NTTA Consumption (in time and monetary units)

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NTA/CWW Time Use and Gender Mini-workshop

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Lima, Perú

COUNTING WOMEN'S WORK

NTA

Outline

1. Estimation strategy
2. Imputing time consumption to individuals based on total time production
3. Producing age/sex means
4. Finalizing the profiles
5. Sensitivity tests

Estimation Strategy (time units)

1. Prepare files with production data and hh members
2. Compute ntta time production for each time producer
3. Impute consumption of time produced in the household to household members
4. Smooth age/sex means
5. Adjust profiles so that they are balanced in the aggregate

Consumption Imputation Assumptions

- For care activities
  - If care is for household members, implement regression method using household members in target age range
    - Example: for care of household children aged 0-18, estimate regression equation using number by age and sex for household members age 0-18
  - If care is for non-household members, divide equally among general population in target age range
    - Example: for volunteering, divide time equally among total population

Consumption Imputation Assumptions

- Care allocation ALTERNATIVES
  - For household childcare: instead of regression, calculate time spent on children by age and sex for households with only one child; use those as weights
  - For non-household childcare: instead of per-capita allocation, allocate using household care age profile as weights, (reasonable assumption?)
  - If you only have a general “care” variables instead of child/elder care separately
    - Leave producer ages out of the regression
    - If care is for sick/disabled but you have no indicator of sick/disabled in the household, can use external measures of disability by age/sex
    - Other?

Consumption Imputation Assumptions

- For general household activities
  - Divide equally among all household members

Computing consumption age profiles

- A question has come up about the methodology
  - Complicated method is to go from producer profiles, to aggregate producer/consumer matrix, to consumer profile.
  - Simple method is to calculate consumer profiles just using survey microdata
- Simpler method is correct if age distribution of time use survey is good representation of total population
- Bequests example highlights the issue

Producing consumption means

- Simple method
  - Impute consumption to individuals in households
  - Take age/sex means as you did for producers
  - Different sample weights available for total household?
- Complex method
  - Compute mean production by age and sex of producer and age and sex of imputed consumer (using weights for time respondents)
  - Multiply by population number in producer age/sex groups
  - Divide by population number in consumer age/sex groups to get mean consumed amount

Simplified Spreadsheet Examples

- Available on the wiki
  - www.ntacounts.org
    - Projects > Working Groups > Gender, time use
  - Versions for simplified and complex methods

Finalizing profiles

- Smooth and adjust smoothed and unsmoothed profiles so that consumption equals production and inflows equal outflows
  - Simple method: compute adjustment factors for consumption to match production; factors are larger if smaller proportion of potential producers have their time use sampled
  - Complex method: adjustment factors will be needed only for smoothed profiles and those should be close to one

Sensitivity tests

- Change consumption allocation to estimate differences between males and females
  - In contexts with heavy “son preference,” equal allocations between males and females may be a bad assumption
  - Regression-based allocation to get a data-driven estimate (will only partially address the issue, but it’s a start)
  - Do some sensitivity tests
    - One child method, but may miss discrimination that is only applied when time is scarce, so could look at difference by type of household structure (by age and sex distribution of children)
    - Trying an allocation of childcare or other activities to girls of x% of boys