



SOCIAL AND ECONOMIC WELL-BEING

## Explanations for the Decline in Spending at Older Ages

**Susann Rohwedder**

RAND, NETSPAR

**Michael D. Hurd**

RAND, NBER, NETSPAR

**Péter Hudomiet**

RAND

International Pension Research Association (IPRA) Webinar

March 23, 2022

We are grateful for financial support from the U.S. Social Security Administration (SSA) as part of the Retirement and Disability Research Consortium through the Michigan Retirement and Disability Research Center. The opinions and conclusions expressed are solely those of the author(s) and do not represent the opinions or policy of SSA or any agency of the Federal Government.

## **Context: Financial preparation for retirement**

Common advice based on **income replacement rate:**

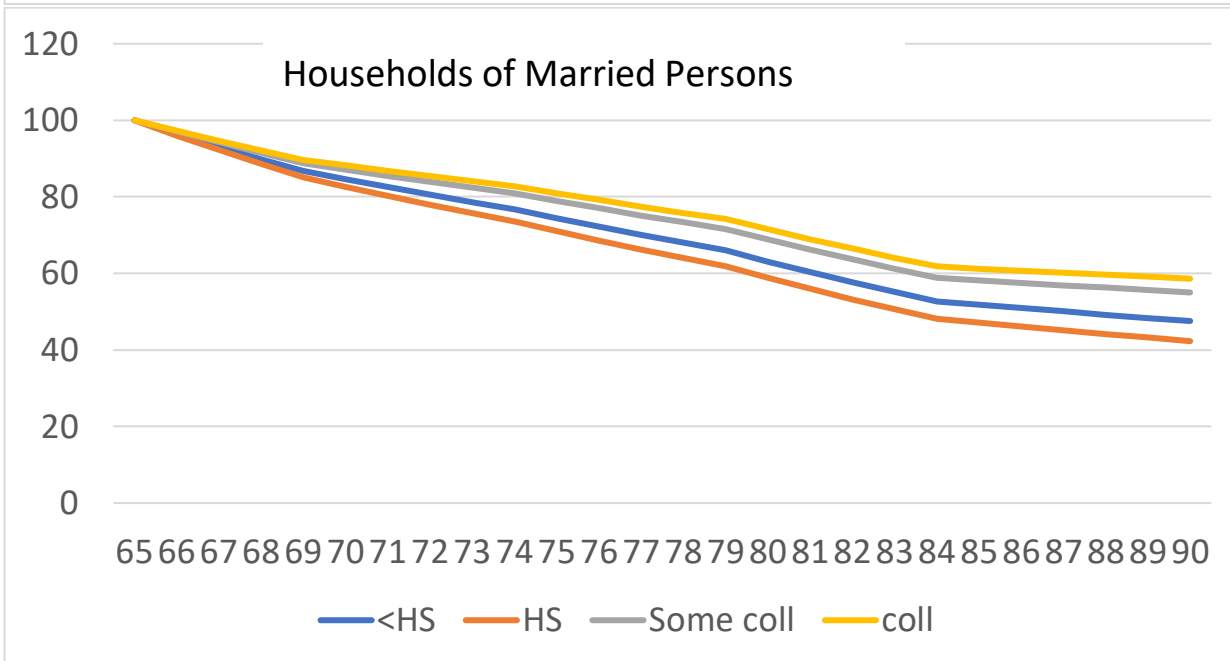
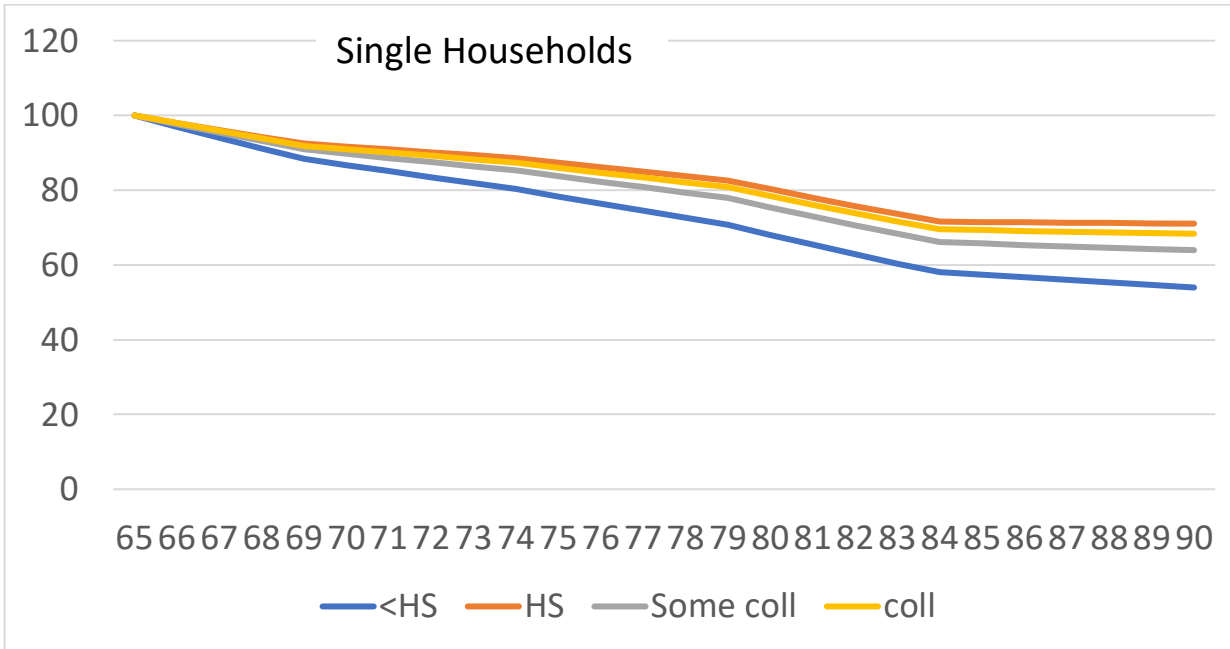
Assumes flat spending path after retirement  
(despite changes in households' circumstances over time)

**But: Actual spending paths decline in real terms.**

- Spending trajectory based on observed rates of change
- Data from Health and Retirement Study (HRS)
- Sub-study: Consumption and Activities Mail Survey (CAMS)
- elicits longitudinal observations on total household spending

**Real spending paths – decline.**  
4 education categories.

Somewhat larger slope among less educated



Source: CAMS 2003-2019. Trajectories estimated from 2-year changes in total household spending.

## What is interpretation of declining spending path?

- Chosen in a utility maximizing framework

OR

- Forced on short-sighted people who overspent/under saved

Or Mixture of both types in the population?

### **This paper**

Analyze data we added to sub study of HRS to shed light on reasons for decline.

## What is interpretation of declining spending path?

### “Yaari path”: the decline is chosen *ex ante*

- Wealth not consumed is wasted
- Therefore, consume more earlier
- With “bad luck” of surviving, reduce spending
- Force of mortality approximately exponential
  - Even with bequest motive should reduce spending at advanced old age
  - Couples more complex
    - “bequest to surviving spouse”
    - But path eventually should decline

### Implication

Declining spending path not evidence of under-saving.  
Rather, result of intemporal optimization.

## Interpretation of declining spending path (cont.)

### Behavioral

- Lack of forward-looking behavior
- Attempt to maintain pre-retirement spending level
- But consumers surprised by low levels of resources
- Logic of budget constraint requires reduction in spending with age
- Declining spending path is evidence of under-saving.

## OR: Extended Yaari-model

- Complementarity between health and some categories of spending (e.g. travel or going out when in good health)
- Or just less enjoyment from some types of spending at older ages (e.g. “already seen it all”)

Motivated by observations about budget shares.

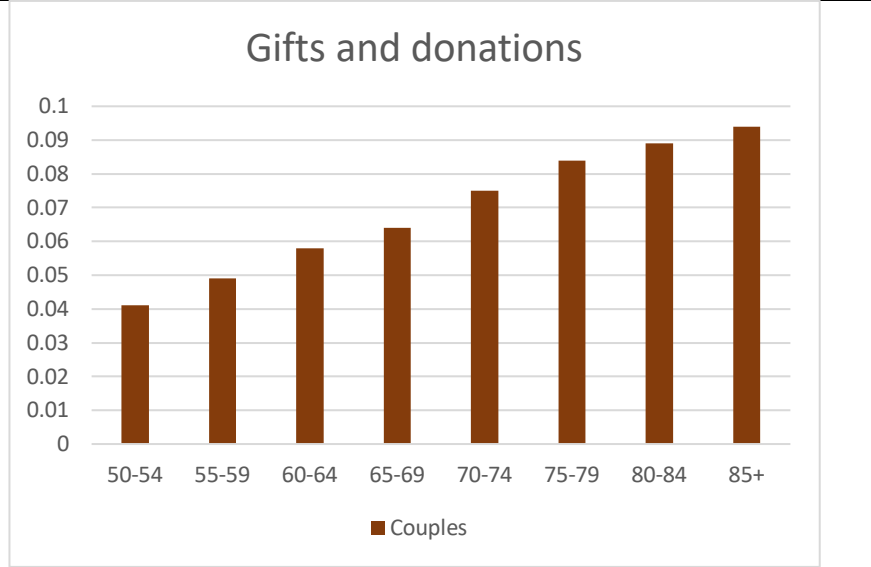
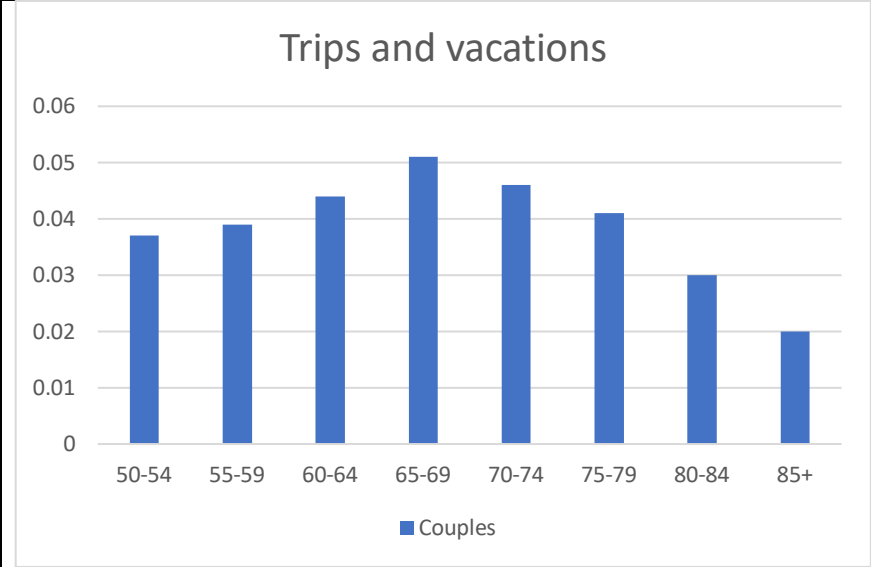
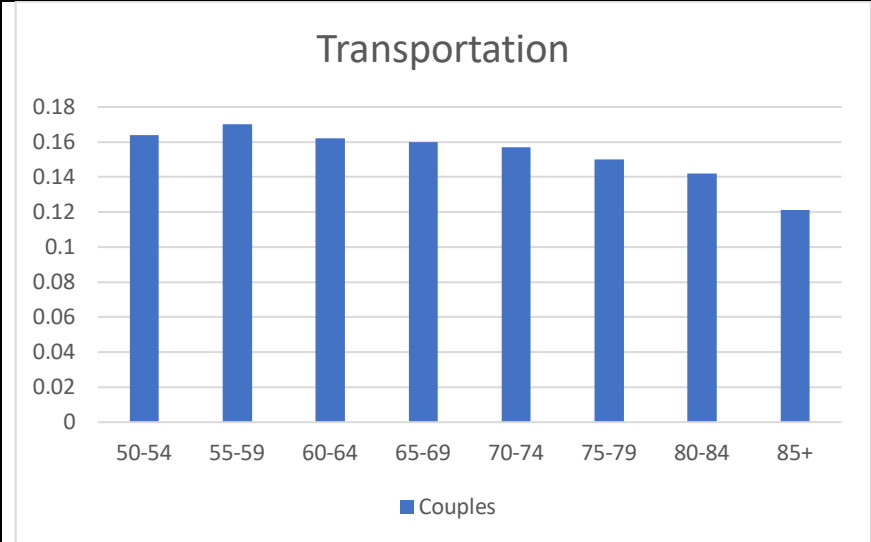
# Budget shares of households of married persons-decline in age



But could be due to budget constraint



# Budget shares of households of married persons (cont.)



## Suggests three categories of goods

1. **Substitutable for health** (health care spending itself)  
Marginal utility lower when health is better.
2. **Neutral** (gifts and donations)  
Marginal utility unchanged by health change
3. **Complementary** (Trips and vacation)  
Marginal utility is higher when health is better.

More broadly, some spending categories are related to states associated with aging

- Health
- Demographics: widowhood
- “Been There Done That” or “Seen too many airports”

## Suggests rational extended Yaari type

Agent knows health will decline

- Productivity of spending on some items will be lower in the future
- Higher spending early when spending productive
- Next time period, when health worse, reduce spending
- Declining path chosen *ex ante*

## Implications

- Declining spending path chosen *ex ante*
  - Decline not evidence of a mistake
- Less emphasis on mortality risk than in Yaari model
- Makes declining spending path more likely than simple Yaari model

### **To examine plausibility, would want to ask respondents:**

- *Has your marginal utility of spending for trips and vacations changed? (holding spending constant)*
- And similar for other health complements and substitutes

# Empirical Approach

## 1. Ask respondents

- A. Reasons for declines/increases in spending
- B. Change in enjoyment (marginal utility) of spending-related activities
- C. Do *changes* in enjoyment predict *changes* in spending?

## 2. Signs of financial distress?

- Satisfaction with financial situation  
Now and whether changed over time
- Financially constrained  
Now and whether changed over time

## We added some questions to the 2019 **Consumption and Activities Mail Survey**

CAMS, a sub study of the Health and Retirement Study (HRS)

- In year 2001, 5,000 HRS households chosen at random
- Mail-out spending survey
- Longitudinal follow-up on odd-numbered years
- Queries spending in 35 categories
- Complete measure of annual spending
- Total spending in CAMS matches total spending in Consumer Expenditure Survey quite well

## About 2,100 observations in 2019 CAMS

Perceptions of total **spending change over the last 6 years**

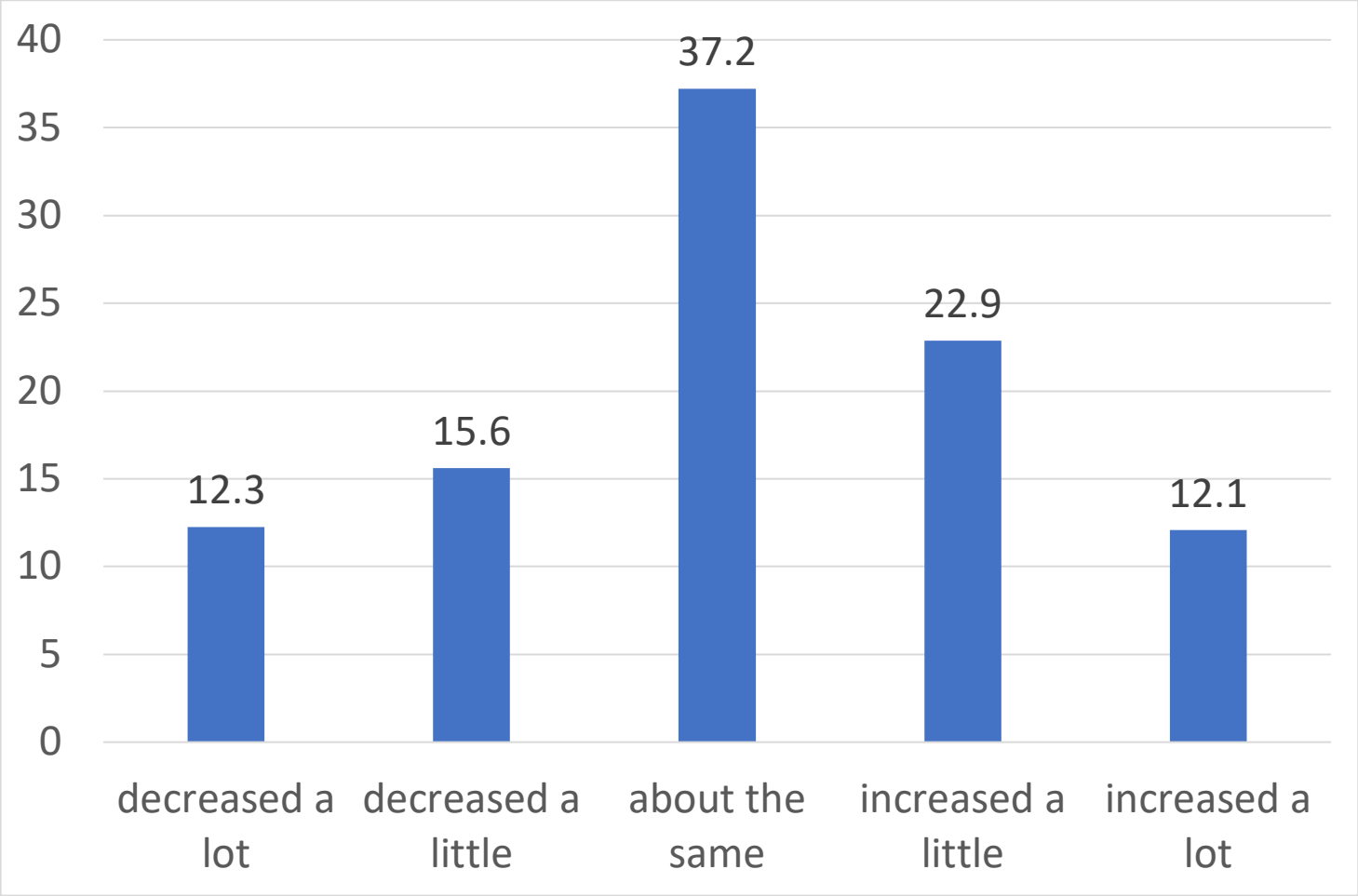
*B41. How has your household's spending changed over the past six years? Please think of what you typically spend, leaving out any unusual expenses.*

Follow-up questions: **reasons** for a spending reduction (or for an increase)

One of six reasons was...

*We/I have reduced spending on some things because we get less enjoyment from them than we used to.*

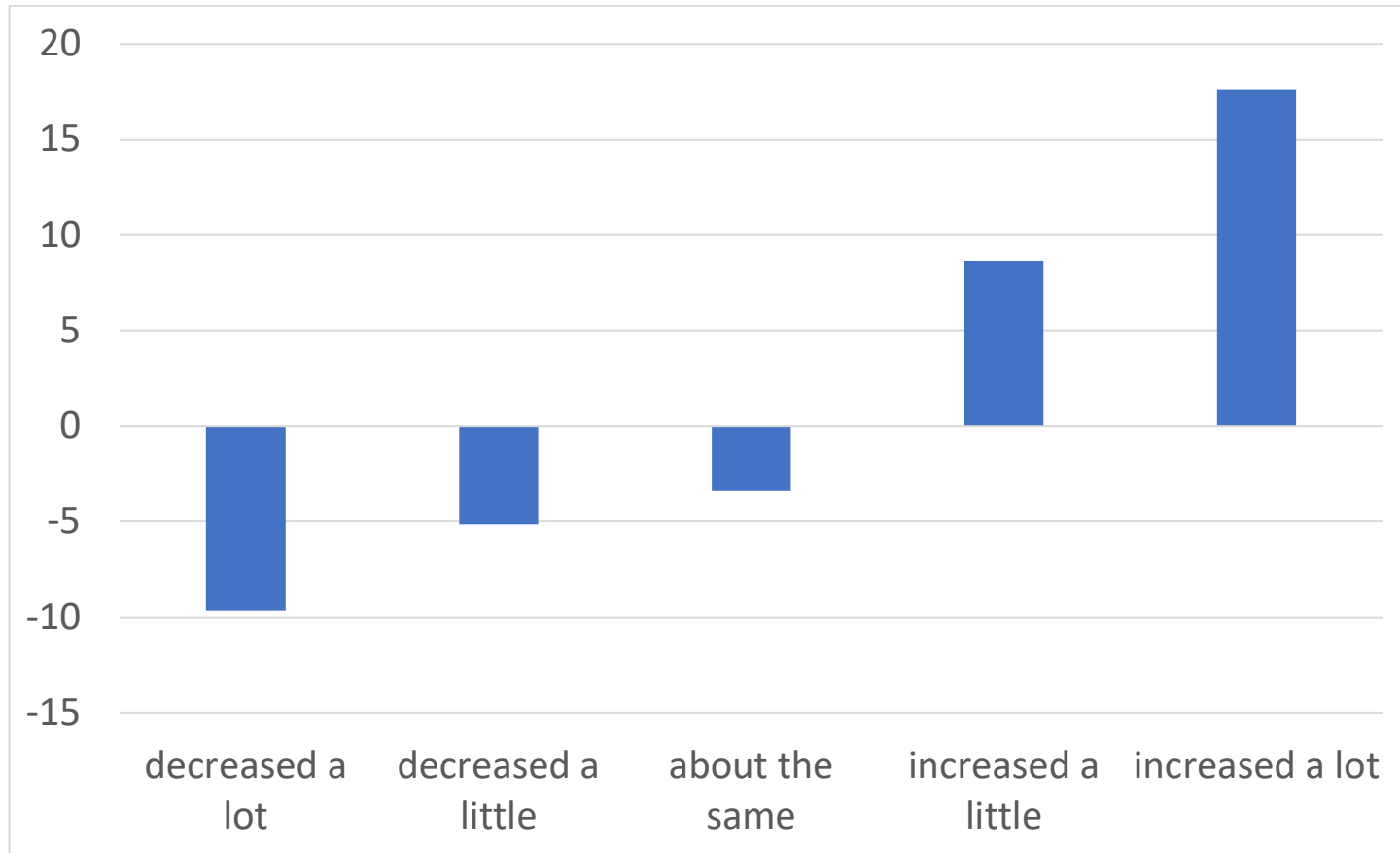
# Distribution of perceived six-year spending change



Respondent probably thinking of nominal spending

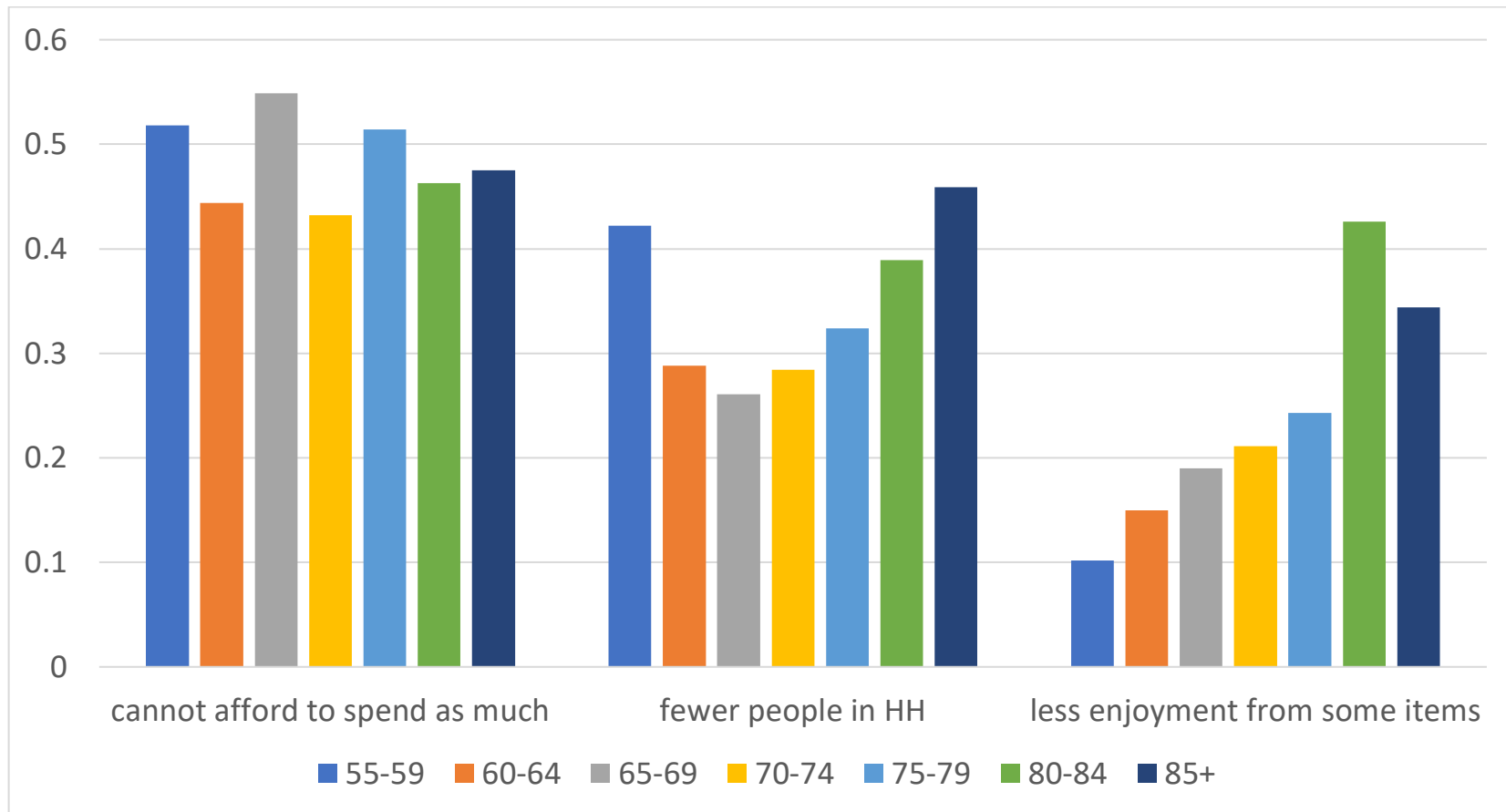


# Median of actual six-year spending change (% nominal) and self-perceived spending change. Actual CAMS 2013 and 2019



Nominal median change was -1% or -11% real.

# Reasons for a spending reduction, percent of those who reduced



Focus on changes in enjoyment

## Change in Enjoyment from Spending-related Activities

Asked of everyone.

Compared to six years ago, how much enjoyment do you (or would you) get today from *going out to eat*?

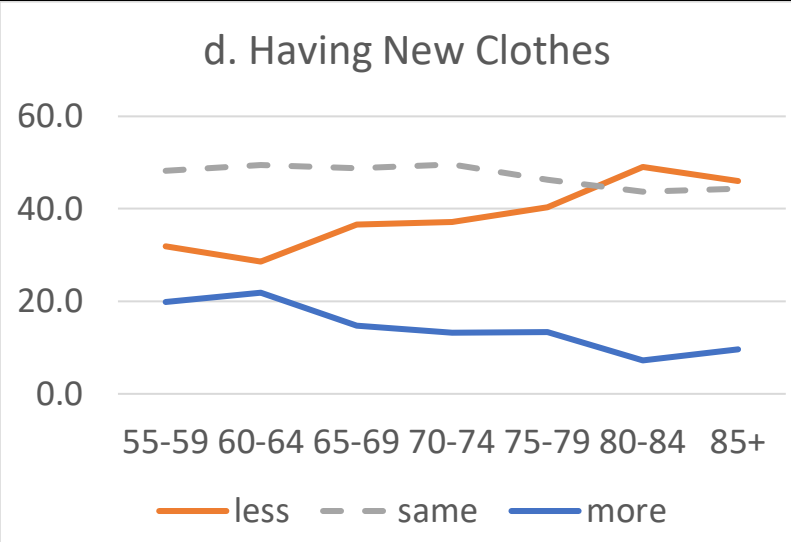
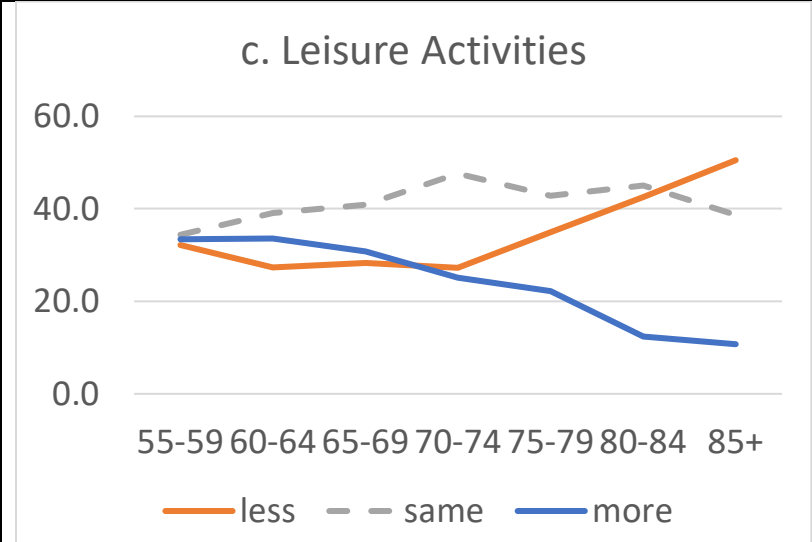
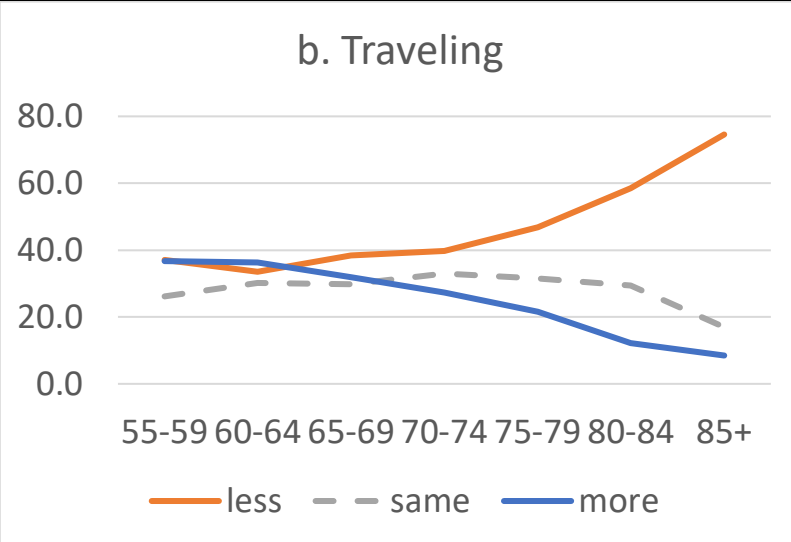
Much less, a little less, about the same, a little more, much more.

### Categories

- Going out to eat
- Traveling
- Leisure activities
- Having new clothes
- Having a new car
- Having new appliances
- Giving financial support to family/friends

Reduce to three-point scale: **less enjoyment, same, more**

# Percent of Respondents affirming each category

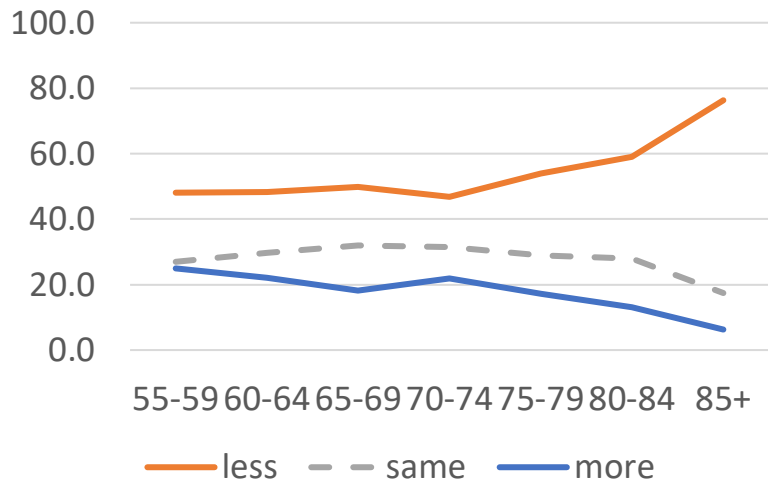


**At older ages**

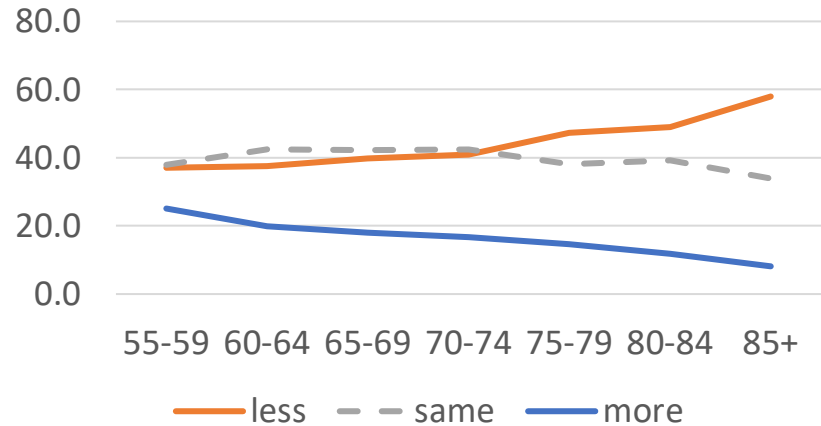
Higher percentage with **less enjoyment** (compared with 6 years ago).

Lower percentage with **more enjoyment**

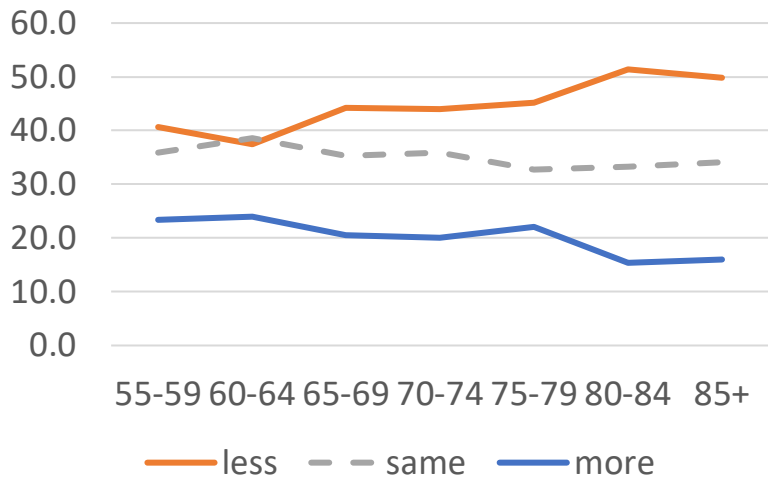
e. Having New Car



f. Having New Appliances, TV, PC, etc.



g. Giving Financial Support

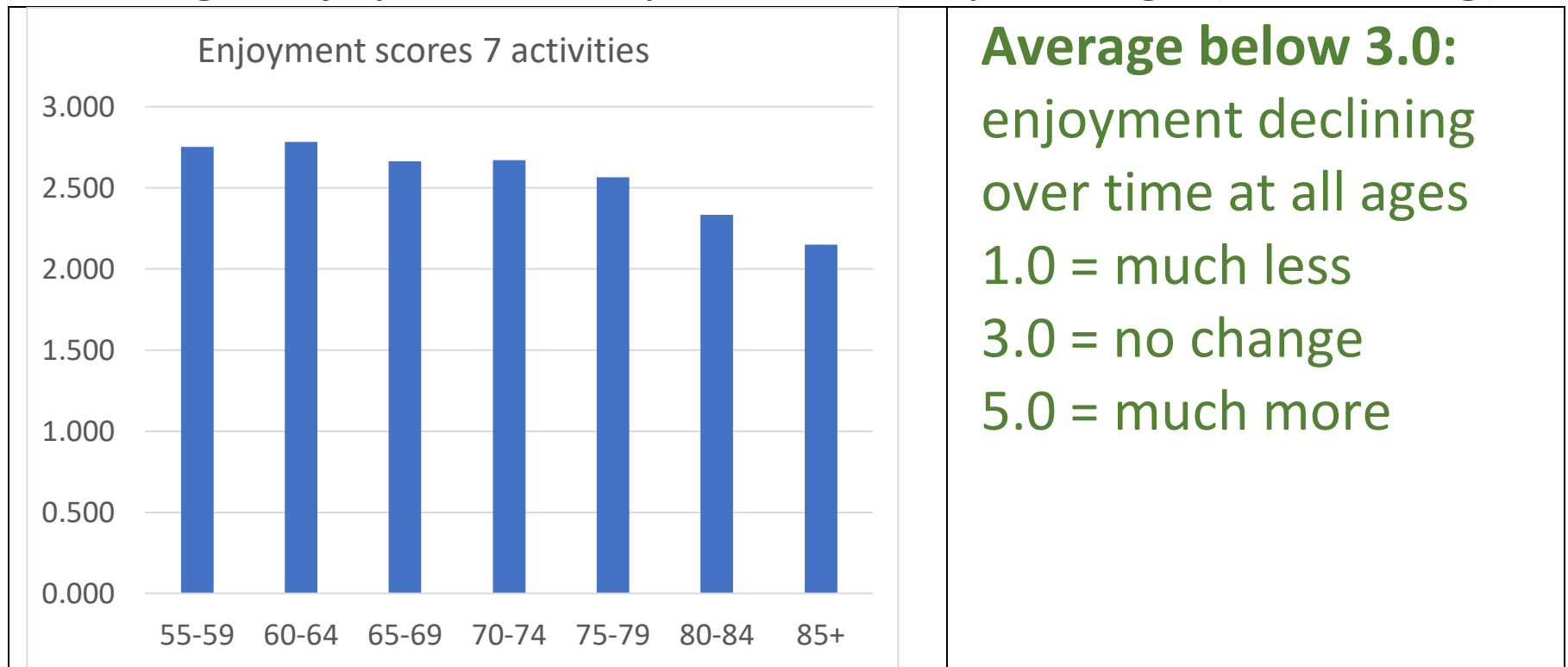


### Interpretation:

At ages 75+ spending on these items produces less utility compared with six years ago.

## Aggregate across activities.

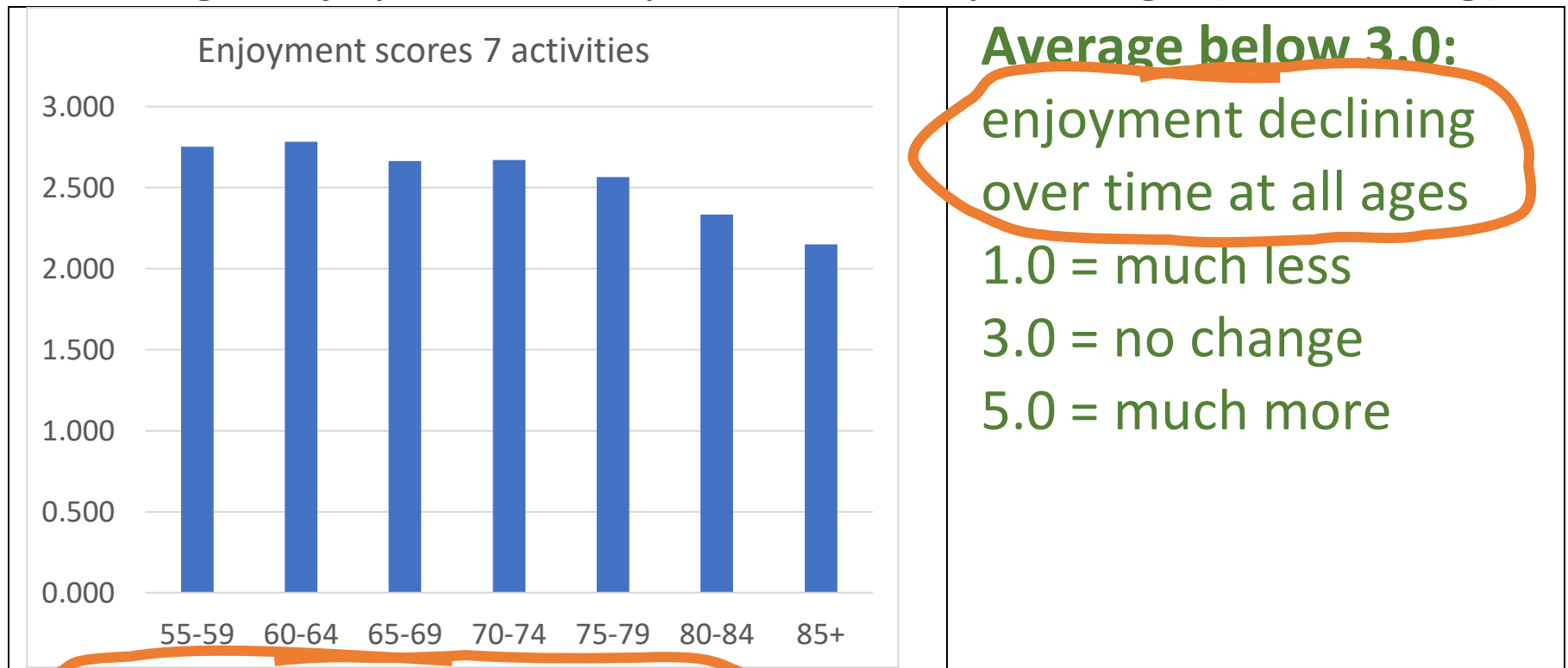
Average enjoyment compared with 6 years ago (1-5 scaling).



Decline accelerates with age: 0.6 of an enjoyment category (2.8 age 55-59 => 2.2 age 85+)

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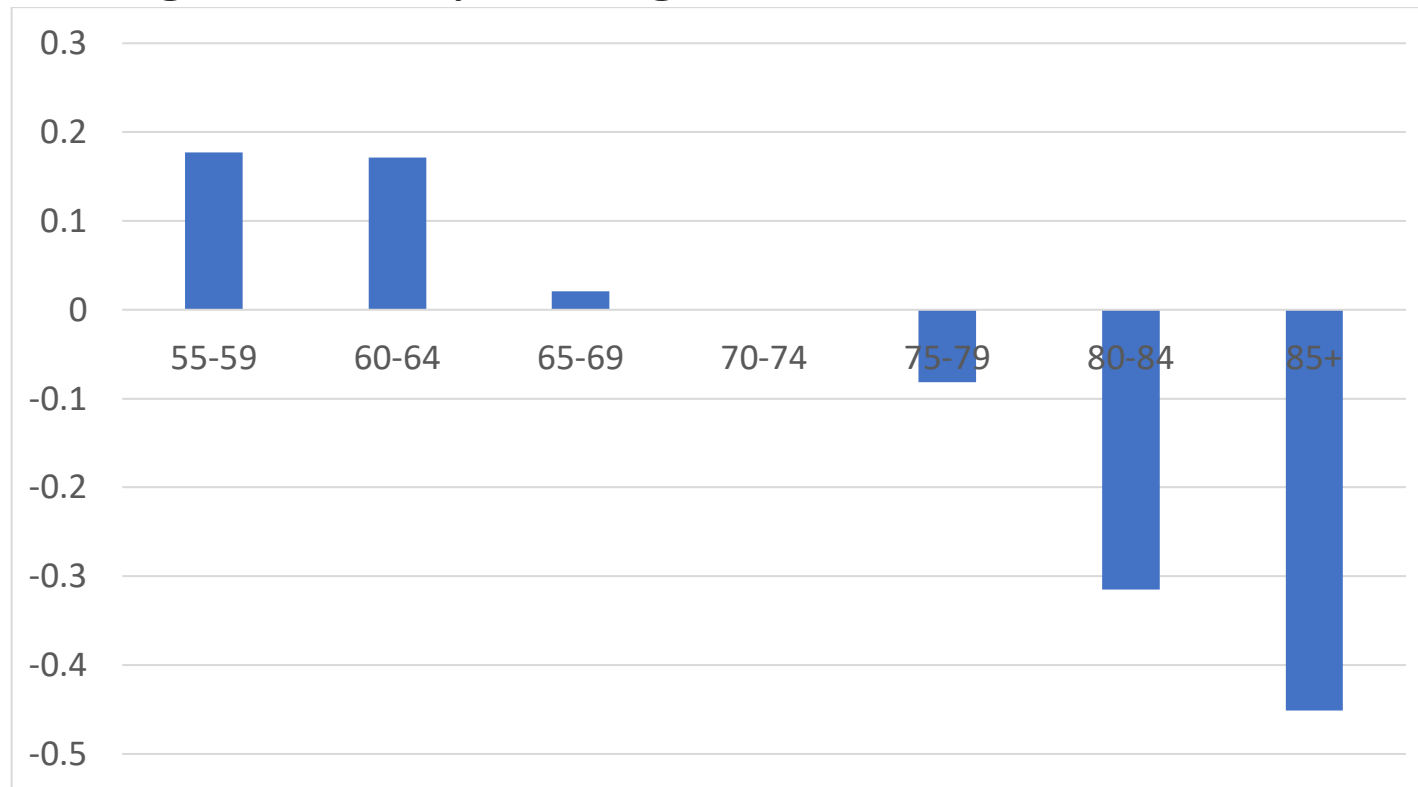


Decline accelerates with age: 0.6 of an enjoyment category  
(2.8 age 55-59 => 2.2 age 85+)

# Changes in enjoyment, controlling for health and financial constraints

## Regression-adjusted enjoyment scores

Change since 6 years ago.



Controls: Self-rated health, financially constrained now and change, education, race/ethnicity, demographics

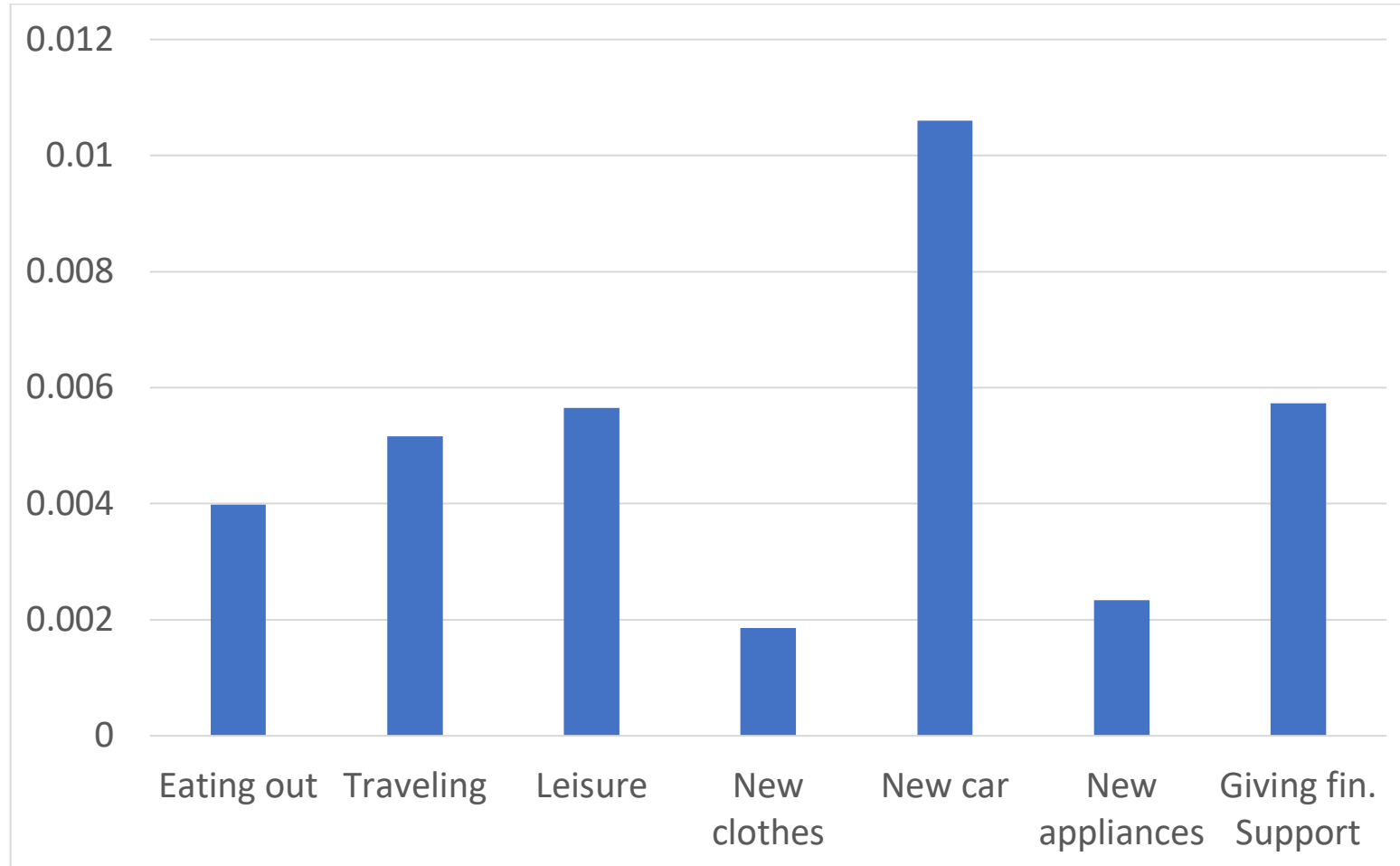


## Do changes in enjoyment predict changes in spending composition?

To control for changes in levels of spending (Engel curve),  
**regression of change in budget shares on**

- changes in total spending,
- “changes in enjoyment” variables,
- age,
- education
- demographics

## Change in budget share associated with change in enjoyment



(Controls for change in total spending)

Typical budget share: Travel = 0.03 to 0.05

## **NEXT: Signs of increasing financial distress at older ages?**

### **Questions on financial situation: current and change**

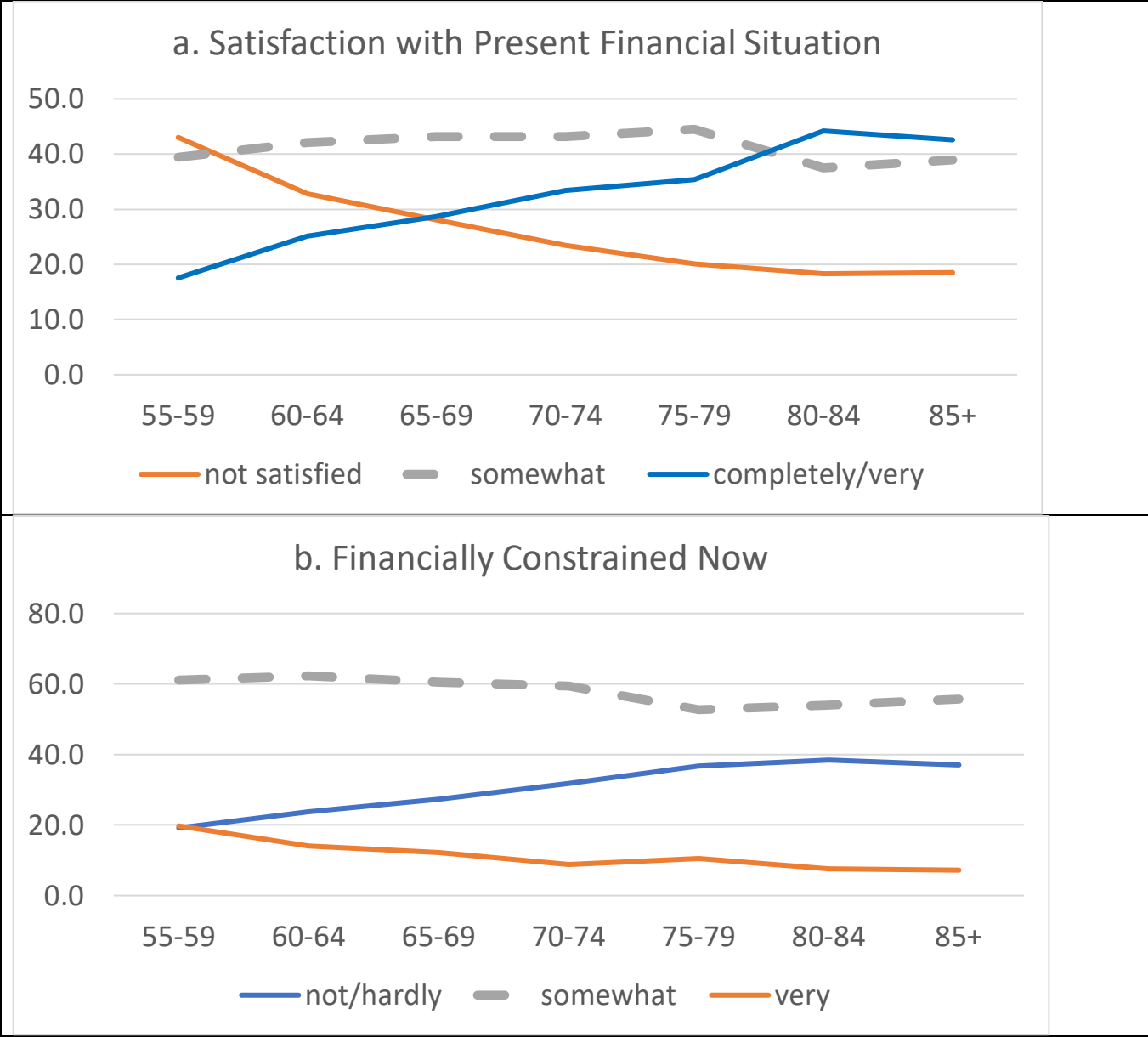
*How satisfied with present financial situation*

- a. Completely satisfied
- b. Very satisfied
- c. Somewhat satisfied
- d. Not very satisfied
- e. Not at all satisfied

*To what extent is household constrained in its spending?*

- a. Very constrained (often we cannot afford to buy things we need)
- b. Somewhat constrained (we have to watch our spending, but can cover all basic needs)
- c. Hardly at all constrained (we can largely buy what we want)
- d. Not constrained (we do not have to worry about finances)

# Reduced to 3-point scale



**Better financial situation with age**

**But cross-section:**  
Includes cohort differences and differential survival

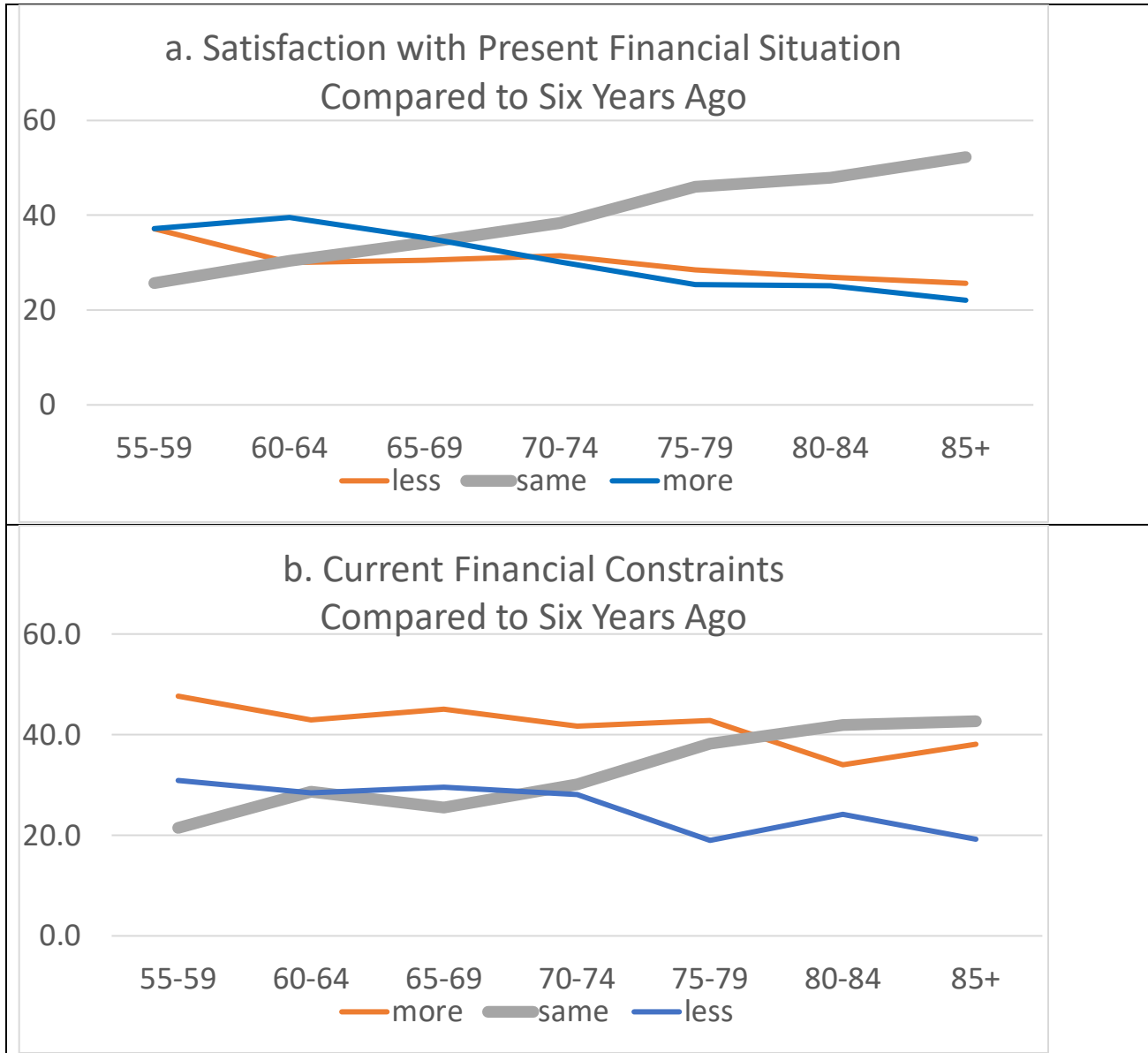
## Satisfaction with financial situation/financially constrained now compared to 6 years ago:

→ within-person comparison

- a. Much more satisfied today than six years ago
- b. A little more
- c. About the same
- d. A little less
- e. Much less

Reduce to 3 categories.

# Within person comparison with six years ago



**Although real spending lower at older ages**

**Satisfaction at 80+**

- 50% report satisfaction same as six years ago.
- 25% report better
- 25% worse.

**Financial constr. at 80+**

- 40% unchanged
- 40% increased
- 20% decreased

## Summary and conclusions

- Real spending declines with age
- Economic satisfaction
  - Increases with age in cross-section
  - Increasingly stable at older ages: 48% of 80 year-olds report “no change” over last six years
  - Self-assessed budget constraint does not worsen with age
- What is the explanation?
  - Budget shares suggest health/age complementarity
  - Direct question about change in enjoyment from activity
  - Support for reduced efficiency of spending on some activities
    - Less “need” to spend at older ages

- What about (extended) Yaari versus behavioral?
  - In both, constraints would increase with age
  - Economic satisfaction and age
    - Yaari: possible flat in age
    - Behavioral: decline with age
  - Need expectations data about change in spending



## Importance of understanding spending path

Financial preparation for retirement:

How much to save?

1. Use flat spending path?
2. Or use results from DP model: declining spending path
3. Use observed (declining) spending paths
  - Criterion for success: don't run out of wealth
  - Possibly better target for individuals than expected utility maximization
  - But want to know that declining path is not (too) harmful
  - Are results on "enjoyment" quantitatively important?

Our results suggest most people satisfied with declining path.

- Society of Actuaries study

**But heterogeneity:** Some had worsening economic situation

**Implication:**

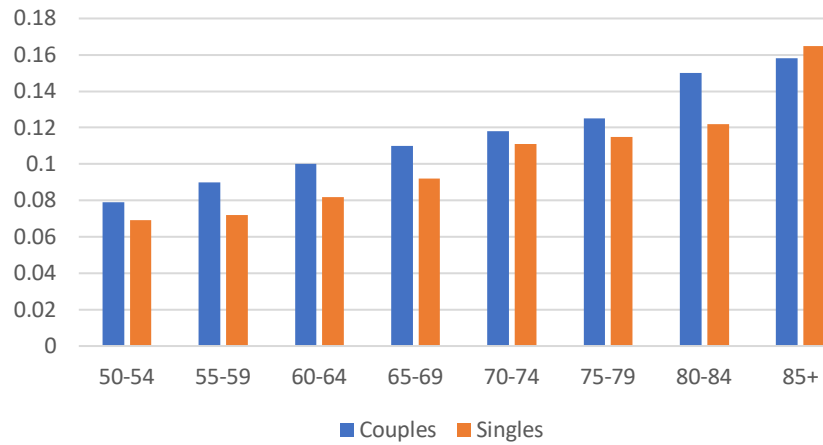
- Don't need to encourage "people" to save more;
- Need to encourage (or provide for) "some people"

Thank you!

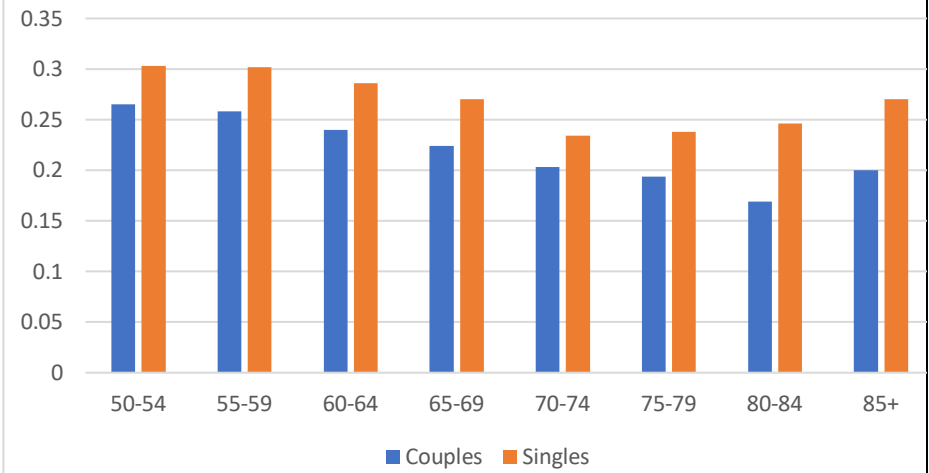
[susannr@rand.org](mailto:susannr@rand.org)



Budget shares: health care



Housing budget shares



# Population frequency of affirming reasons for reduced spending

