acknowledgements

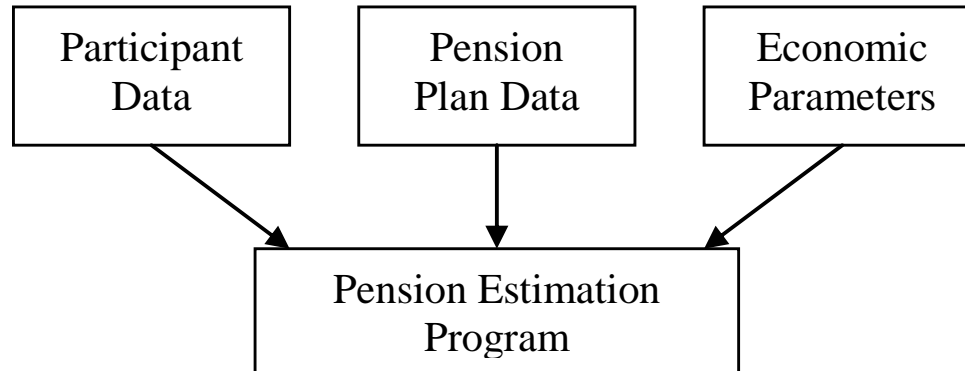
- **Builds on a series of conceptual and empirical studies by CEK and Susann Rohwedder**
- **Graciously funded by DOL, NIA, NSF, SSA, TIAA-CREF**
- **HRS staff helped us immeasurably**

Background on HRS PEP

- **Uses SPDs and economic data**
- **Produces DB and DC wealth estimates**
- **Alternatives to self-reported pension wealth**

Background on HRS PEP

Input Files for the *Pension Estimation Program*



Background on HRS PEP

- **Modeling constraints**
 - Time-invariant, common real rate of return
 - Time-invariant inflation rate
 - Time-invariant employee pre-tax deferral rate
 - Eligibility since date of hire
 - SPD only explains plan at a point in time
 - Continuous coverage
 - Current plan replaced plan of same value

DC/401(k) Calculator

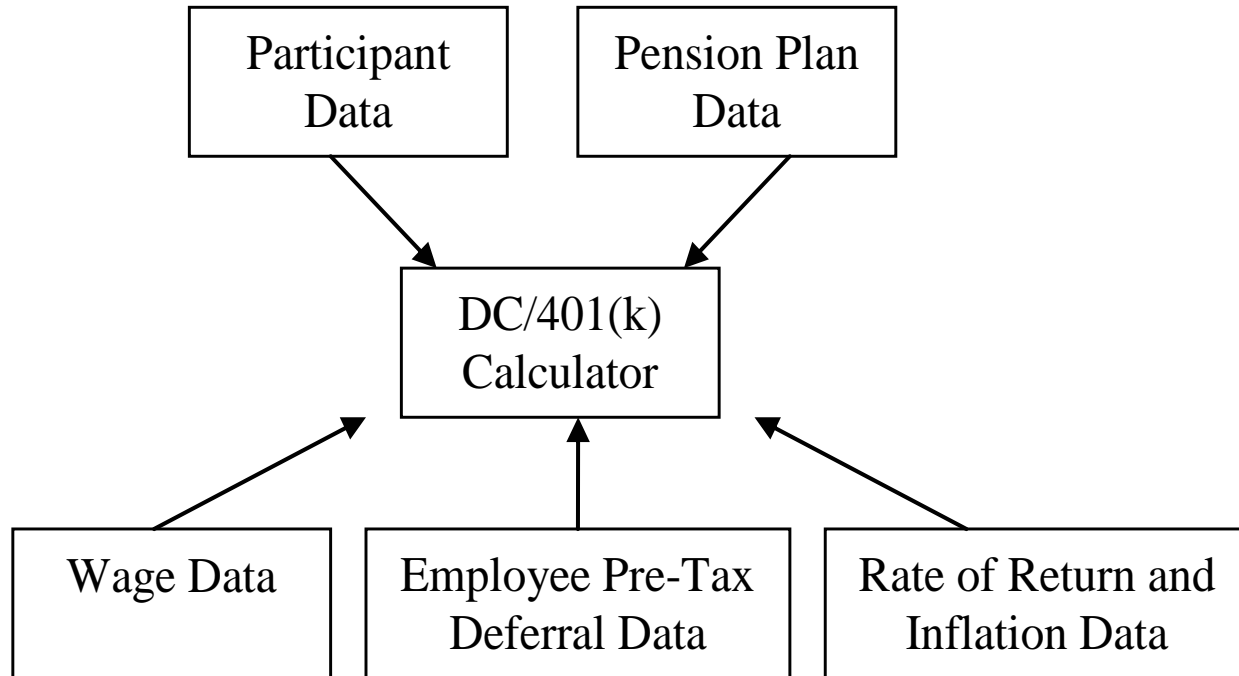
- **More flexibility in modeling DC wealth**
 - Time-varying, individual rates of return
 - Time-varying inflation rates
 - Time-varying employee pre-tax deferral rates
 - Eligibility based on plan adoption dates

DC/401(k) Calculator

- **Emphasis on use of administrative data**
 - **Covered earnings and W-2 earnings**
 - **Employee pre-tax deferrals from W-2s**
- **Written in a more transparent manner**
- **Coded in SAS and easier to modify**

DC/401(k) Calculator

Input Files for the *DC/401(k) Calculator*



Replicating PEP

	Mean	10th	25th	Median	75th	90th	95th	99th
Calculator	207	0	0	30	219	599	967	2,006
Program	215	0	0	29	220	607	990	2,228
Difference (%)	5.70	0	0	0	0	3.96	15.80	116.90

DC Plan Balance at Quit Date (\$'000)

Introducing Time Varying Rate of Return

	Mean	10th	25th	Median	75th	90th	95th	99th
Time Invariant	46	0	0	5	44	129	219	495
Time Varying	49	0	0	5	47	138	236	520

DC Plan Balance at Quit Date (\$'000)

Sensitivity of DC Wealth to Pre-tax Contribution Rate

	Mean	10 th	25 th	Median	75 th	90 th	95 th	99 th
Participant File	70	0	0	17	80	191	287	673
0 Percent	38	0	0	0	39	105	160	346
5 percent	94	12	25	59	114	202	279	536
W-2 Records	64	0	0	20	75	159	268	557

Expected Present Value of DC Wealth in 1992 (\$'000)

Sensitivity to Plan Eligibility Date

	Mean	10th	25th	Median	75th	90th	95th	99th
Eligibility from Hire Date	70	0	0	17	80	191	287	673
Restricted Eligibility	59	0	0	16	70	154	234	503

Expected Present Value of DC Wealth in 1992 (\$'000)

HRS Original Cohort Vs. War Babies

	Mean	10th	25th	Median	75th	90th	95th	99th
Original Cohort	133	0	0	35	130	336	598	1,485
War Babies Cohort	120	0	0	24	158	321	534	940

Expected Present Value of DC Wealth in Entry Year (\$'000); Full Sample

HRS Original Cohort Vs. War Babies

	Mean	10th	25th	Median	75th	90th	95th	99th
Original Cohort	152	0	0	40	151	391	705	1,559
War Babies Cohort	200	0	37	126	263	485	651	1089

**Expected Present Value of DC Wealth in Entry Year (\$'000);
Subsample with Matched Earnings Records**

Findings

- 1. Details of actual importance of various modeling assumptions laid out in paper**
- 2. “Typical” DC wealth estimates from PEP**
 - A. Overstate 401(k) wealth by 40%**
 - B. Overstate total DC wealth by 20%**

Findings

- 3. With administrative data, original cohort**
 - A. Mean 401(k) balance in 1992 was \$15,205**
 - B. Median balance was \$0**
 - C. Majority of eligible employees did not participate**
 - D. 44% of balance due to employer match**

Findings

- 4. With administrative data, WB cohort**
 - A. Mean 401(k) balance in 1997 was \$78,000**
 - B. Median balance was \$31,000**
 - C. 24% of total balance due to employer match**
 - D. Growing importance of employee saving in 401(k)s for younger cohort**

Concluding Remarks

- **Most researchers want off-the-shelf pension wealth measure**
- **But quality of wealth measure depends heavily on**
 - **Modeling assumptions**
 - **Use of administrative data**
- **Requires careful thought in research design**
- **Extend to EBB cohort when data available**