Dynamics of Individual Information about Social Security

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Retirement planning

- intertemporal problem with long horizon; need to form expectations
- involves financial planning

Requires information:

- Social Security, employer pensions (if individual has one)
- other financial options
- expectations about events that affect the financial position

Little known about planning process leading up to retirement:

- What information do individuals use?
- When do they acquire it and/or act on it?

Prior studies (and some presentations today)

Raise considerable concern about

- widespread poor financial literacy
(Lusardi and Mitchell, 2005)

- inertia and lack of financial planning
(Mardrian and Shea, 2001; Lusardi, 1999, 2001, 2003)

- lack of knowledge about their retirement resources
(Mitchell '88, Gustman and Steinmeier '2001)

Yet, in Italy …
individuals forecast their replacement rates from pensions fairly accurately.
(Japelli, 1995; Miniaci, Monfardini and Weber, 2002)

In this study

- show evidence from the U.S. on Social Security expectations
  → situation not as bad as found in previous studies

- study extent of misperceptions about Social Security benefits in a dynamic context

- relate misperceptions about Social Security to measures of well-being in retirement

My findings differ from prior findings …

Because

- study information / knowledge in dynamic setting (cross-section results tend to be misleading)

- account for sources of uncertainty (timing of retirement, risks related to health, earnings, job loss)

- recognize that value of the same information differs across individuals (e.g., by distance from event)

This study: Information about Social Security

- acquire information if
  benefit > cost

- benefit varies with
  * relevance of the information
  * size of mistake relative to economic resources

- cost varies with
  cognitive ability
  accumulated stock of related knowledge

DATA: Health and Retirement Study (HRS)

- U.S.
- individuals age 51-61 in 1992 and their spouses
- follows the same individuals over time
- interviews every two years
- six waves of data (1992, 1994, … 2002)
- very rich information on economic status, health, expectations …

Expectations about Social Security in HRS

6 waves, 1992 – 2002

Do you (spouse/partner) currently receive SS benefits?

(no) *Do you expect to receive SS benefits at some time in the future?*

(yes) *At what age do you expect to start collecting these benefits?*

If you start collecting these benefits then, how much do you expect the benefit payments to be in today's dollars?

Expectations and Uncertainty

Expectations about SS contain uncertainty about

- future events such as earnings, job loss
- the SS program
- individual's own past earnings histories

Question design is not optimal and leads to increased non-response and measurement error.

Expect some missing or noisy observations

≠ lack of knowledge

Expectations about Social Security in HRS

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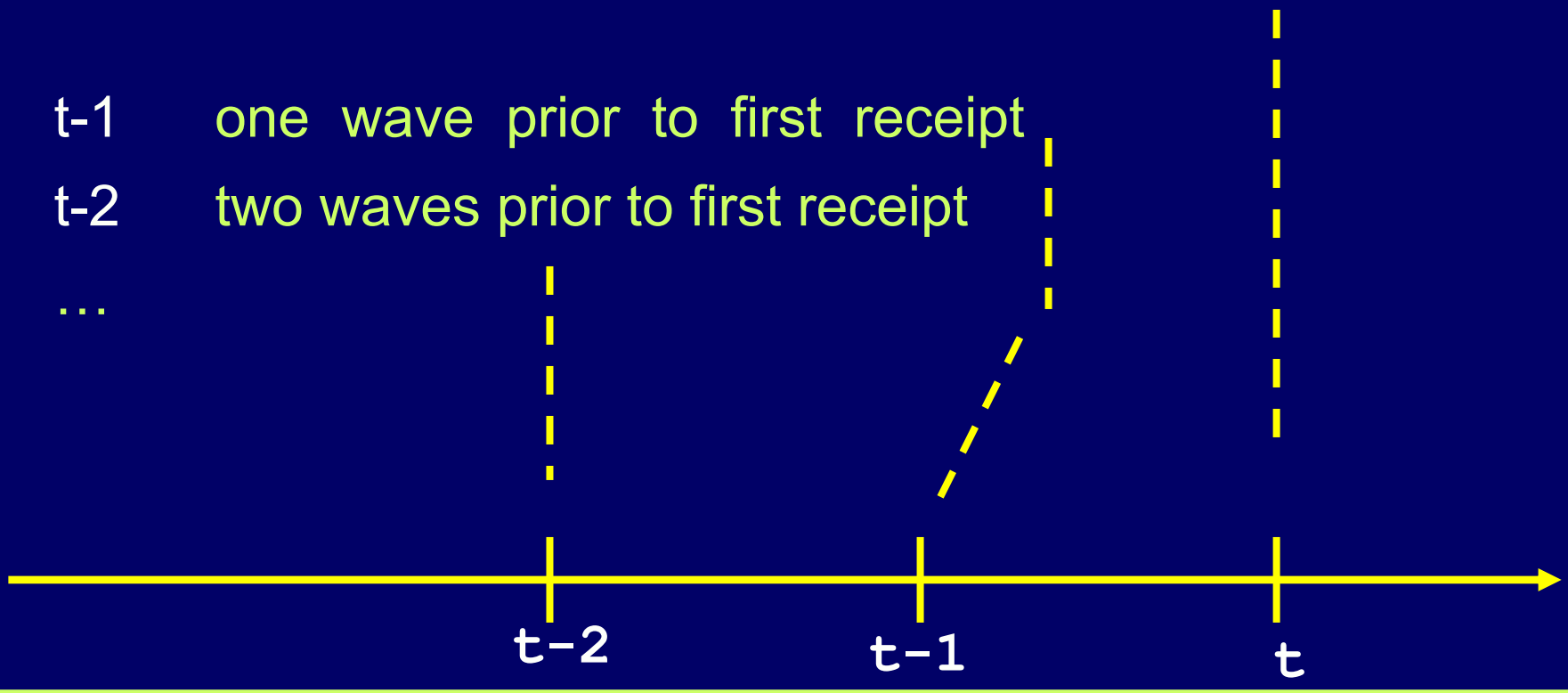
Approach: study **SS expectations with reference to SS benefits observed at first receipt**

Let t be the wave in which R starts receiving SS benefits

t-1 one wave prior to first receipt

t-2 two waves prior to first receipt

…



Expectations about future Social Security receipt

(yes / no) answer categories

→ no room for uncertainty

- virtually no item non-response
- high accuracy which increases further the closer the event
- inaccuracy largely related to genuine uncertainty about eligibility

Accuracy of Expected Claiming Age

Percent within one year of actual claiming age.

Number of waves before receiving SS benefits	Length of panel, including wave t		
	3 waves N=2699	4 waves N=2569	5 waves N=1646
1	81.6	82.4	81.8
2	71.7	72.4	71.3
3		67.1	67.6
4			61.2

- **Substantial updating leading up to the event**
- **Accuracy increases**

Expected Benefit Amounts

HRS cohort, financial respondents own reports

	Survey Year					
	1992	1994	1996	1998	2000	2002
Reports Value	2704	2561	2723	2145	1685	1012
Brackets	12	-	-	-	-	276
don't know / refuse	3359	2008	1405	1213	852	158
Item non-response [percent]	55.29	42.28	33.98	36.12	33.58	10.93

Responses about Expected Benefit Amounts

Number of waves before receiving SS benefits	Fraction reporting an expected amount [%]
1	74.3
2	71.2
3	64.4
4	55.2

N = 1964, panel. Source: Rohwedder and Kleinjans (2004)

Once a non-respondent does not mean always a non-respondent: Only 7% would never respond in 4 wave panel (without brackets).

Probability of reporting an expected benefit amount

- Multivariate analysis
- observations from all waves pooled (N=42,101)
- include multiple observations on same individuals (up to six)

Non response varies systematically with

distance from claiming (-)
uncertainty about timing of claiming (-)
uncertainty about related future events (-)
income, wealth (+)
low education (-)

Probability of reporting an expected benefit amount
effect of distance from claiming

		Odds Ratio	P-value
Age (in years)		1.012	0.014
Expected distance from claiming		0.961	0.000
Probability of working past 62	<50	-	-
	=50	0.864	0.000
	>50	0.923	0.006

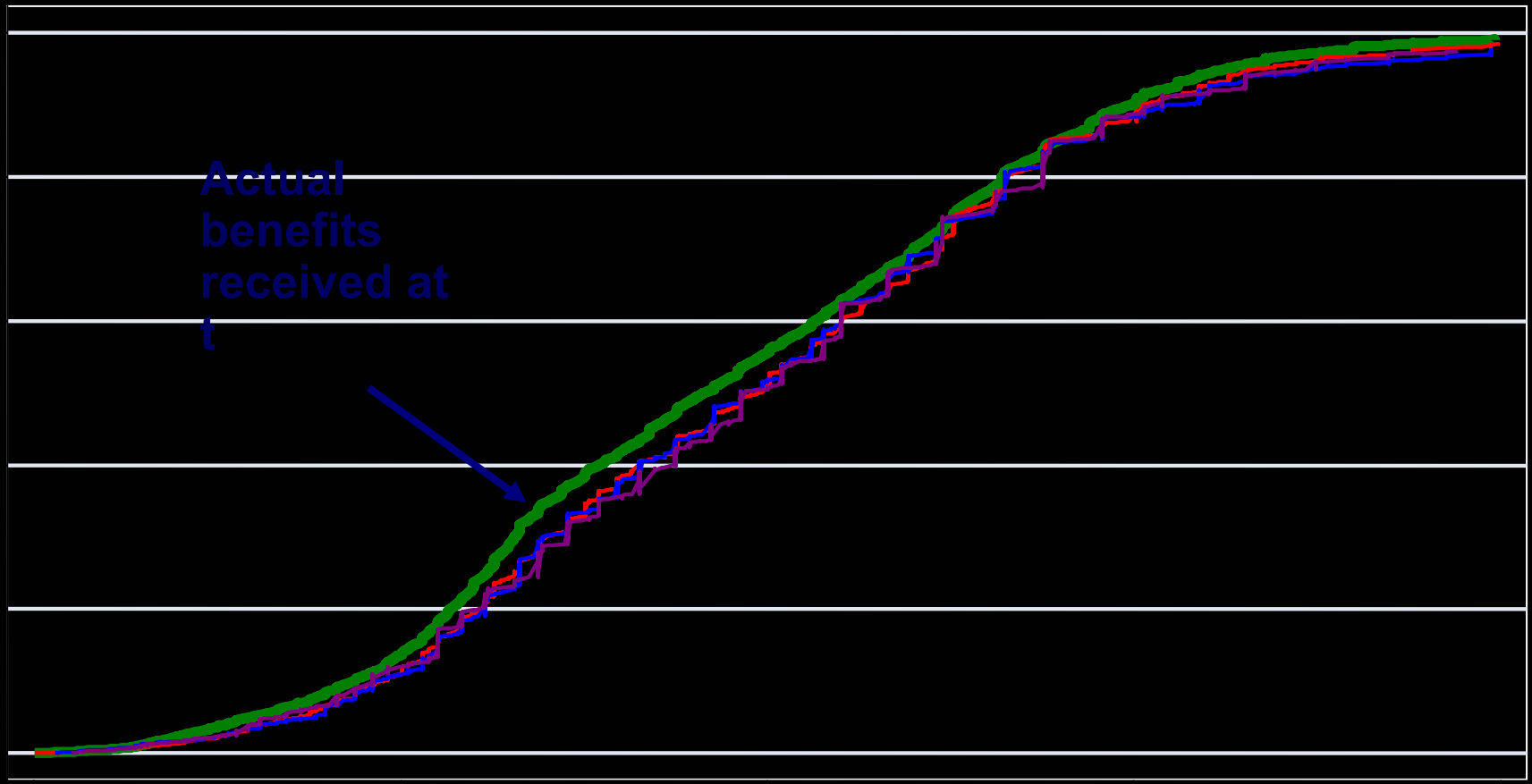
Probability of reporting an expected benefit amount
effect of uncertainty/risk

		Odds Ratio	P-Value
Health (self-rated)			
	excellent	1.074	0.022
	very good	1.085	0.002
	good	-	-
	fair	0.939	0.074
	poor	0.879	0.021
Subjective Probabiliity of losing one's job over the next 12 months	<50	-	-
	=50	0.929	0.090
	>50	1.145	0.010
Subjective Probability of work limiting health event over next 10 years	<50	-	-
	=50	1.017	0.561
	>50	1.053	0.135

Accuracy of Expectations about Benefit Amounts

How does population distribution of expected benefits compare with received amounts?

Cumulative Distribution of Expected SS Benefits



Source: Rohwedder and Kleinjans (2004)

Distribution of individual deviations from t-1 to t

Deviation = amount received at t – expected amount at t-1

	Abs. Deviation	Percentage Deviation
N	3,540	3,540
Mean	-35	-14.1
P10	-2,781	-36.2
P25	-868	-10.5
P50	54	0.6
P75	1,180	11.9
P90	3,192	29.4

Distribution of percent deviations

at t-1, t-2, t-3

individuals who started claiming as planned (78% at t-1)

	t-1	t-2	t-3
N	2,744	1,785	1,131
mean	-8.8	-7.5	-5.0
p10	-28.2	-42.5	-40.4
p25	-7.0	-11.3	-13.7
p50	1.3	3.9	4.9
p75	11.5	17.5	19.9
p90	25.8	34.1	35.6

individuals who claimed earlier than planned (exp.>actual) 11% at t-1

	t-1	t-2	t-3
N	394	444	295
mean	-32.9	-25.3	-23.1
p10	-56.7	-83.1	-92.7
p25	-26.8	-36.6	-39.4
p50	-5.2	-6.7	-3.9
p75	8.9	14.8	16.6
p90	33.4	35.2	40.4

Financial respondent held constant.

What drives early claiming?

Probability of claiming earlier than anticipated (logit)

		Odds Ratio	P>|z|
Self-rated Health	excellent	0.802	0.002
	very good	0.996	0.944
	good	-	-
	fair	1.178	0.046
	poor	1.284	0.079
Reached claiming age	age>=62	4.631	0.000
Means of insuring adverse shocks	married/partnered	0.854	0.039
	Employer pension		
	one plan	0.635	0.000
	2 or more plans	0.541	0.000
Time at risk	expected distance	1.753	0.000
Education	less than HS	0.827	0.015
	HS & GED	0.818	0.003
		-	-
	college or more	0.862	0.062

Who over- or underestimates benefits substantially?

Probability(deviation<-20%|deviation>20%)

More likely to be accurate:

- multiple pensions on current job

Less likely to be accurate:

- large distance from expected claiming age
- uncertainty about timing of claiming
- lowest income quartile
- highest wealth quartile

Conclusions so far

- lack of knowledge less severe than previously found

- non-response systematically related to factors that make knowing the amounts more difficult like
  - uncertainty
  - larger distance from event

- still some groups who under or overestimate, but we can study these in much more targeted way in dynamic context

Question of interest for policy makers

To what extent do the observed misperceptions lead to adverse outcomes in retirement?

Impact of misperceptions on

Comparison of post- to pre-retirement years

Percent Deviation = (SS received at t – expected at t-1)/received at t

Calculated at individual level

Retirement years compared to before	N	Mean Percent Deviation between t and t-1
1. better	939	- 3.0
3. about same	536	- 5.5
5. not as good	220	- 9.6
Total	1,695	- 4.7

Reasons for retirement: poor health

Retirement reasons: poor health	N	Mean percent deviation betw t and t-1
1.very important	265	- 10.2
2.moderately important Or 3.somewhat import.	246	- 5.3
4.not important at all	1,262	- 4.5
Total	1,773	- 5.5

Concerns about retirement: Having enough income to get by

Retirement concerns: not enough income to get by in retirement	N	Mean percent deviation betw. t& t-1
1. worry a lot	702	- 7.3
2. worry somewhat	611	- 4.7
3. worry a little	377	- 5.7
4. worry not at all	921	- 5.9
Total	2,611	- 6.0

Recollections about change in total spending at retirement

Categories: Percent deviation SS bens t and t-1	N	Percentage change in spending at retirement: mean	median
overest. by > 20%	115	-14.5	-10.0
overest. by <=20%	266	-10.7	0.0
underest. by<=20%	319	-10.3	0.0
underest. by >20%	94	-11.6	0.0

Conclusions

- Findings from panel data analysis show different results from prior (cross-section) studies:
  lack of knowledge less severe
- Important when using and interpreting these data to
  - control for distance from claiming.
  - take into account uncertainty.
- Substantial updating of expectations about timing of claiming
- About 20 percent of sample experience shocks and show larger deviations (leading to earlier or later than anticipated claiming)

Conclusions (cont.)

Some indication that misperceptions about future Social Security benefits lead to worse outcomes in retirement;

- sizeable for some.

Next:

- study evolution of expectations to learn directly about information acquisition and retirement planning.
- relate to saving behavior

Longitudinal studies the only way to

- establish causality on ret. planning and fin. literacy;
- improve our understanding of ret. planning process.