What to do with assets?: New estimates of intra-household transfers in Japanese NTA

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Motivation

- Analyzing NTA by gender is becoming more important as intergenerational relationships are strikingly different by gender

However…

- The standardized NTA method is not capable of capturing gender differences in intra-household transfers

 -> E.g., Why no savings for non-HH head adult members?

Who owns savings? The conventional definition

- Assumptions in the standard NTA calculation
  - Household head (HH) owns entire savings of the household
  - Lifecycle surplus of each member is used to cover household deficit, and the remaining is passed to HH for saving

- One problem with this assumption
  - It overestimates the intra-household transfer outflow of HH
    (1) The older household member is likely to become HH
      -> Biased estimation of <u>inter-generational transfers</u>
    (2) Men are more likely to be HH than women
      -> Biased estimation of <u>transfer accounts by gender</u>

Household headship by age and sex: Japan
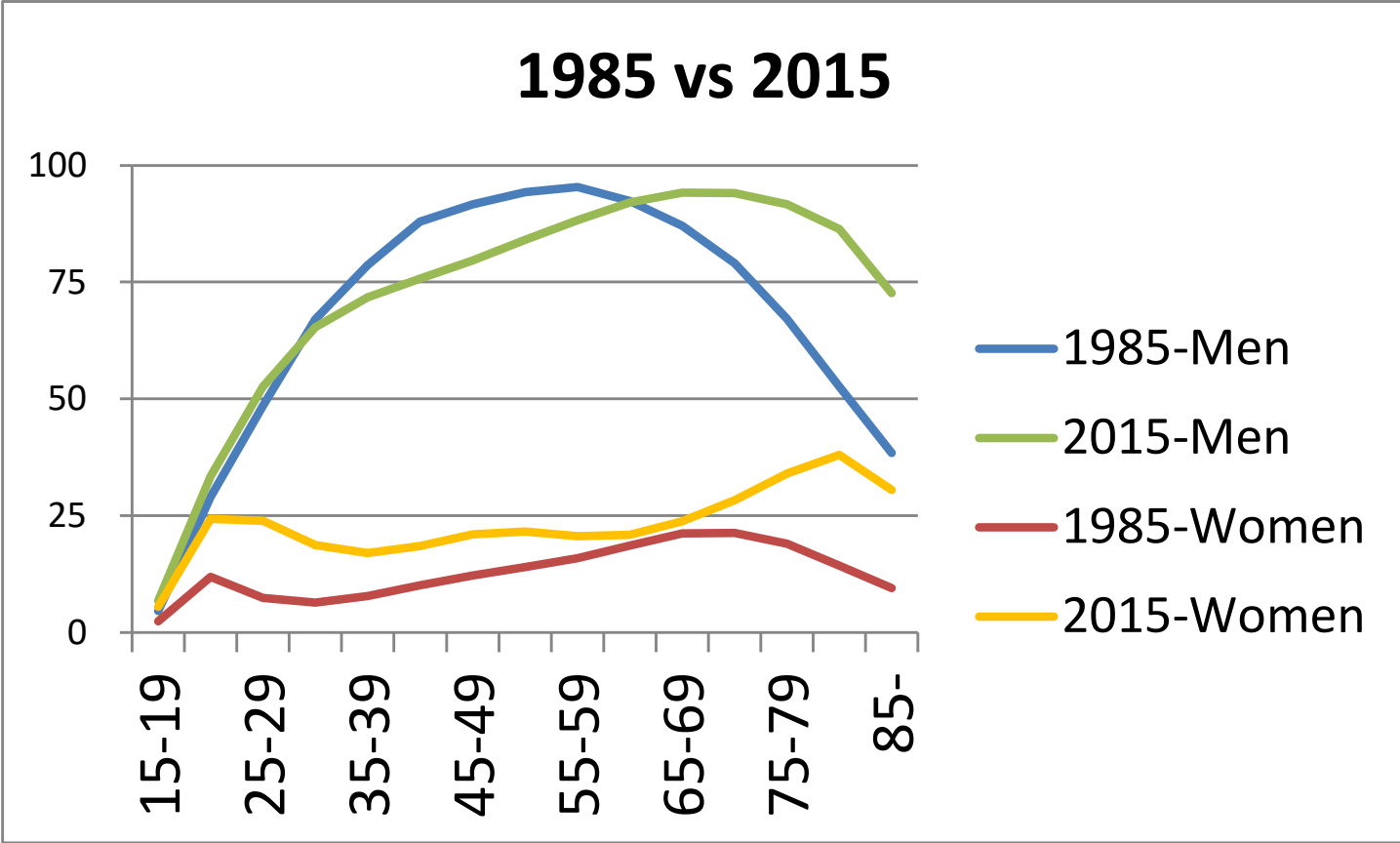
Household headship of married population: Japan
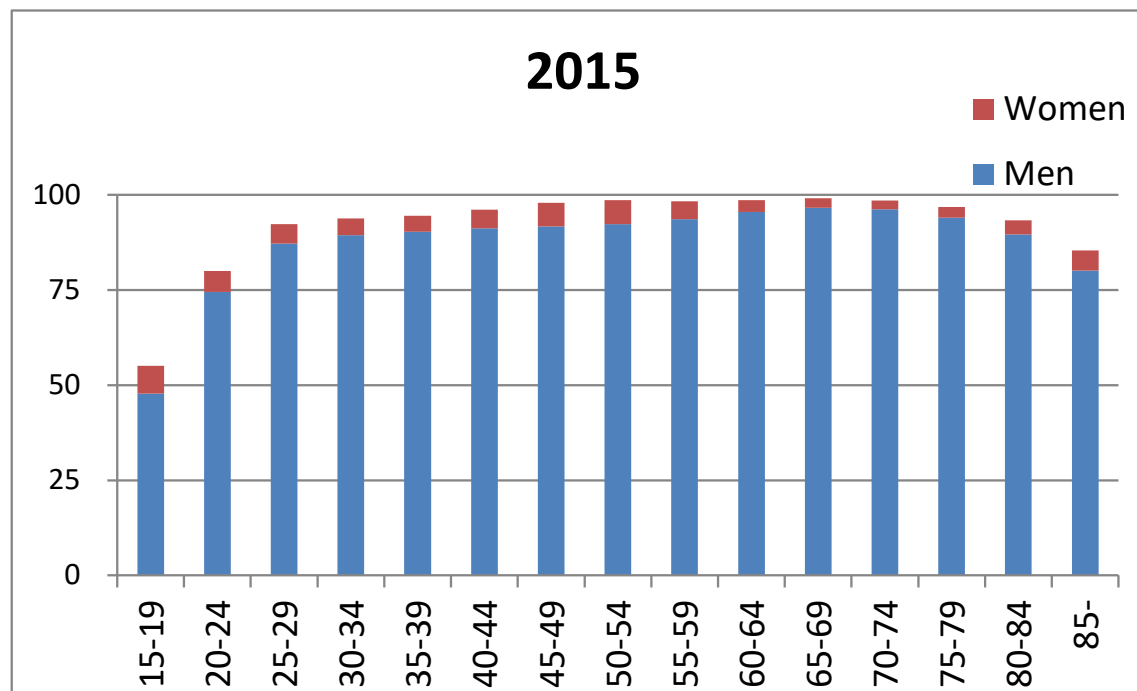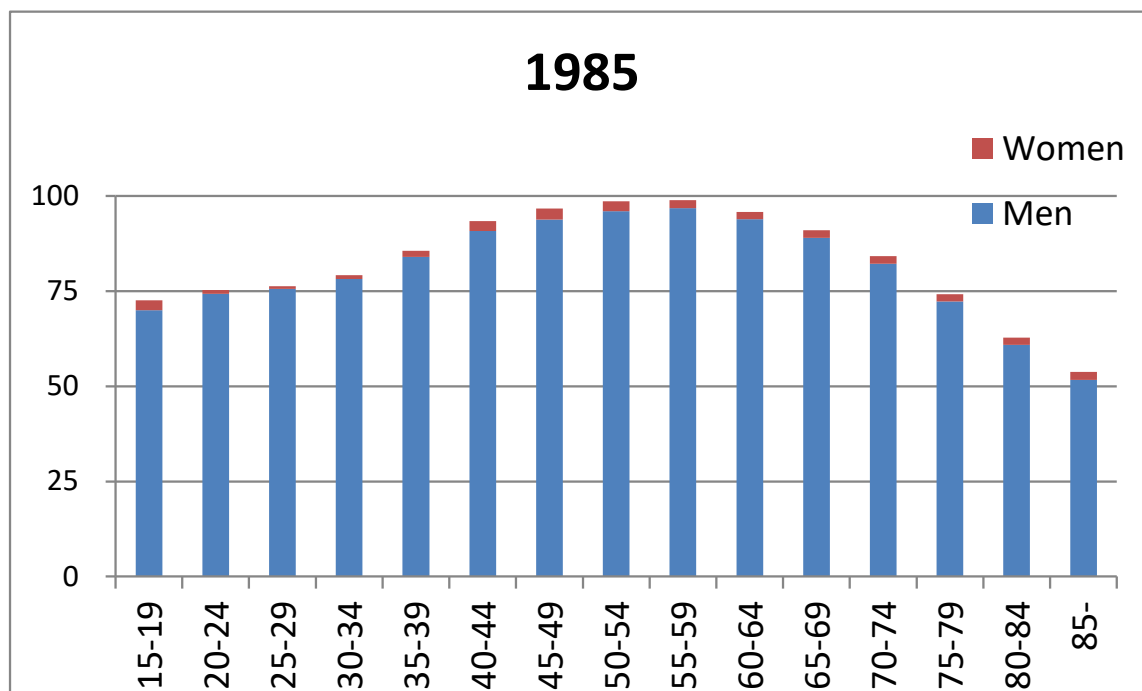
What do we do?

1. Distribute household savings (<u>stock</u>) to each adult member so as to cover lifecycle deficit

2. Use "net time transfers" between spouses to decide share of household savings

3. Recalculate intra-household transfers by allowing the use of newly allocated savings

Method

➢ **Step1**: Estimate the individual share of household savings (S) by age

   -> The same as allocating consumption

① Simple regression model using age dummies of household members

② Use the coefficients to allocate (S) by age

➤ **Step2**: Estimate the spousal share of savings by using <u>the value of net production (lifecycle surplus + net time transfer outflow)</u> accumulated in the past

① Calculate values of lifecycle surplus and net time transfer (unpaid work) for married people by age and sex -> the latter part from NTTA

② Take the ratio of the net values of production for spouses of age x_m and x_f to re-allocate individual savings between spouses

Estimated value of the productive activity

Graphs by sex
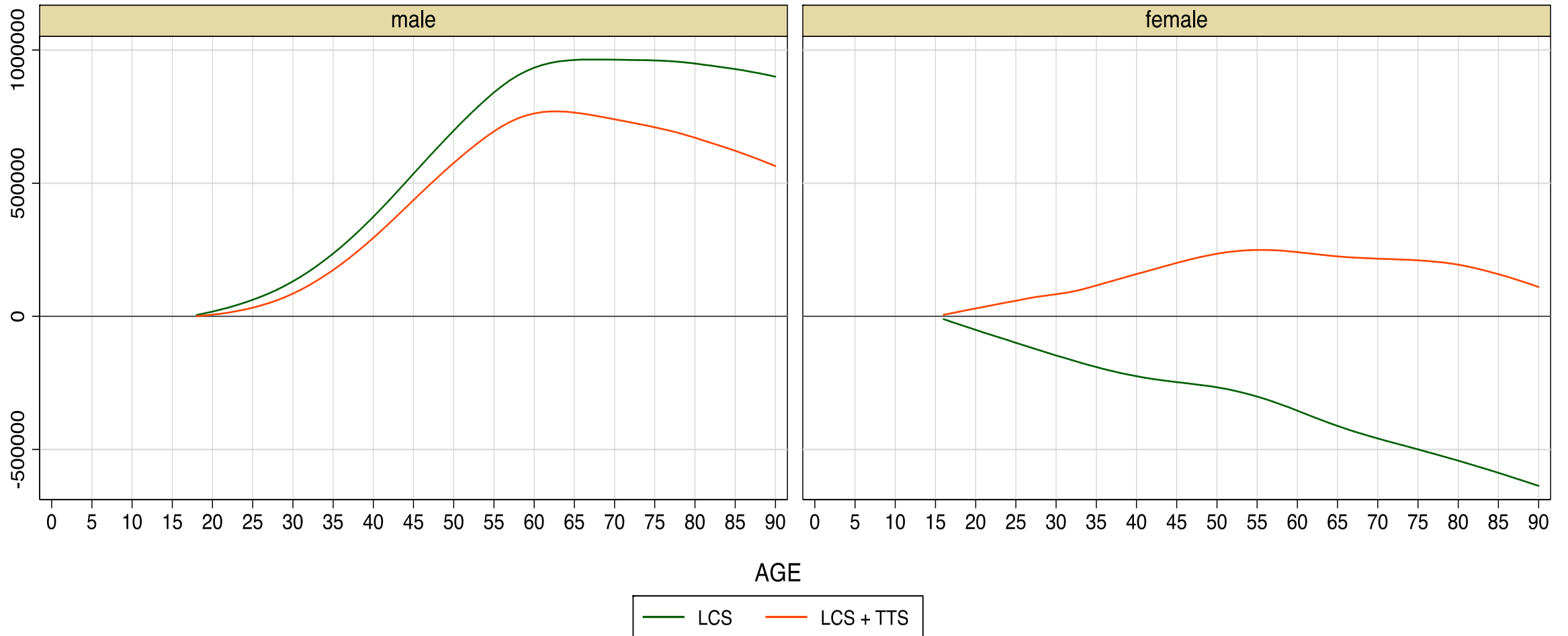
➤**Step 3**: Estimating intra-household transfers

- X = Y – C + S

* For married people, S reflects the recent time transfer calculated in step2

- SUR = max{0,X}, DEF = max{0,-X}
- Tax rate: $t = \sum SUR / \sum DEF$

- Transfer outflow = max{t * X,0}

Numerical example

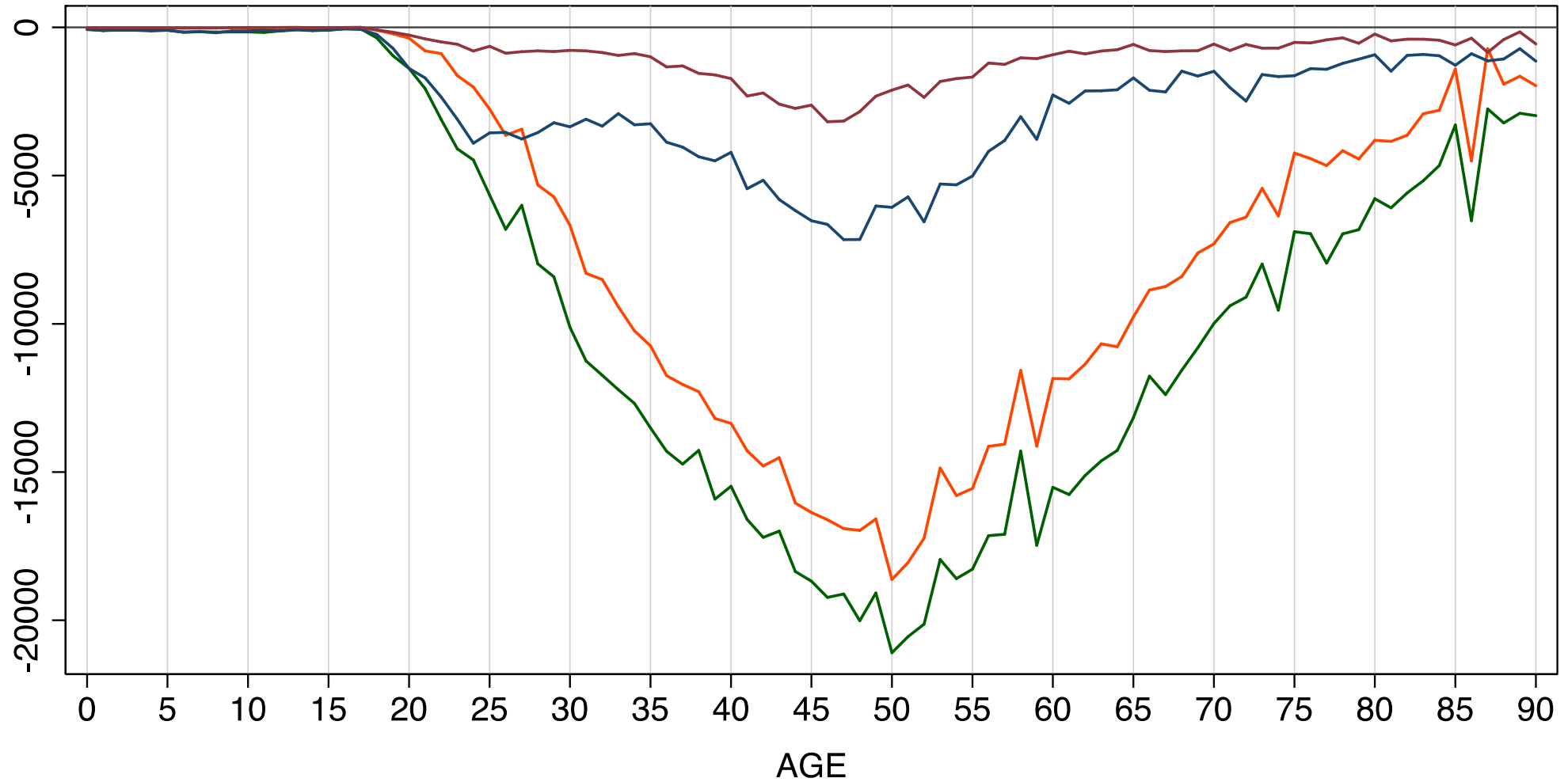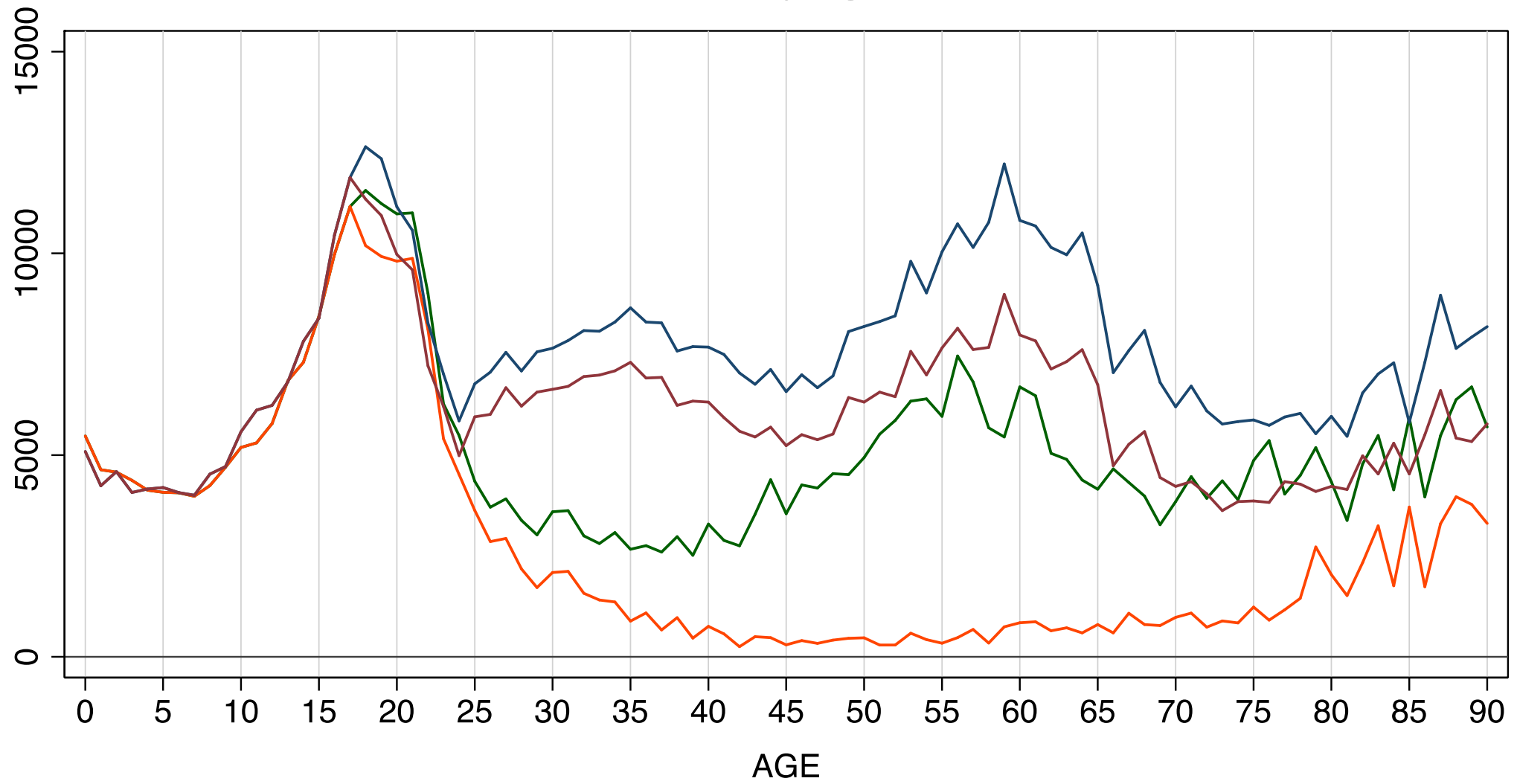| Age	Ms. A (non HH)							Asset			Mr. B (HH)							Asset		
	Y	C	LCS	∑LCS	Net IN	TTS	∑TTS	HH takes all	Reflects LCS	Reflects LCS&TTS	Y	C	LCS	∑LCS	TTS	∑TTS	∑NTP	HH takes all	Reflects LCS	Reflects LCS&TTS
20	100	50	50	50	0	0	0	50			90	50	40	40	0	0	0	40		
21	100	50	50	100	0	0	0	100			90	50	40	80	0	0	0	80		
22	100	50	50	150	0	0	0	150			90	50	40	120	0	0	0	120		
23	100	50	50	200	0	0	0	200			90	50	40	160	0	0	0	160		
24	0	50	-50	150	50	20	20	0	150	170	90	50	40	200	-50	-20	-20	350	200	180
25	0	50	-50	100	50	20	40	0	100	140	90	50	40	240	-50	-20	-40	340	240	200
26	0	50	-50	50	50	20	60	0	50	110	90	50	40	280	-50	-20	-60	330	280	220
27	0	50	-50	0	50	20	80	0	0	80	90	50	40	320	-50	-20	-80	320	320	240

Results

- Conventional method vs new method
- Japan 2004
- Values are in US$

Intra-household outflow by gender

Legend:
- Transfer Outflow male (green)
- Transfer Outflow NEW male (orange)
- Transfer Outflow NEW female (blue)
- Transfer Outflow NEW female (dark red)

X-axis: AGE (0 to 90)
Y-axis: 0 to -20000

Intra-household inflow by gender

Tranffer Inflow male	Tranffer Inflow NEW male
Tranffer Inflow female	Tranffer Inflow NEW female

Net intra-household transfer by gender

Net Transfer male	Net Transfer NEW male
Net Transfer female	Net Transfer NEW female

AGE
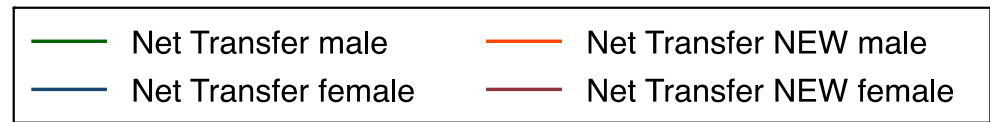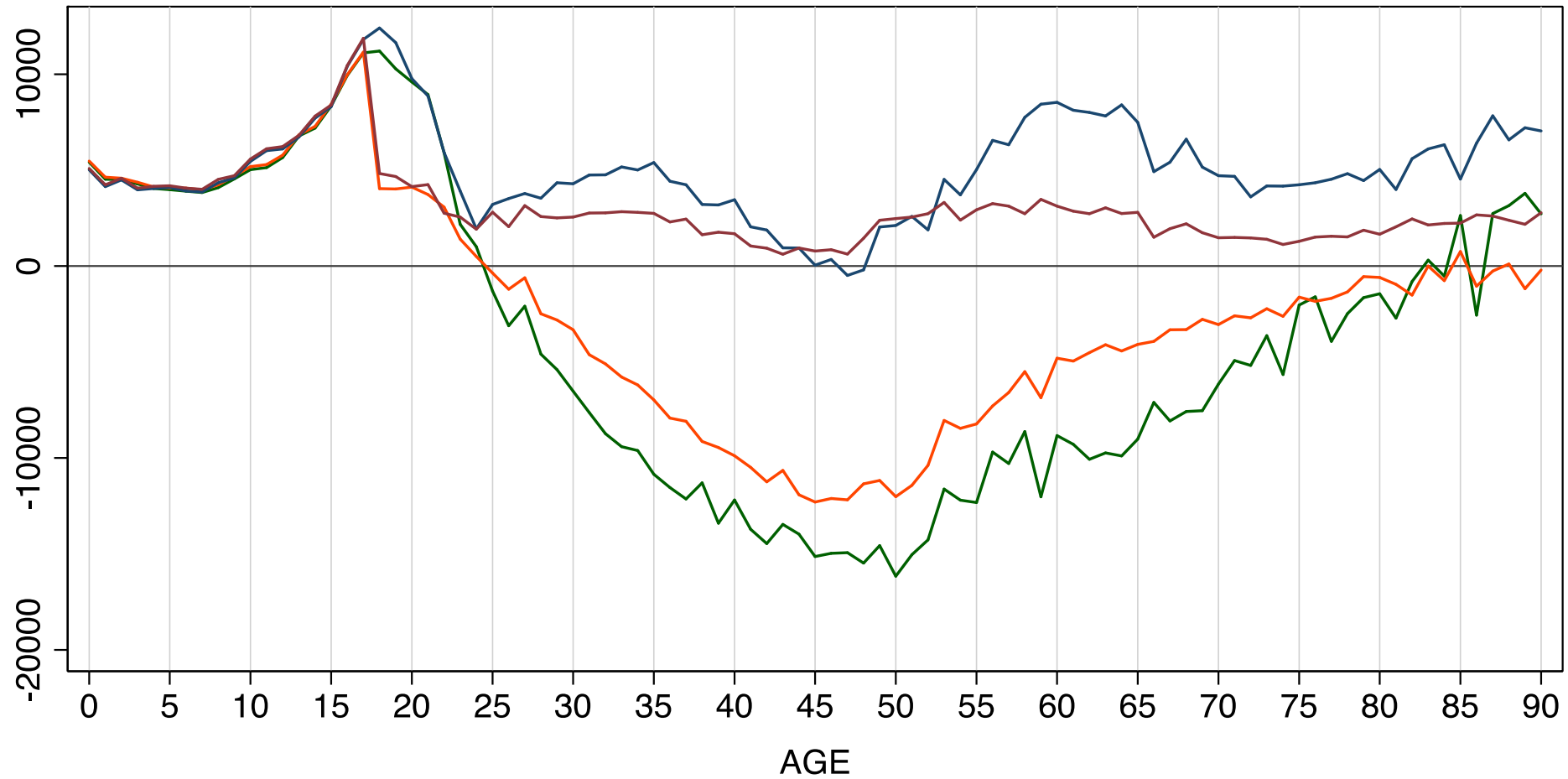
Findings

- Roughly:
  - The outflow shrinks by about $3,000-4,000 for each age
  - The inflow shrinks by about $2,000-3,000 for each age
    -> The difference comes from individual dissaving

- Asset distribution on estimation edges should be improved

Summary

- Measuring intra-household transfers by

  1) Allowing individuals to make transfers from own savings

  2) Using spousal time transfers to affect individual surplus

  -> More realistic to characterize family roles in household economy?

  -> By adding NTTA, the gender gap in the intra-H transfers can be even narrower

- In future research, we also want to look at intra-household transfer in the **longitudinal** context connecting the same cohort over time

Thank you for listening!

Now happy to invite questions

Lifecycle Deficit = Inflow - Outflow

- Inflow (Y)
  - Labor Income
  - Asset Income
  - Net inter-household transfer inflow
  - Net public cash transfer inflow
- Outflow (C)
  - Consumption
  - Indirect tax
- Savings (S)
  - We already know the amount of household savings from cross-sectional data
  - If we follow the manual, all household savings will be allocated to the HH, but since it is unnatural, we want to distribute household savings to each adult member