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Consumption in Retirement: Recent Developments

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Recent Work on the "Retirement Consumption Puzzle"

- **Aggregate the results of 10 years of work on household changes in spending upon retirement.**

- My goal: Develop a Set of Stylized Facts

  - Aguiar and Hurst (2005, 2007)
  - Ameriks, Caplin and Leah (2007)
  - Banks, Blundell, and Tanner (1998)
  - Battistin, Brugiavini, Rettore, and Weber (2006)
  - Bernheim, Skinner, and Weinberg (2001)
  - Fisher, Johnson, Marchand, Smeeding, and Torrey (2006)
  - Haider and Stephens (2007)
  - Hurd and Rohwedder (2003, 2006)
  - Laitner and Silverman (2005)
  - Miniaci, Monfardini, and Weber (2003)
  - Smith (2006)

Five Stylized Facts

1. Expenditure declines at the time of retirement vary tremendously across consumption categories.

2. The spending declines (for the average household) appear to be limited to two categories:

    - food
    - work related expenses (clothing, personal care, and travel)

    - There is little evidence of declines in spending within any other consumption category (for the average household)

3. There is no decline in food consumption despite the decline in food expenditure.

Five Stylized Facts

4. There is heterogeneity in expenditure declines at the time of retirement <u>across people</u>.

   - Low wealth households (in the bottom quartile of wealth to income distribution) experience greater declines in spending than do higher wealth households.

5. Many of these low wealth households experienced involuntary retirement (often do to a health shock).

Conclusions: Retirement Consumption Puzzle is Dead

- **There is no retirement consumption puzzle for the vast majority of households!**

- A standard lifecycle model of (relatively patient) households augmented with home production, work related expenses, and idiosyncratic health shocks fits the data very well.

  - Similar to the results of Scholz et al (2006) when modeling wealth accumulation.

- Some households may be ill prepared for retirement (myopic, bad planners, time inconsistent preferences, etc.). However, these households are a relatively small fraction of the total population (0 - 25%).

- We should focus our attention on understanding these such households.

Overview: The Retirement Consumption Puzzle

- What is the puzzle?
  - At the time of retirement, household spending seems to fall sharply (relative to pre-retirement trends).
  - At odds with a standard model of intertemporal optimization.
  - Magnitudes are large (~10-20%)
  - Robust finding across countries.
  - Literature, broadly, deals with the endogeneity of retirement.

Facts 1 and 2: Changes in Spending by Category

- Fisher et al. (2006) – CEX Data

Identification: Cohort analysis

Compare non-retired 61-65 year olds to retired 66-70 year olds

Results for the second cohort:

Food at home:	-8.3%
Food away from home:	-15.9%
Total out of pocket consumption expenditures:	-3.1%
Total consumption service flows:	-1.2%

Conclusion: Food declines more sharply than measures of total consumption.

Facts 1 and 2: Changes in Spending by Category

- Miniaci et al. (2003) – Italian Survey of Family Budgets

Identification: Cohort analysis

Analyze spending patterns for older households by category.

Results:

At the time of retirement, all of the declines in non-durable consumption occurred in:

1) work related categories (clothing and transportion)
2) food

Facts 1 and 2: Changes in Spending by Category

- Battisin et al. (2006) – Italian Survey on Household Income and Wealth

Identification: Cohort analysis

Identify off of differences in Italian pension eligibility

Results:

Find similar results to Miniaci et al (2003).

Conclude:

"The conclusion that we draw from this exercise is that our estimated retirement consumption drop could well be due entirely to a reduction of work-related expenses and a substitution away from market goods to home production of food"

Facts 1 and 2: Changes in Spending by Category

- Banks et al. (1998) – Britain's Family Expenditure Survey

Identification: Cohort analysis

Plot trajectories by age

Results:

Food expenditures (necessities) decline much more sharply than does the expenditures on other non-food/non-work related categories

Facts 1 and 2: An Exception

- Laitner and Silverman (2005) – CEX Data

- Identification: Cohort analysis
  Predict retirement probabilities from CPS
  Adjust CEX data to make it representative of NIPA

- Results:

  Total expenditures decline 16% at the time of retirement.

- Differences – Identification comes from predicting retirement probabilities by age. Households who retire younger often due so because of health shocks. (Those retiring later are "richer").

Facts 1 and 2: Aguiar and Hurst (2007)

- Use CEX data (NBER – CEX Files)
- Cohort analysis (average over cohorts)
- Compare 60-62 year olds with 66-68 year olds (adjust for household size).
- Examine 14 detailed consumption categories

Facts 1 and 2: Aguiar and Hurst (2007)

Replicate Fisher et al.

Total Non-Durable (no housing services)	-0.07 (0.03)
Total Expenditure (no housing services)	-0.02 (0.03)
Total Expenditure (with housing services)	0.01 (0.02)

By Categories

Food	-0.11 (0.02)	Shelter (Rent)	0.07 (0.03)
Clothes/Personal Care	-0.21 (0.06)	Utilities	0.01 (0.03)
Transport	-0.09 (0.04)	Entertainment	0.08 (0.05)

Removing Food, Clothing and Transport

Total Expenditure (no housing service)	0.07 (0.03)
Total Expenditure (with housing services)	0.07 (0.03)

Facts 1 and 2: Conclusion

- **The decline in spending at the time of retirement is limited to three categories:**

  Food

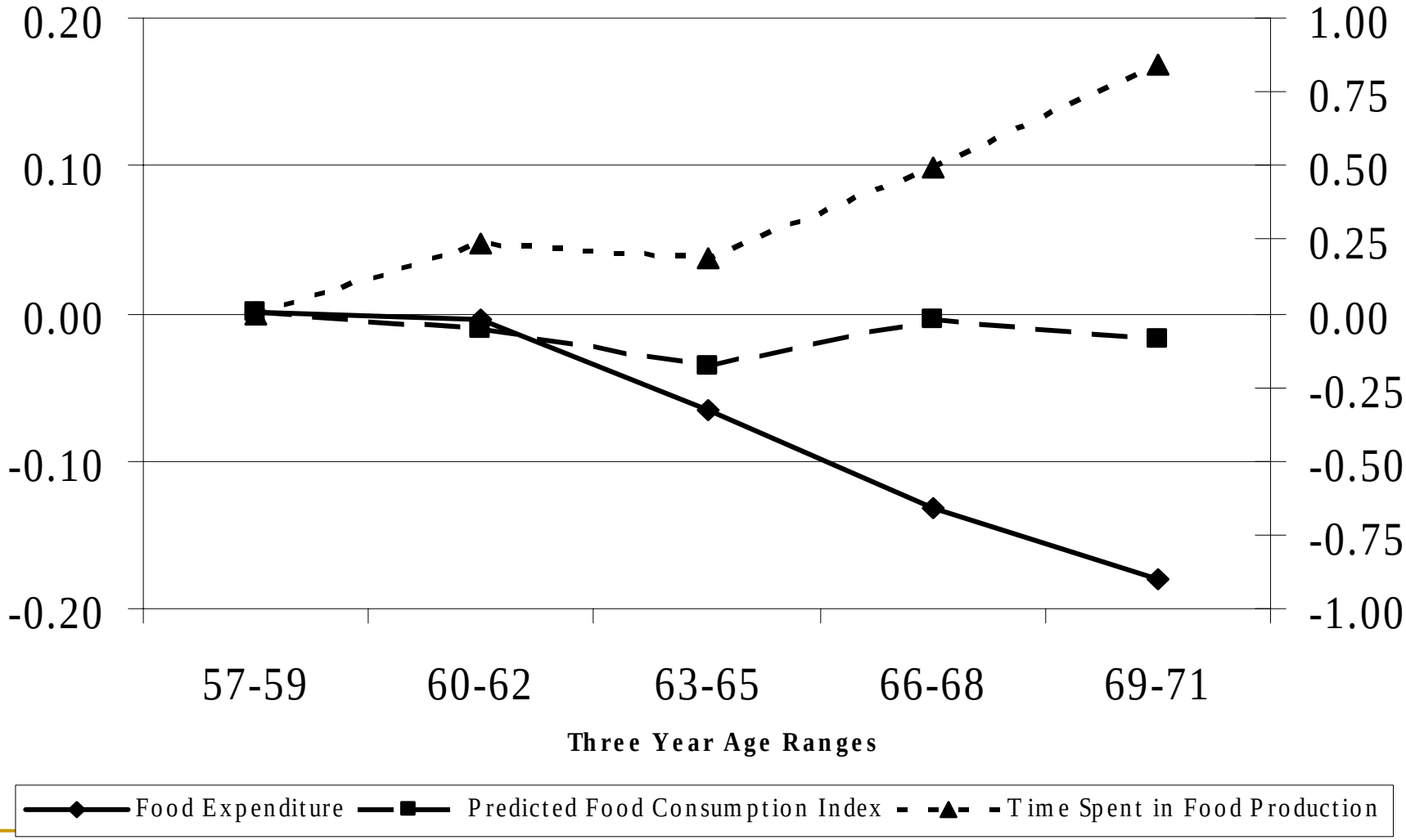
  Transportation

  Clothing/Personal Care

- If there is a retirement consumption puzzle for the average (median) household, it only occurs in a subset of consumption categories.

- Clothing and transportation are often considered “work related” expenditures.

Fact 3: Food Spending At Retirement (Aguiar and Hurst 2005)



Fact 3: Conclusion

- Retirees spend much more time on “food production” (Aguiar and Hurst 2005 and 2007, Hurd and Rohwedder 2003 and 2005, and Schwerdt 2005)

- The additional time spent on home production valued at a realistic opportunity cost can explain the entire decline in food expenditures holding food consumption constant (Aguiar and Hurst 2005)

- Actual food consumption (using detailed food diaries) remains constant during retirement.

Fact 4: Heterogeneity in Expenditure Declines

- **Evidence that the size of the decline in expenditures at the time of retirement differs by household pre-retirement wealth.**

- Bernheim, Skinner, and Weinberg (2001)

  - "Composite Food expenditures" declines by pre-retirement wealth to income ratios:

Bottom quartile	**31.2%**
Third quartile	13.8%
Second quartile	13.9%
Top quartile	8.9%

Fact 4: Heterogeneity in Expenditure Declines

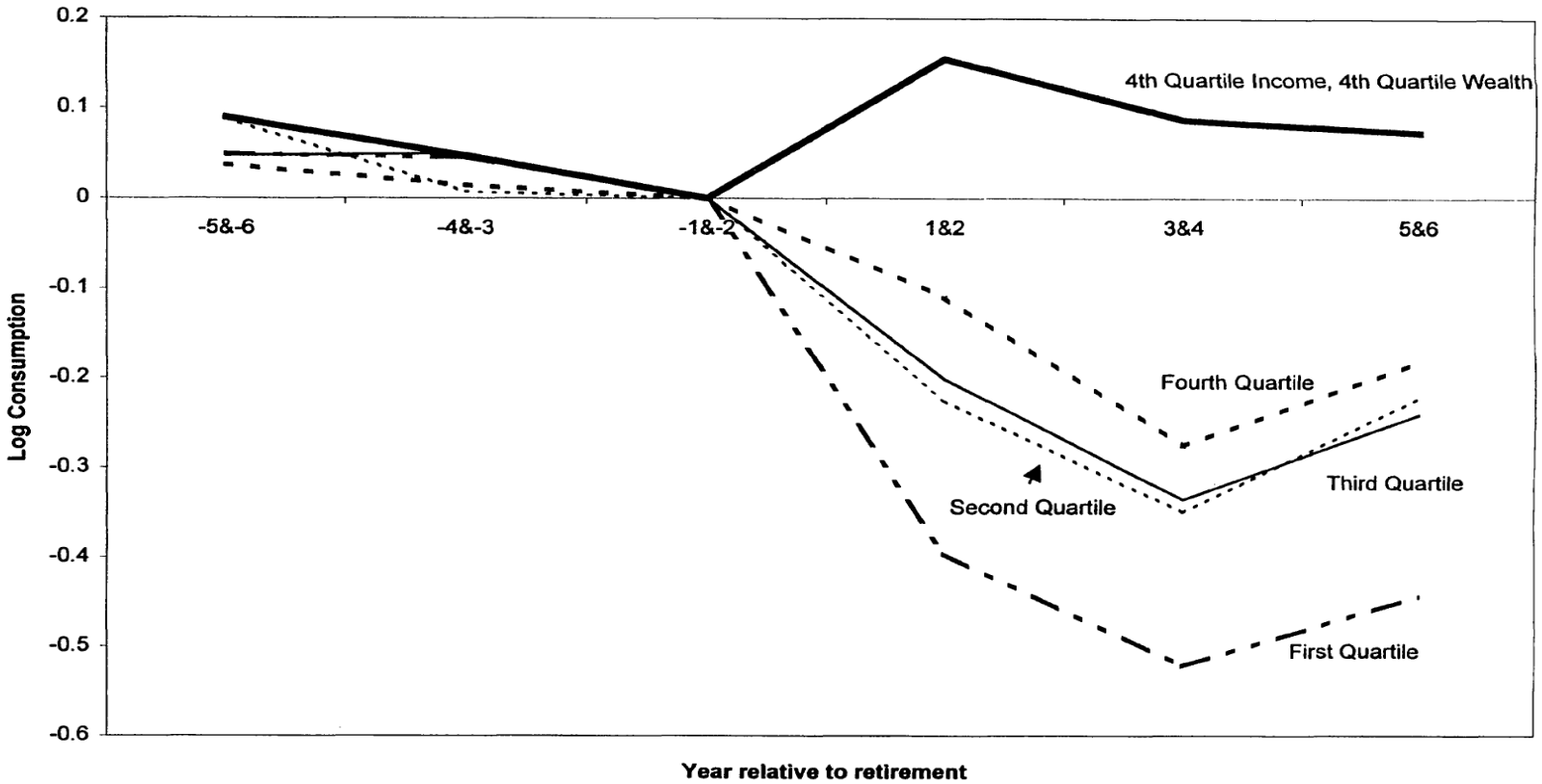


FIGURE 4. CHANGE IN CONSUMPTION AT RETIREMENT, BY WEALTH QUARTILE

Results for the bottom quartile of income replacement rates

Fact 4: Heterogeneity in Expenditure Declines

- Similar evidence found in many other studies
  - Hurst (2006) – PSID data
  - Hurd and Rohwedder (2003, 2005) - CAMS/HRS data

    Only ½ of retirees report experiencing a decline in total expenditures associated with retirement.

    The decline was largest for households in the bottom wealth quartile.
  - Ameriks et al. (2007) – TIAA-CRFE sample

    Similar results as Hurd and Rohwedder

Fact 5: Unexpected Retirements

- Consumption declines differ between those who experienced an unplanned retirement vs. a planned retirement (Haider and Stephens (2007) and Smith (2006)).

- Those with unplanned retirements experience a much larger decline in expenditure than those with a planned retirement.

  Smith finds that those with planned retirements experience NO decline in expenditure at the time of retirement.

  Haider and Stephens find that only looking at planned retirements reduces the estimated decline in expenditures by 33%.

Fact 5: Unexpected Retirements

- **Hurd and Rowhedder show that nearly 30% of households report that an adverse health shock was at least moderately important in their decision to retire.**

- Show that those experiencing health shock that caused the retirement had:
  - low wealth entering retirement
  - worse health prior to retirement

- **Conclusion: A portion excess expenditure decline at retirement for low wealth households is explained by "unexpected retirement" (health shocks).**

Summary of the Facts

- For the average household, there is no evidence of any substantive decline in expenditures outside of food, clothing, and transportation.
- Entertainment spending actually increases slightly. Food **consumption** remains constant (despite declining food **expenditures**).
- This fact seems robust across countries and methodologies.
- Most households self report “no change” in spending at the time of retirement.
- Low wealth households entering retirement do experience larger declines in spending.
- A portion of these low wealth households experienced unplanned retirements, often due to health shocks.

Conclusions

- **There is no retirement consumption puzzle for the vast majority of households!**

- A standard lifecycle model of (relatively patient) households augmented with home production, work related expenses, and idiosyncratic health shocks fits the data very well.

- **Consumption and leisure appear separable in utility**.

- A potential need for better health insurance?

- A small percentage of households may actually be ill prepared for retirement. **Who are these households?**