Global Aging and Global Economics

Issues, some answers, and many more research questions for you!

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1. Fundamentals: Demography (and open questions on links to economics)

2. The Wealth of Nations: Labor Market Issues (Macro/Micro)

3. Product Markets: Sectoral Change, Trade and Infrastructure

4. The Strategic Role of Capital Markets: Asset Meltdown, Portfolio Effects, Globalization and Diversification
Open Questions in Economic Demography

- Deterministic and stochastic projections: How reliable are they?

- Is demography exogenous? Do we understand causality? Economic incentives to fertility and migration
2. Labor Market

The Wealth of Nations

Economy: \[ Y = A \times F(L, K) \]

Individual: \[ Y/N = A \times f(L/N, K/L) \]

Globalization: GDP vs. GNP
Abbildung 1: Erwerbstätige in Deutschland, 2000-2050 [in Millionen]

Quelle: Berechnungen des Autors auf Basis der Bevölkerungsprognose B2
Abbildung 2: Stützquote (Erwerbstätige pro Erwachsene), 2000-2050 [in %]


⇒ Support ratio (Employment/Consumer)

-15% in 25 years
-0.45 ppt per annum
⇒ German GDP per capita
(net of exogenous GDP growth)
Research issues:

\[ Y = A \times F(L, K) \]

**Response of L to aging** (retirement age, entrance age, female LFP, unemployment)

**Response of A to aging** (age profile of productivity, health, capital intensity)
Abbildung 4: Alters- und senioritätsspezifische Verdienste

Sales force (on piece rate)

Clerical workers (on salary)

Abbildung 9: Relative Arbeitsproduktivität von Vertriebspersonal und Büroangestellten

Quelle: Berechnungen des Autors

Abbildung 4: Alters- und senioritätsspezifische Verdienste

A European (?) issue:

Large structural changes in the product market require more sectoral mobility in the labor market
Consumption demand shifts

Abbildung 5: Altersspezifische Konsumausgaben [Gütergruppen in Prozent]

Mobility demand shrinks to 50% ...

Consumption demand shifts

...but demand for healthcare doubles over the life course

*Quelle: Statistisches Bundesamt, Fachserie 15, Heft 5, EVS 1993.*
Large sectoral labor mobility!

Every sixth job will be moved to a different sector
4. Capital Markets

Strategic role of capital markets in the course of global aging:

- Substitution of scarce and costly labor
- Intertemporal resource shifting
- International diversification

But:

Asset meltdown? Scarcity of capital supply?
Saving rate by age and cohort

- 11%
- 5%
Saving rates by age and cohort (relative to age 40)
Research issues:

• How responsive are age-saving profiles to public policy (tax privileges, pensions)?

• Realistic general equilibrium models of capital accumulation
  
  Quite sophisticated, but:
  • Risk (life span, earnings, returns)
  • Portfolio effects
  • Capital market frictions (home bias, FDI)
  • Behavioral reaction to pension reform
Saving rate declines, but neither abruptly nor dramatically
Capital stock: Asset Meltdown?

Capital stock as multiple of GDP

Small, only relative, and diversifiable!
Rate of return: Asset Meltdown?

OLG models indicate so far:
Demographically induced decline of rate of return is non-negligible, but far from a capital market breakdown.

7.8% (4.8%)

6.8% (3.8%)

Chart showing the rate of return over years from 2000 to 2050 for Germany, EU, and OECD.
Safe versus risky assets?

Risky: equity
Equity premium
Safe: savings accounts
Implications of differential aging

Support Ratio

Note: Share persons of working age in total population
Induced international capital flows

Note: Share persons of working age in total population

Support ratio

Multi-country OLG model

⇒ Net capital flows
Final issue: Corporate governance

- Capital productivity important part of TFP
- Strategic role of capital markets makes corporate governance more important
- Feedback effects of pension reform
Where to set priorities?

- Aging and productivity (need firm data!)
- Behavioral responses to pension reform: retirement age, saving (need international data! Time-honored questions with limited answers)
- Macroeconomic effects of risk management
- Global capital flows (home bias, frictions)