Ageing Europe – An Application of
National Transfer Accounts for Explaining
and Projecting Trends in Public Finances

# Age and cohort effects on income and consumption in France

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# Issues at stake

- Life-cycle theory of consumption:
  - A decline at latter ages?
- Welfare of generations:
  - Is the inter-generational allocation fair?
  - Is there a "golden" generation?
- Collinearity in APC models:

  Regress on Age, Date (Period), BirthDate (cohort)

  Problem as: Age + BirthDate = Date

# Solutions to the collinearity issue

- Use different measure units

- Deaton and Paxson (1994) decompose cycle (period effects) and trend (age and cohort effects)

- Chauvel (2013) focuses on non-linear effects once a linear trend has been eliminated

- Use another variable
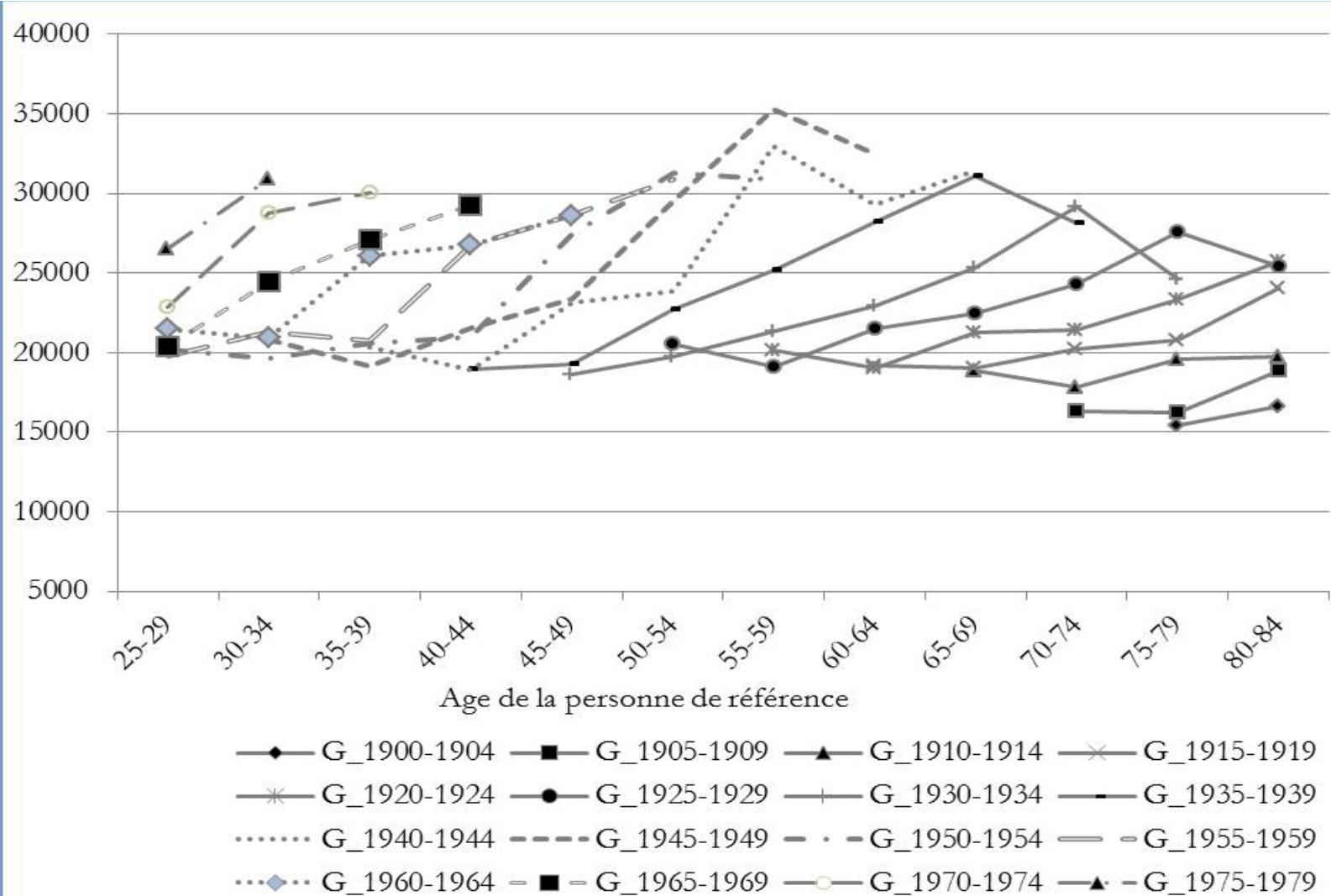
  Here => LifeExp rather than age

# The data

- French consumption cross-sectional survey: 7 waves between 1979 and 2011

- 10,000 households per wave (mainland France)

- We rescaled data on the aggregate counterpart in National Accounts (as in NTA)

- Cohorts (1901 to 1979), 409 observations, average size: 164 individuals

# Variables (in constant prices)

- Net disposable income
  - Net labor and capital incomes
  - Net social transfers
- Private consumption
  - taxes and mortgage payments excluded
- Imputed rents
  - Estimated until 1995
- Savings: Obtained as a difference

# Net disposable income (per cons. unit)



Age de la personne de référence

Legend:
- ◆ G_1900-1904
- ■ G_1905-1909
- ▲ G_1910-1914
- ✕ G_1915-1919
- ✳ G_1920-1924
- ● G_1925-1929
- + G_1930-1934
- G_1935-1939
- ⋯⋯ G_1940-1944
- - - - G_1945-1949
- - · - G_1950-1954
- G_1955-1959
- ⋯⋯ G_1960-1964
- ■ G_1965-1969
- ○ G_1970-1974
- ▲· G_1975-1979

# Consumption (per cons. unit)



Age de la personne de référence

G_1900-1904  G_1905-1909  G_1910-1914  G_1915-1919
G_1920-1924  G_1925-1929  G_1930-1934  G_1935-1939
G_1940-1944  G_1945-1949  G_1950-1954  G_1955-1959
G_1960-1964  G_1965-1969  G_1970-1974  G_1975-1979

# The model

- Regressing the variables of interest, i.e.:
  - Net disposable income
  - Private consumption
  - Private consumption (without housing)
  - Saving rates
- As a function of:
  - Age/life expectancy
  - Period
  - Birth date
  - Size of the household

# Cohort effects

# Income as a function of birth date
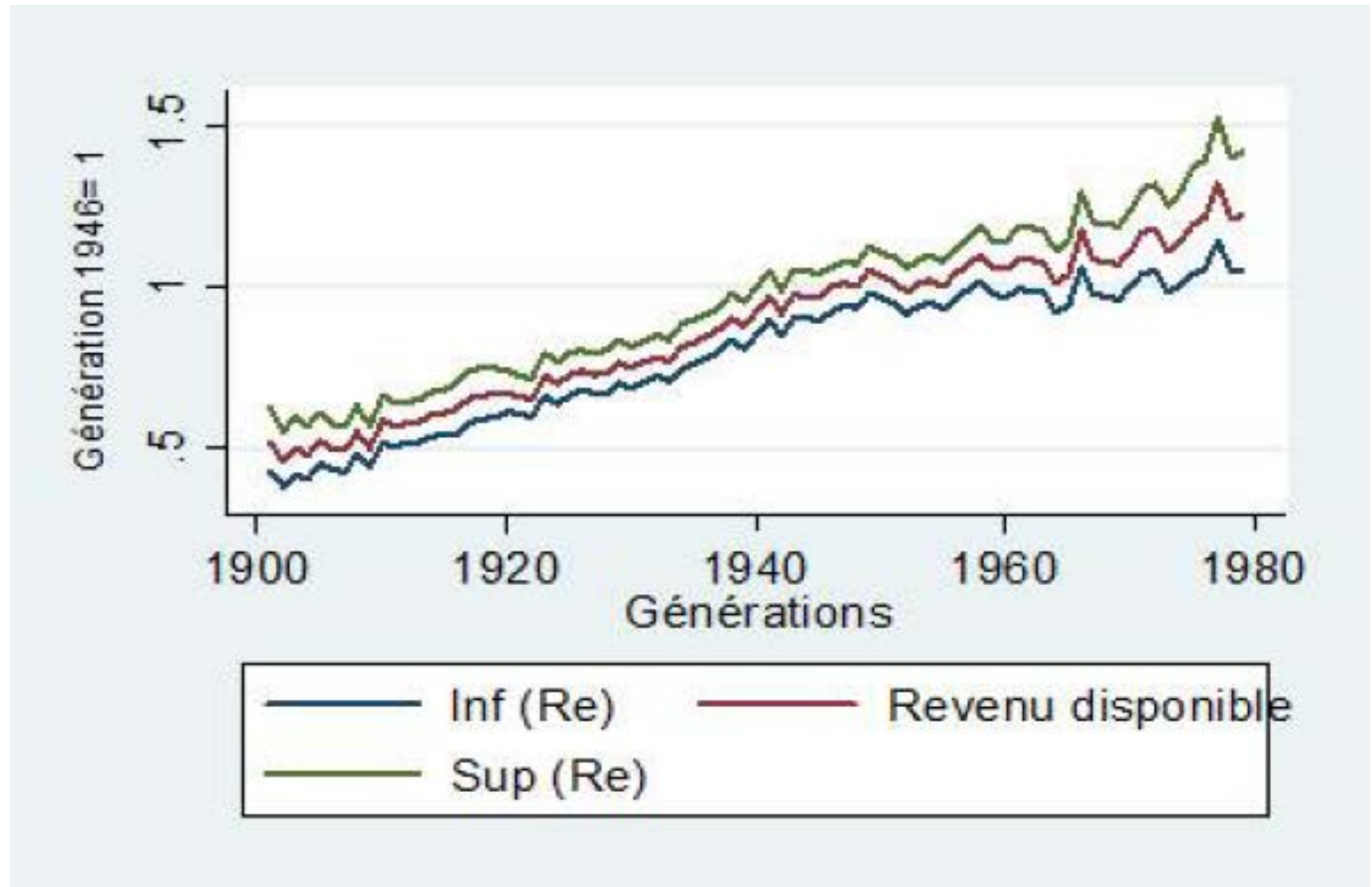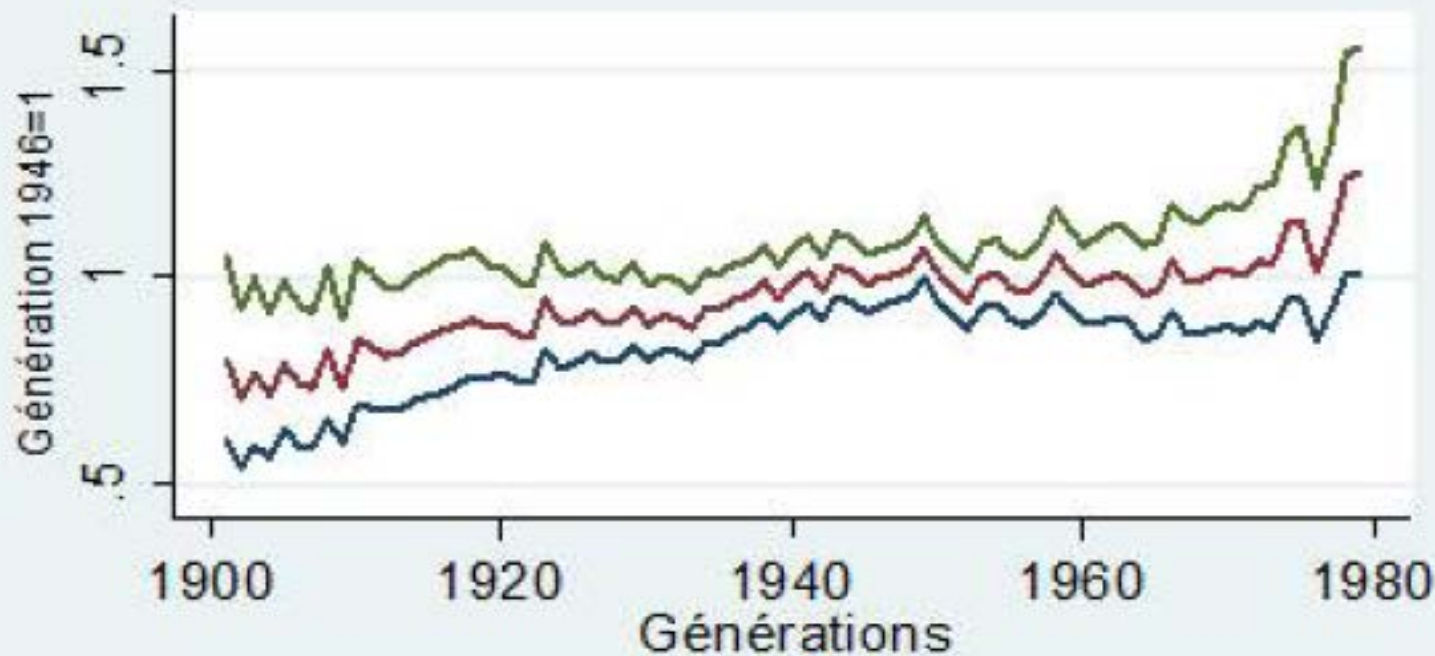
# Robustness with life expectancy

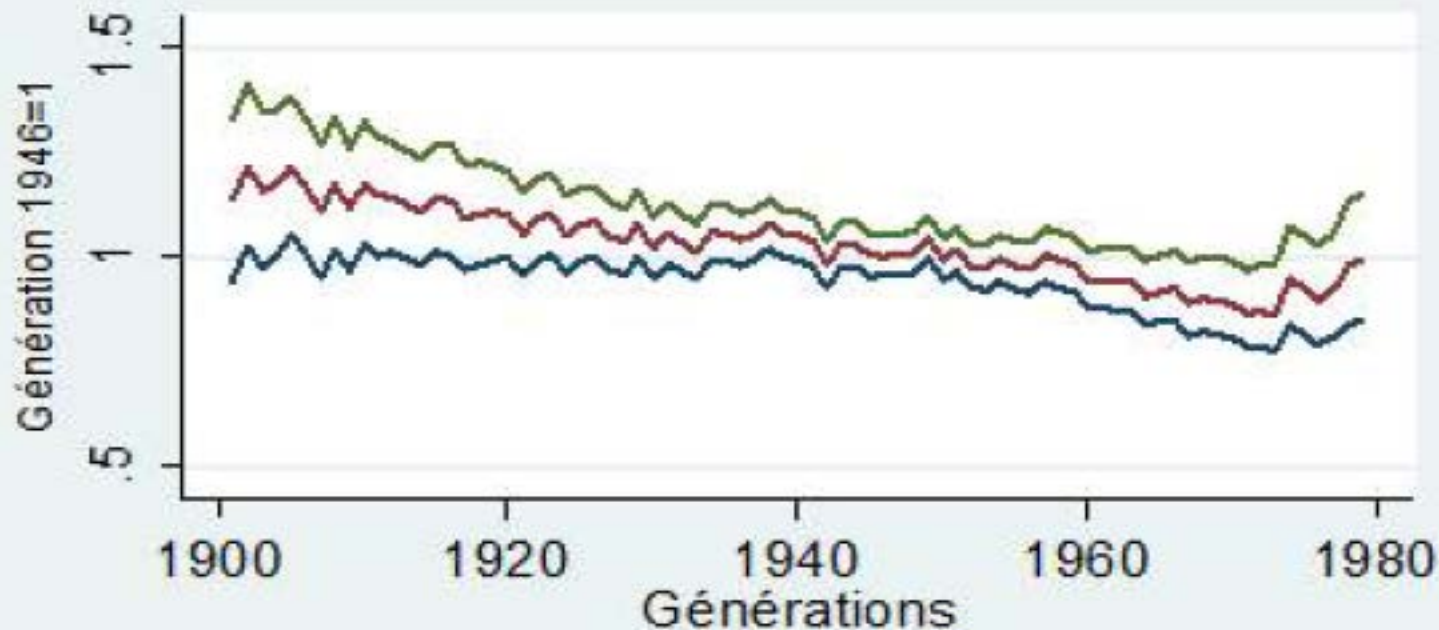# Consumption as a function of birth date
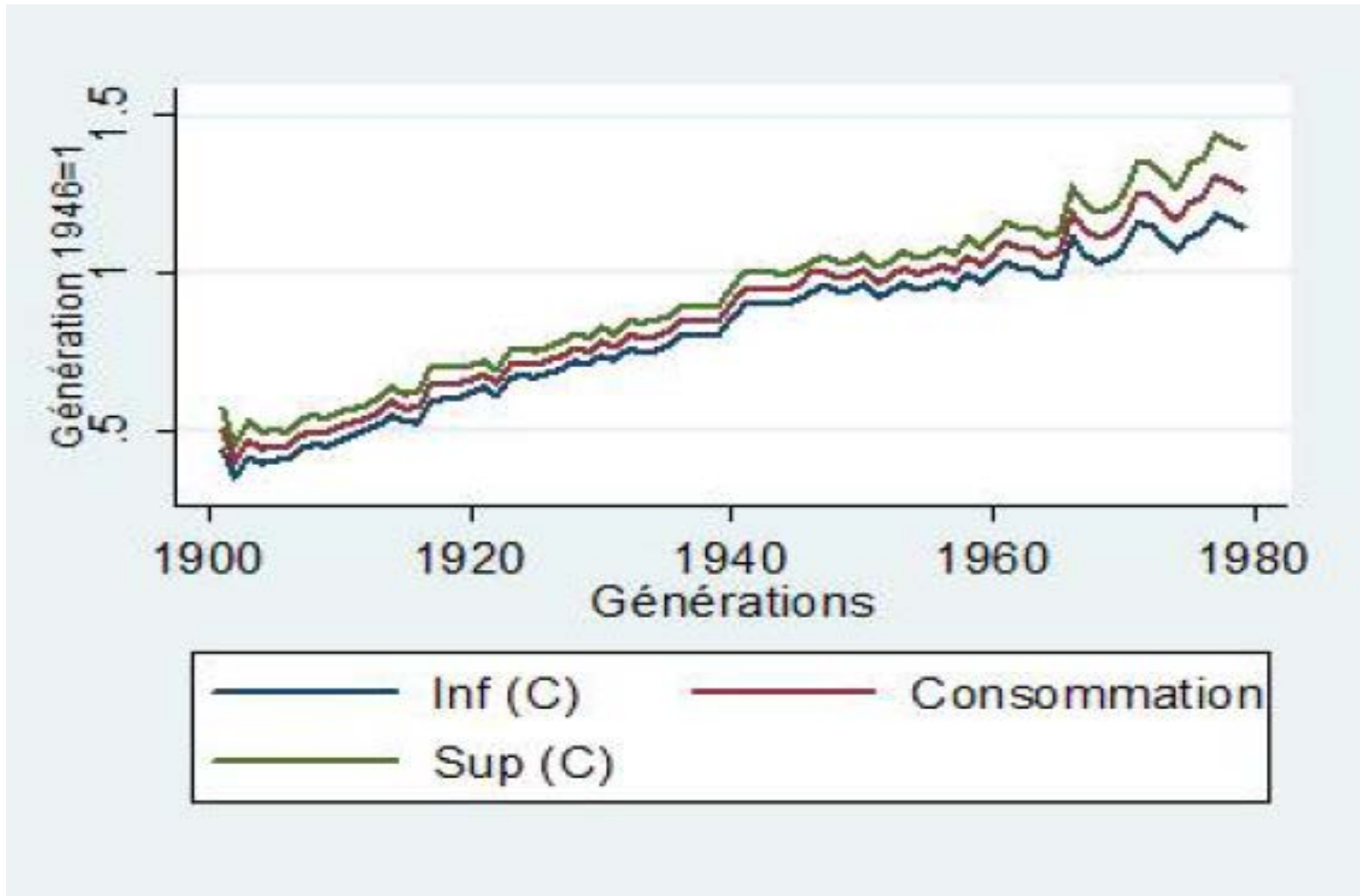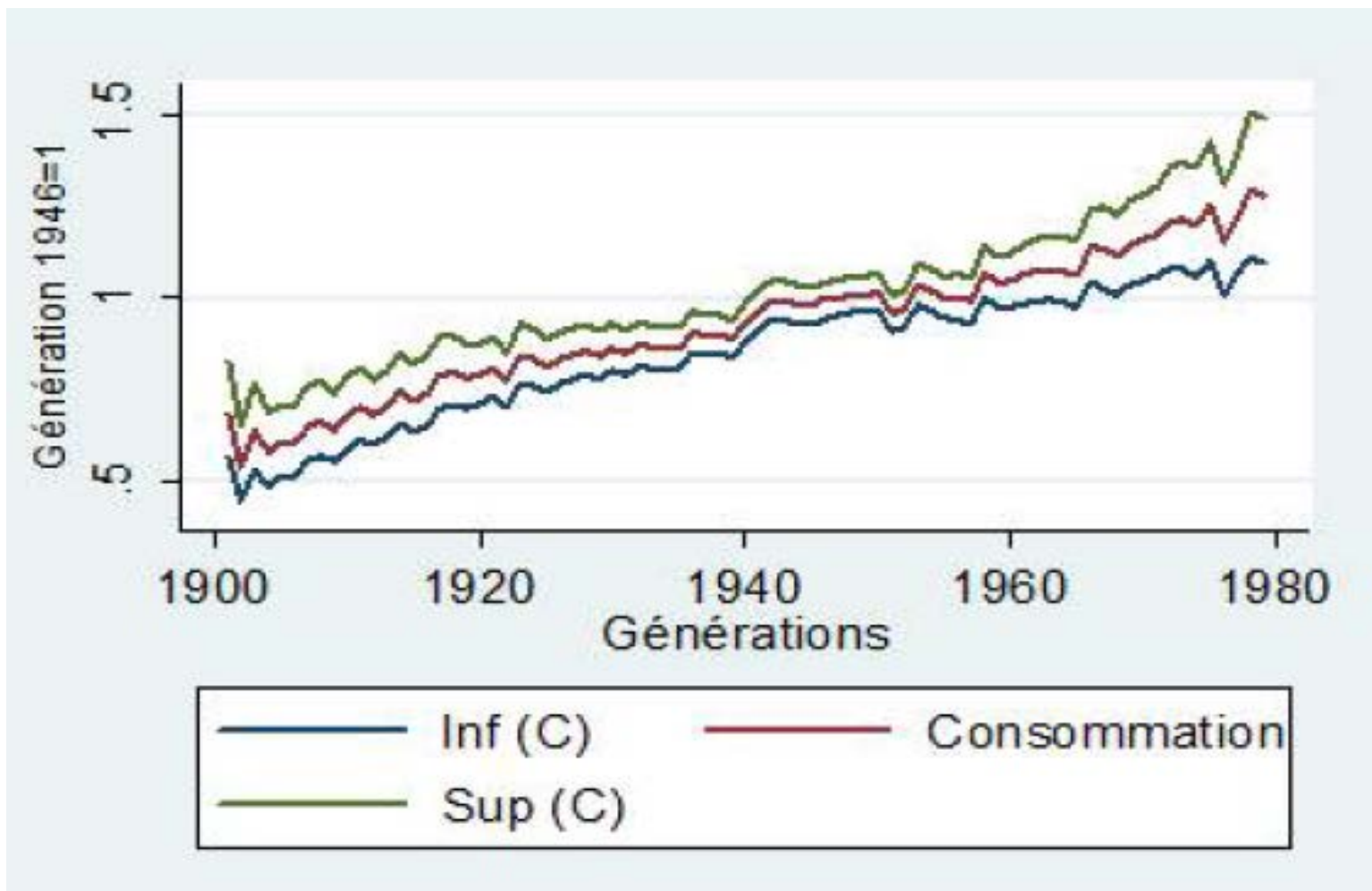
# Robustness with life expectancy

# Consumption (without housing) as a function of birth date
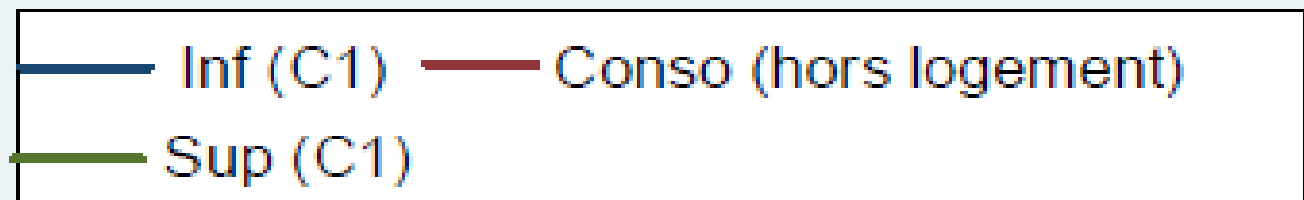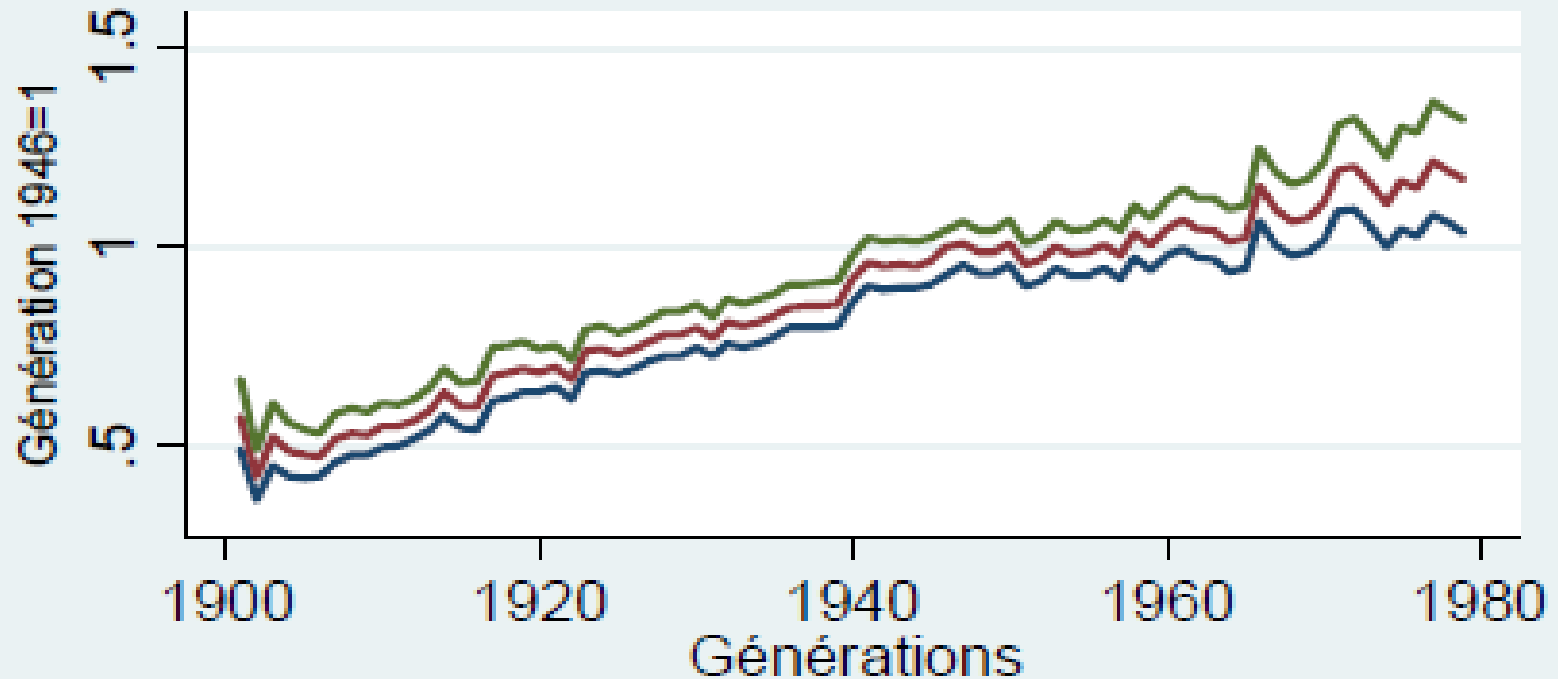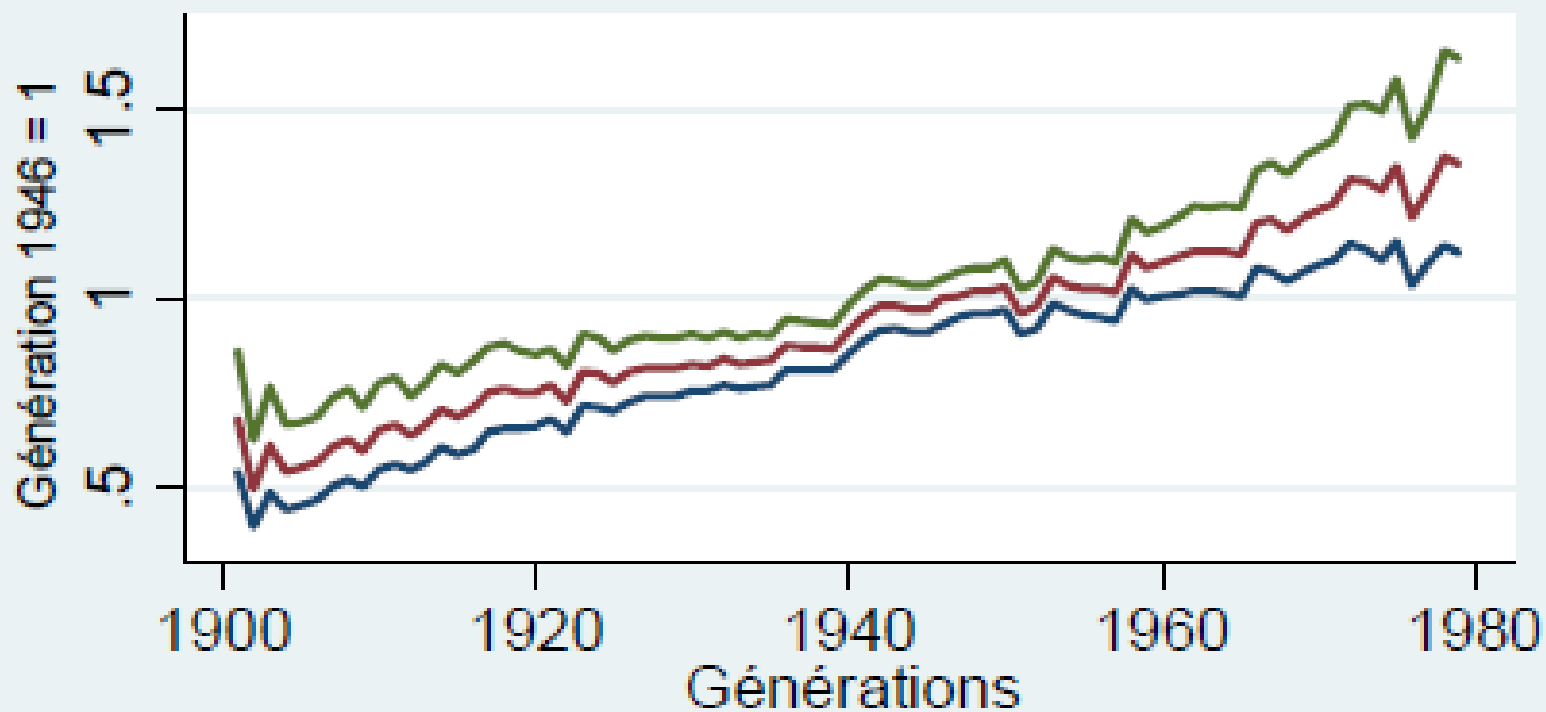
# Robustness with life expectancy

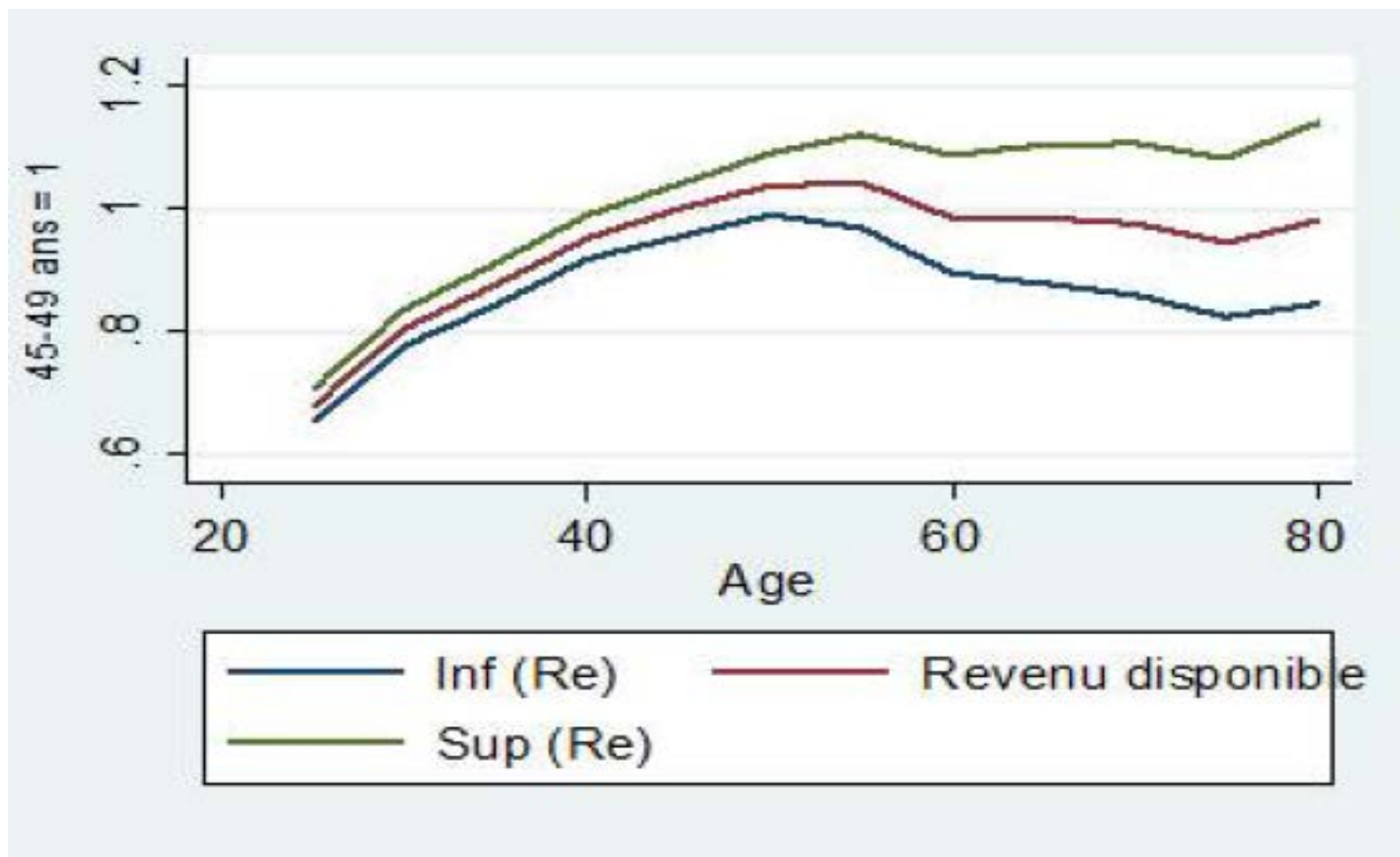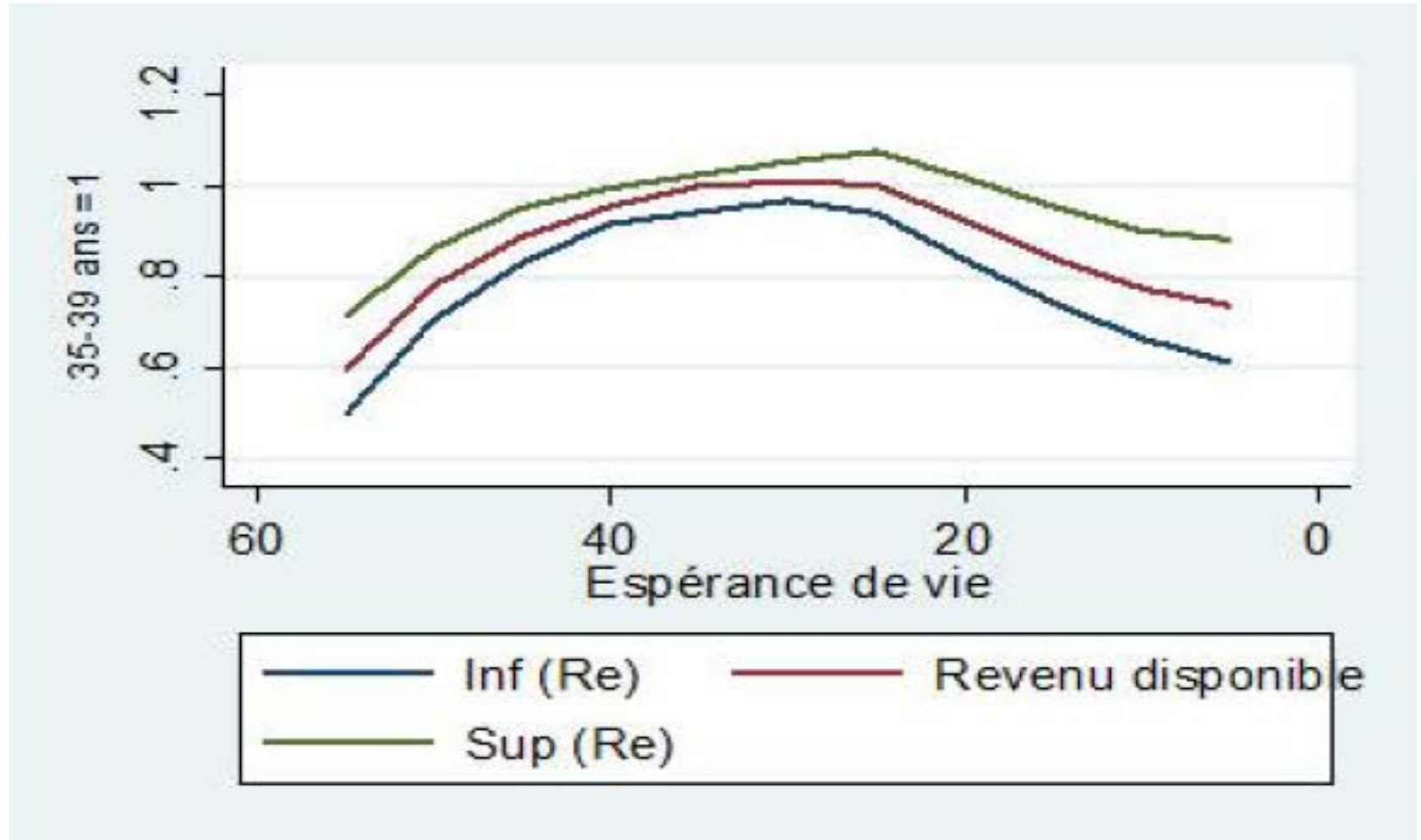# Saving rate as a function of birth date
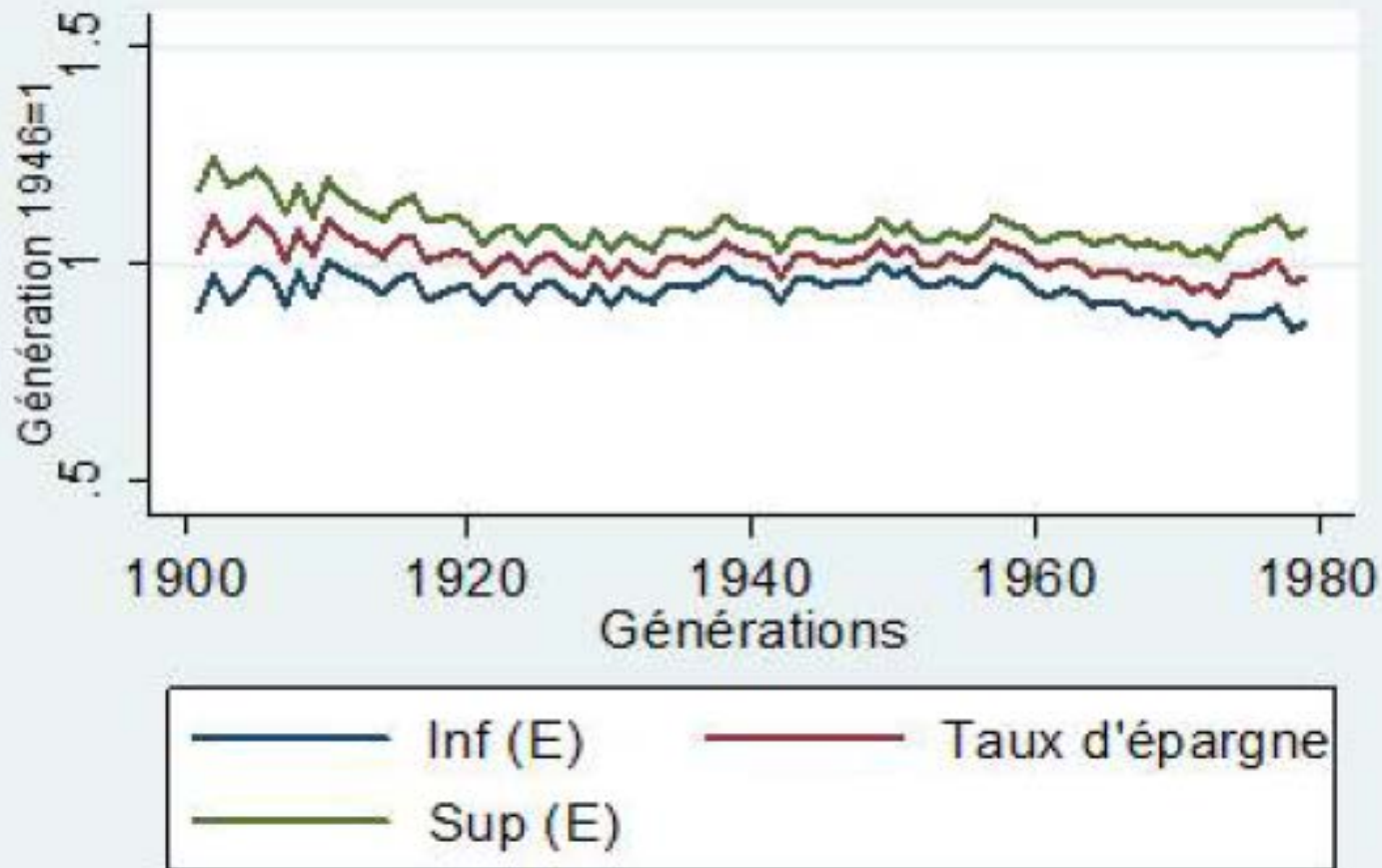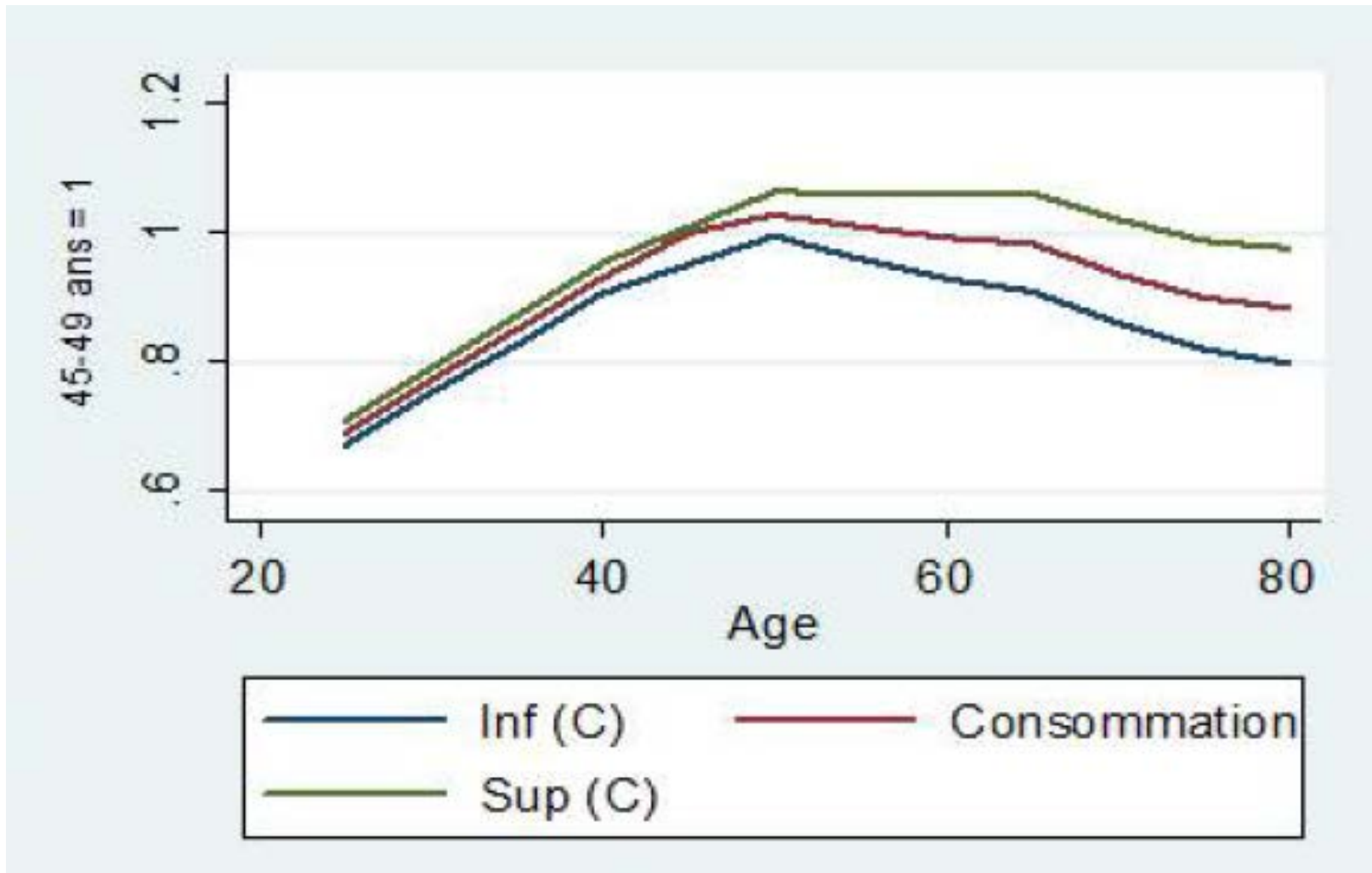
# Robustness with life expectancy
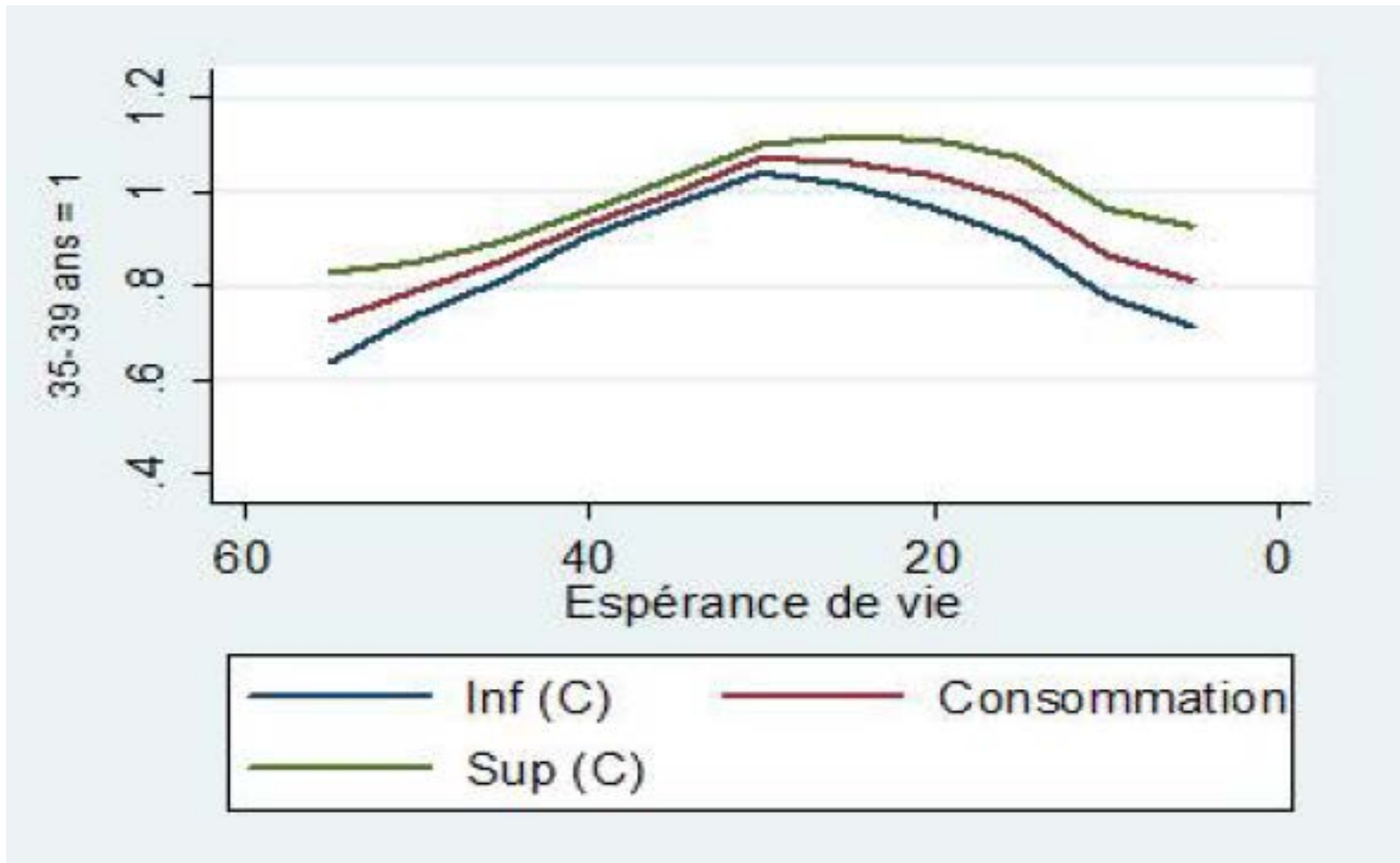
# Age effects

# Income as a function of age

# Income as a function of life expectancy
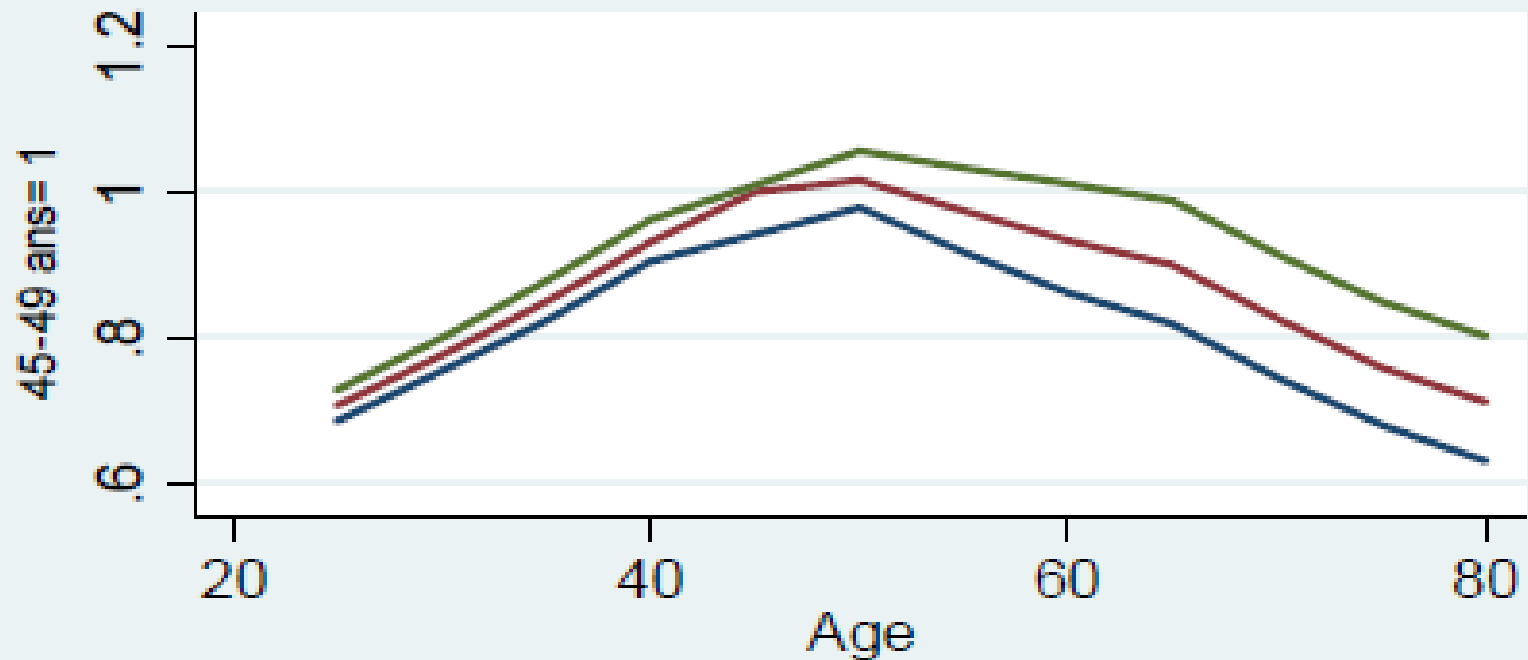
# Consumption as a function of age

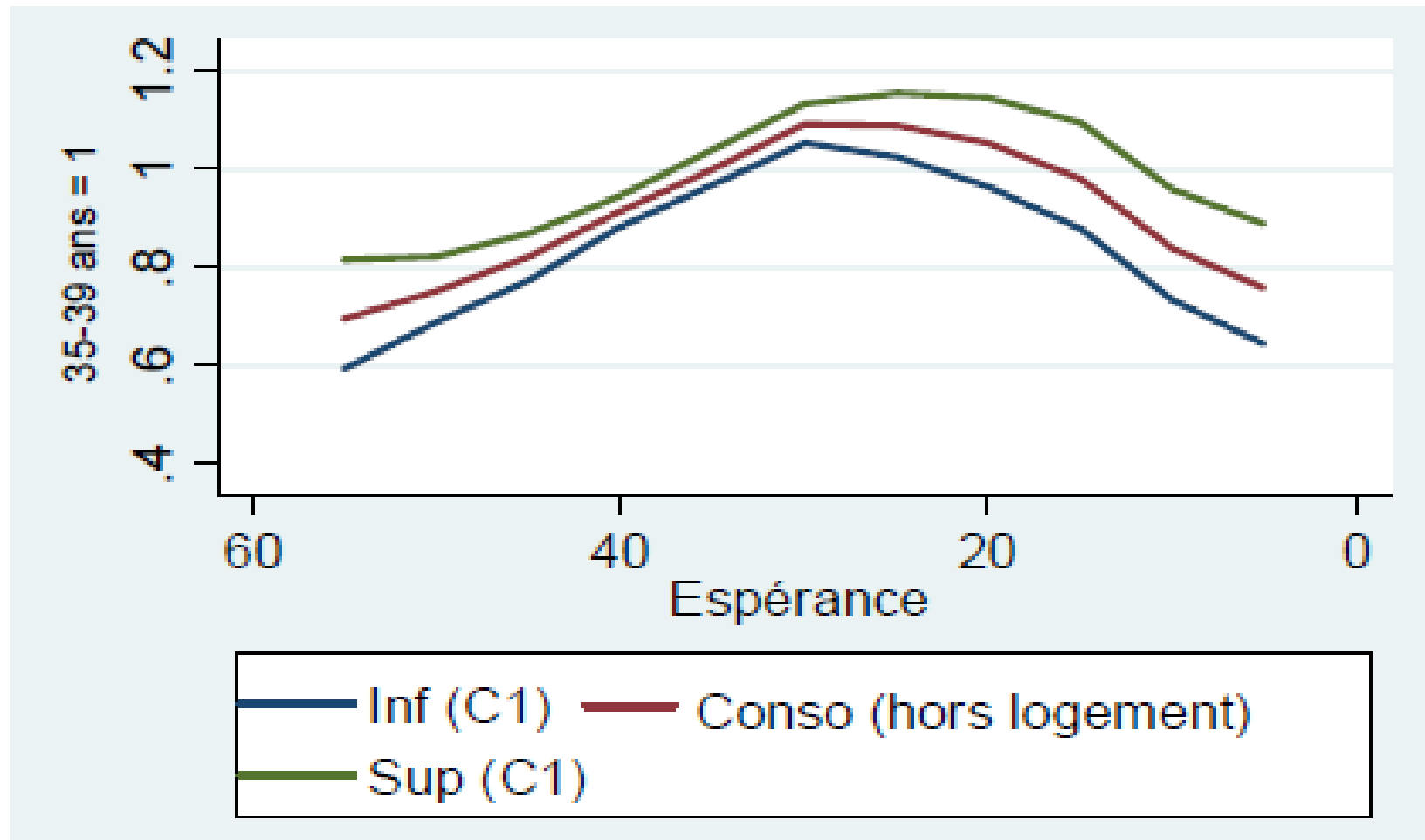# Consumption as a function of life expectancy

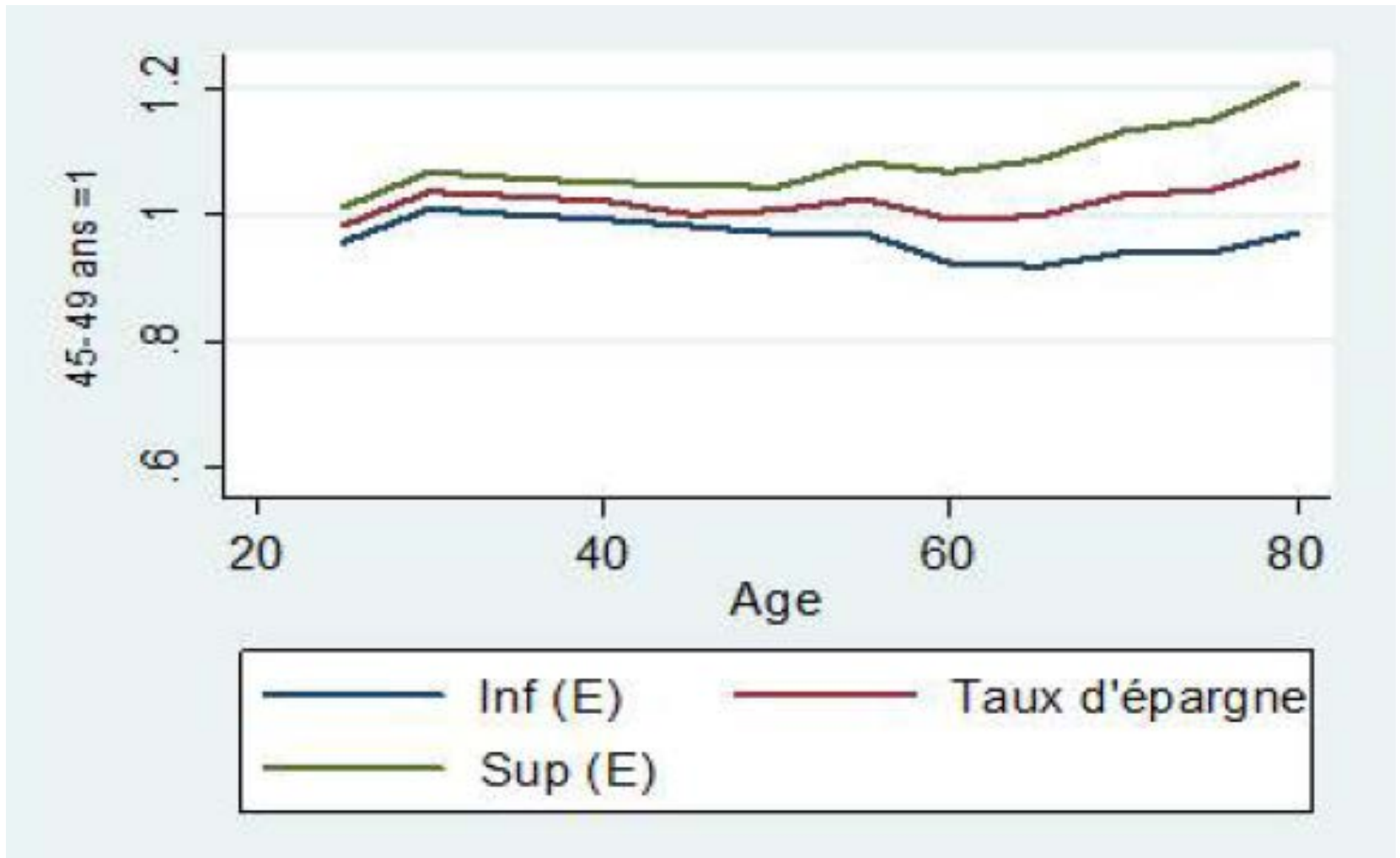# Consumption (without housing) as a function of age

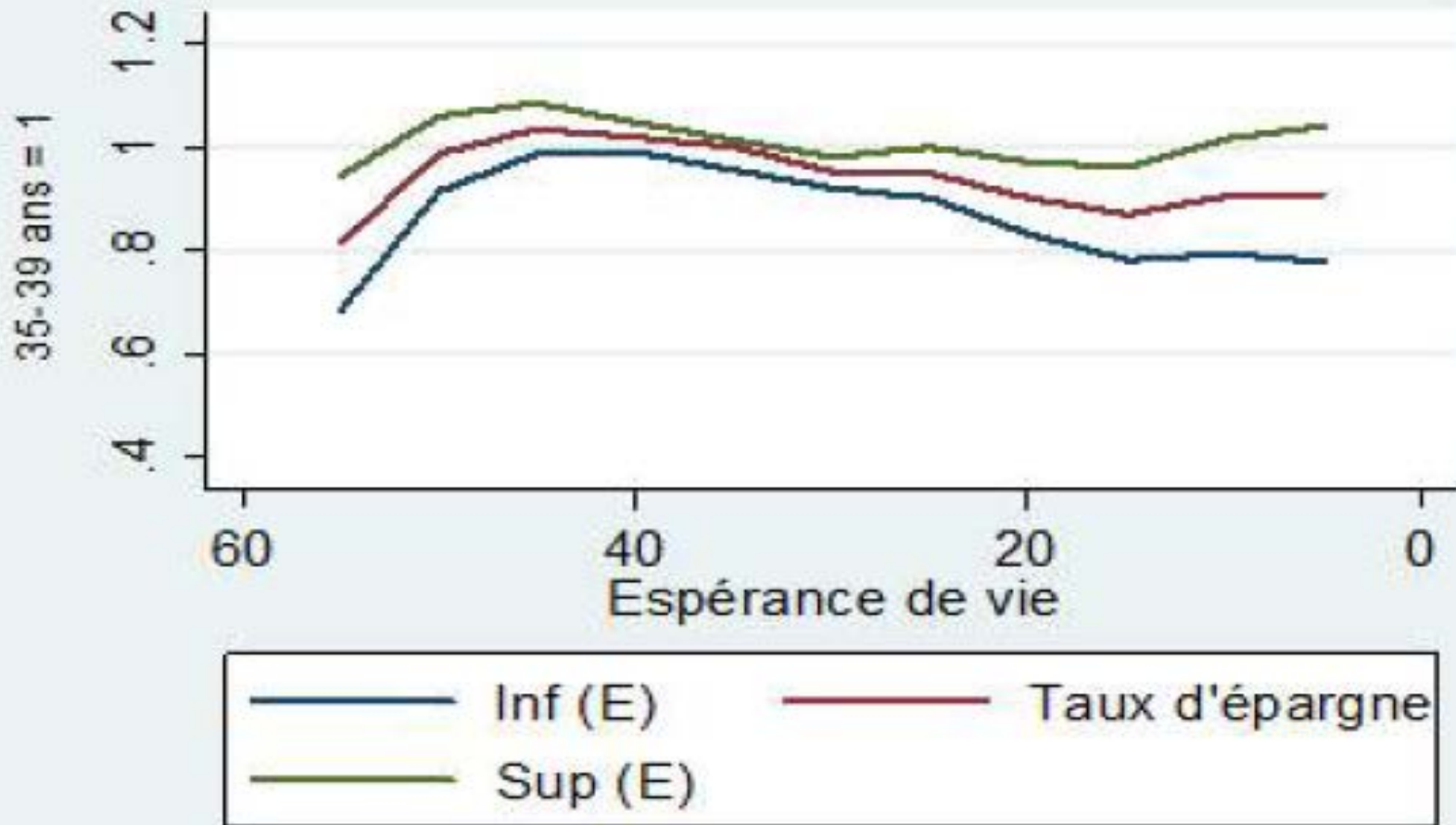# Consumption (without housing) as a function of life expectancy

# Saving rate as a function of age

# Saving rate as a function of life expectancy

# Main conclusions

- Post-baby-boom generations experienced <u>no</u> decline in welfare. Evidence of:
  - Increase in welfare w.r.t. pre-WW2 generations
  - Increase in welfare for post-1965 generations
- Decline in consumption by the elderly

- <u>Policy message</u>: Reducing public transfers to the elderly cannot be justified on the grounds of intergenerational fairness