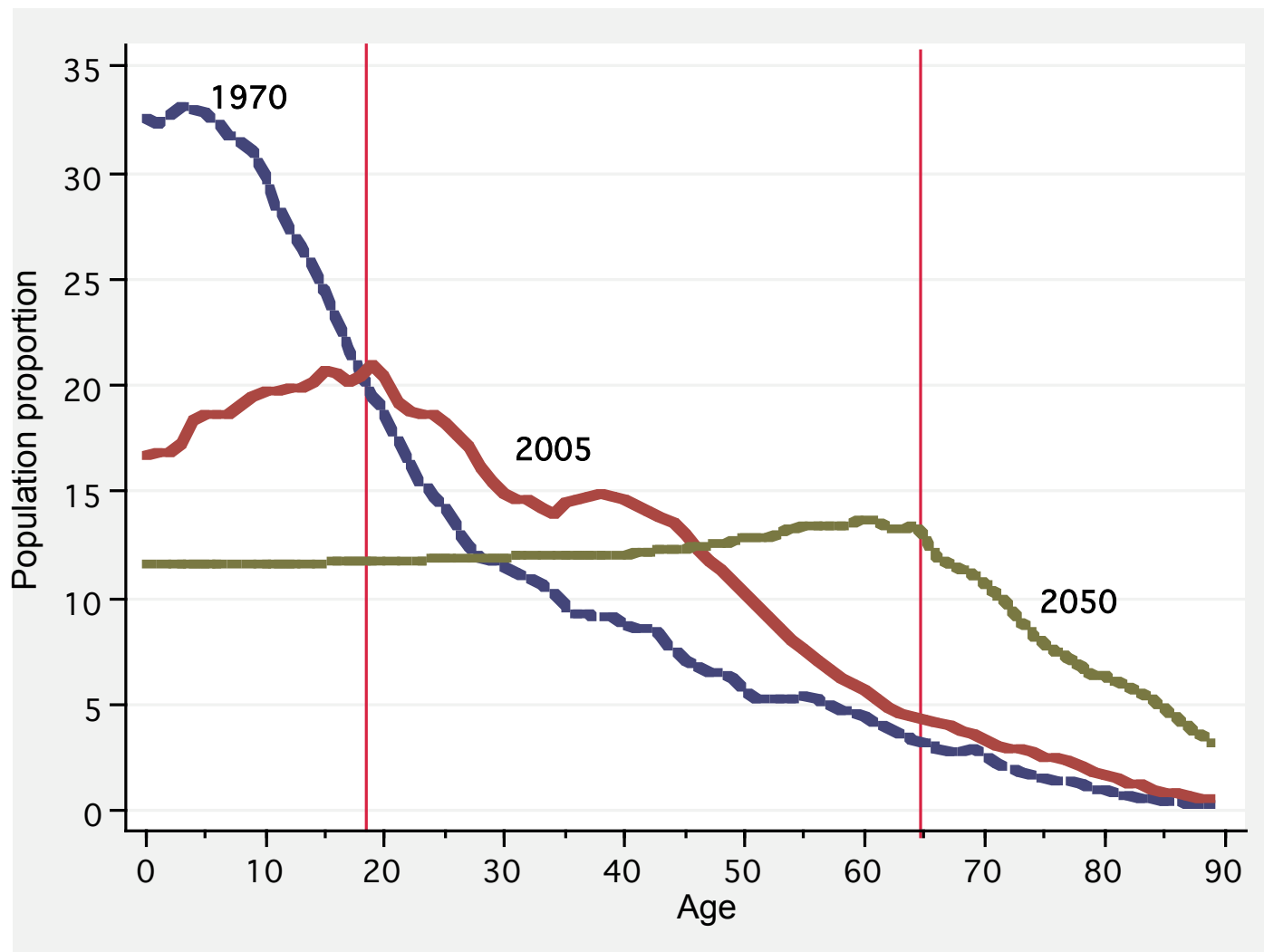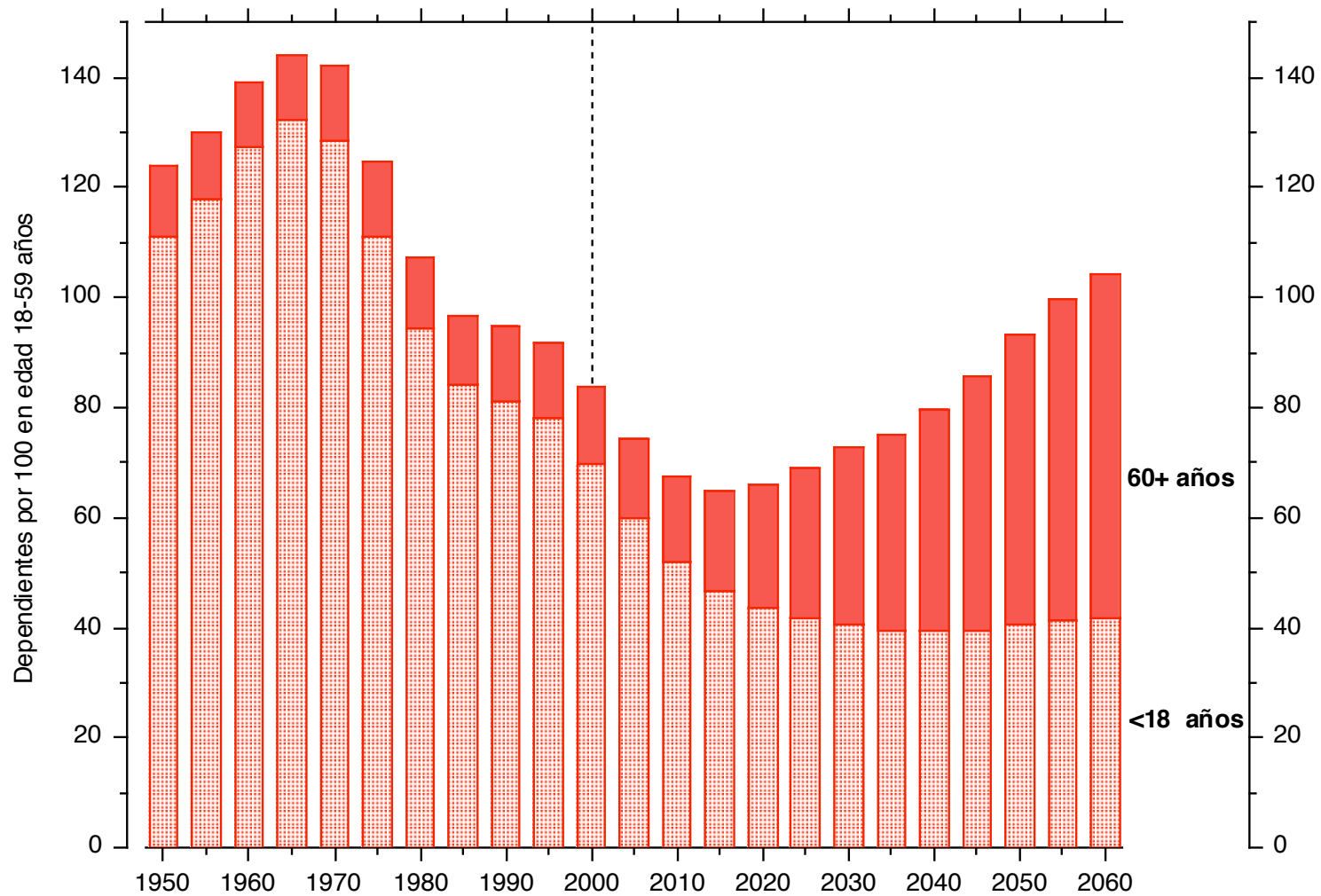# Decomposing the first demographic dividend in Costa Rica

Luis Rosero-Bixby

University of Costa Rica

Dramatic change in age structure
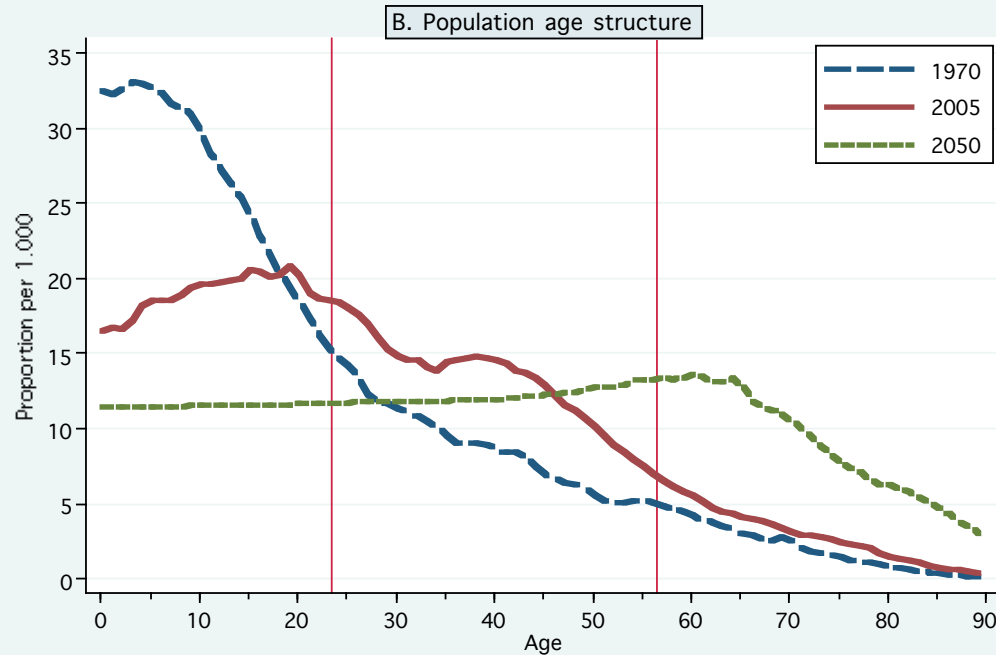
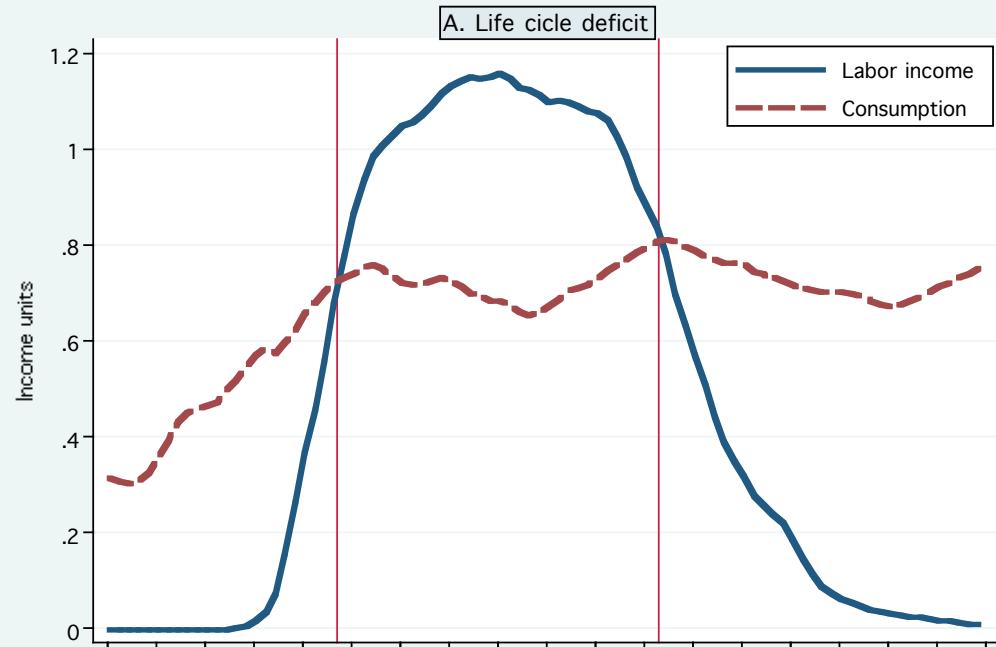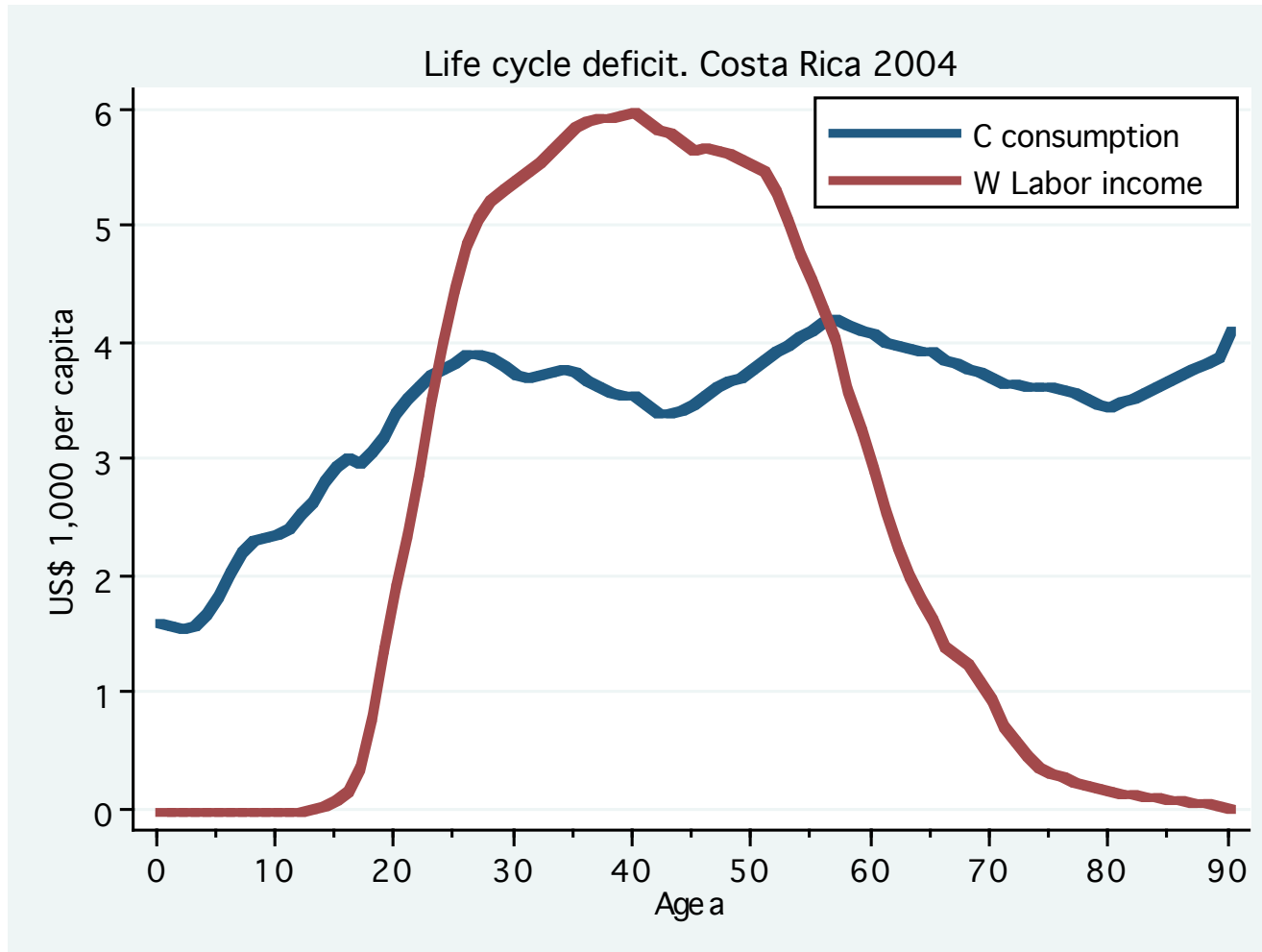# Favorable dependency ratio

The life cicle deficit in 2004

and the changing population age

The first demographic dividend
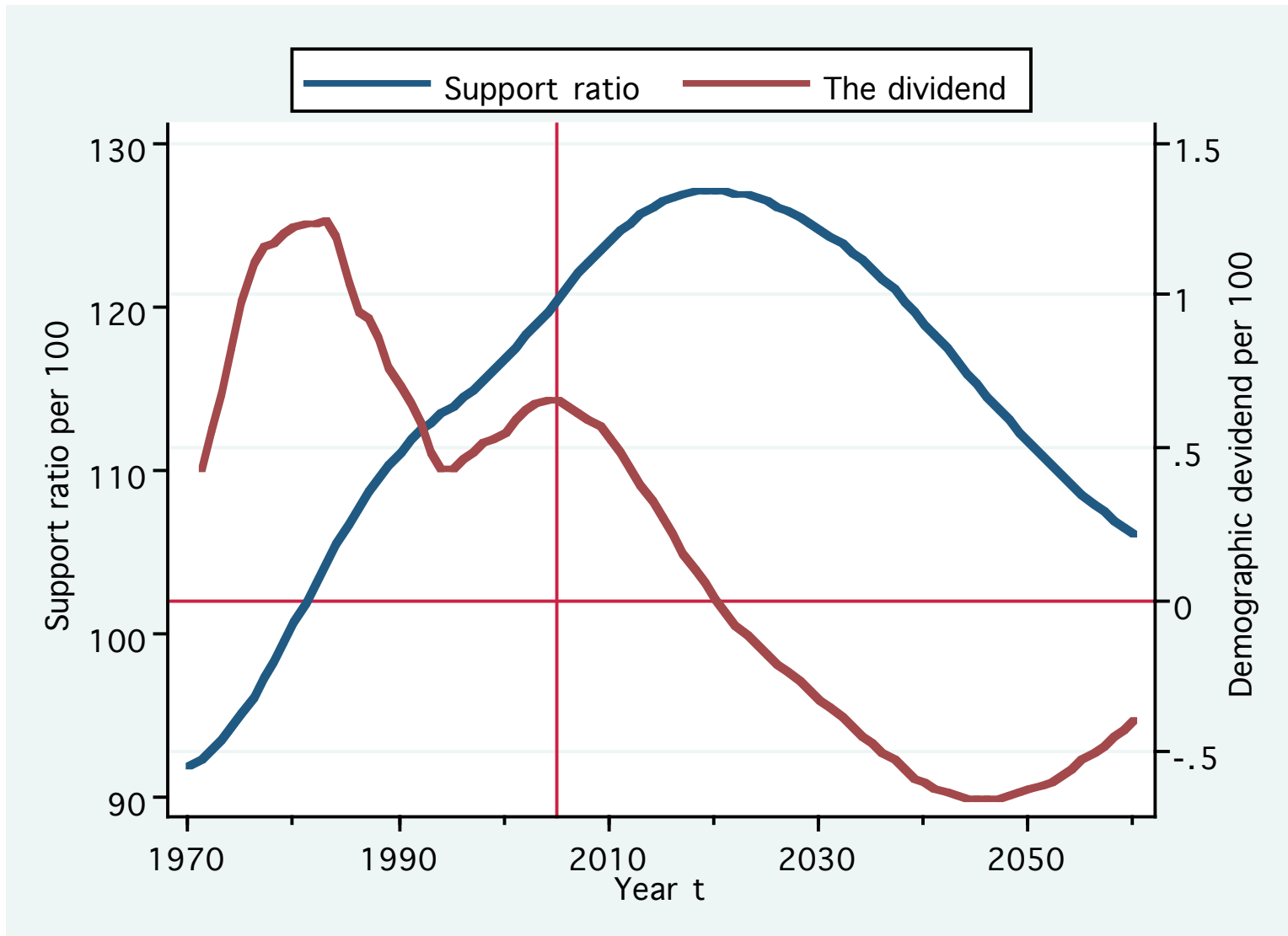

Life cycle deficit. Costa Rica 2004

Support ratio:

$$\frac{\sum_a W(a)P(a,t)}{\sum_a C(a)P(a,t)} = \frac{L(t)}{N(t)}$$
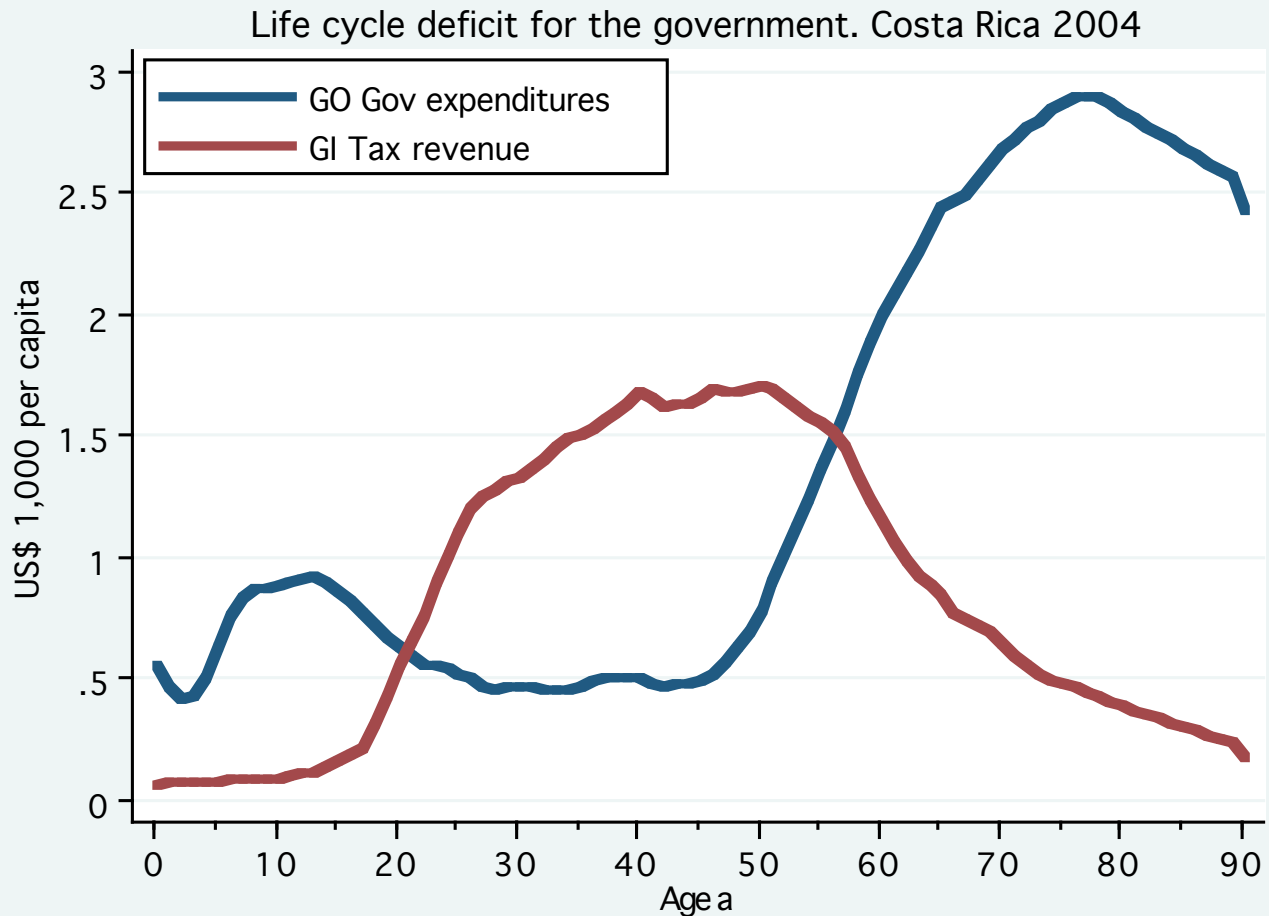
Effective producers
Effective consumers

The dividend:

$$\dot{L}(t) - \dot{N}(t)$$

The first demographic dividend

The fiscal demographic dividend

Life cycle deficit for the government. Costa Rica 2004
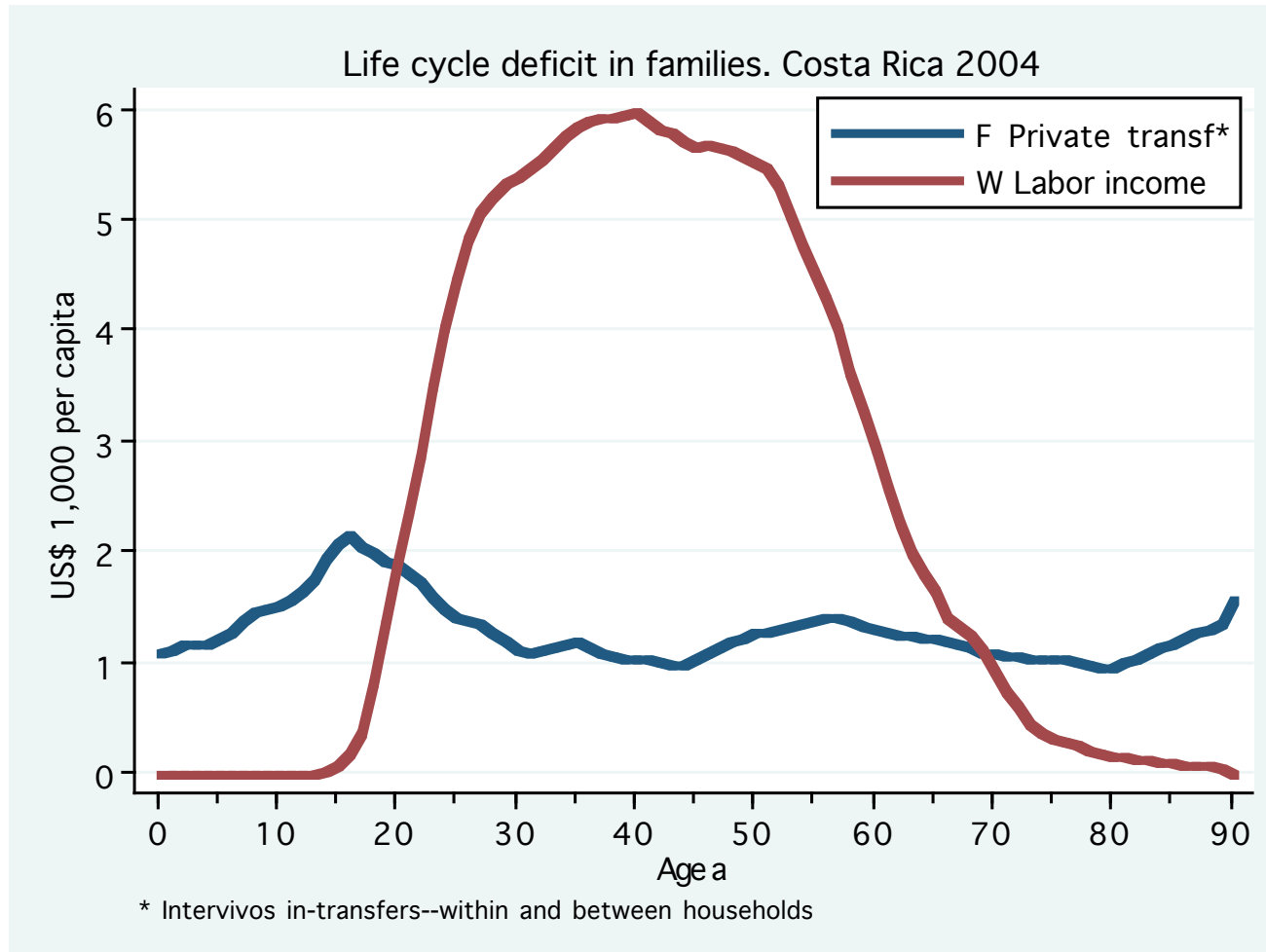
Support ratio:

$$\frac{\sum_a GI(a)P(a,t)}{\sum_a GO(a)P(a,t)} = \frac{T(t)}{E(t)}$$

The dividend:

$$\dot{T}(t) - \dot{E}(t)$$
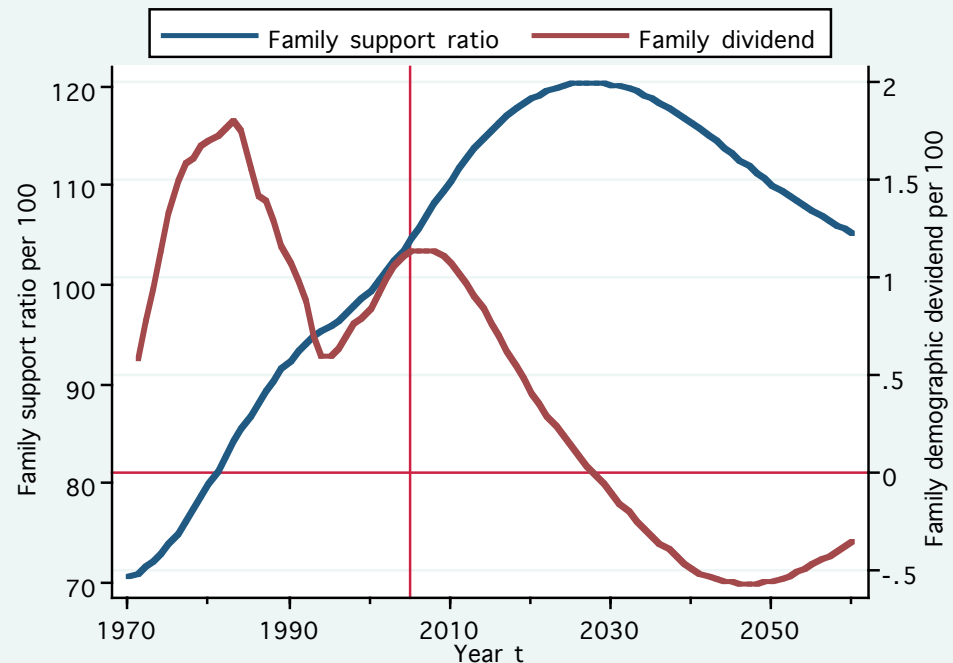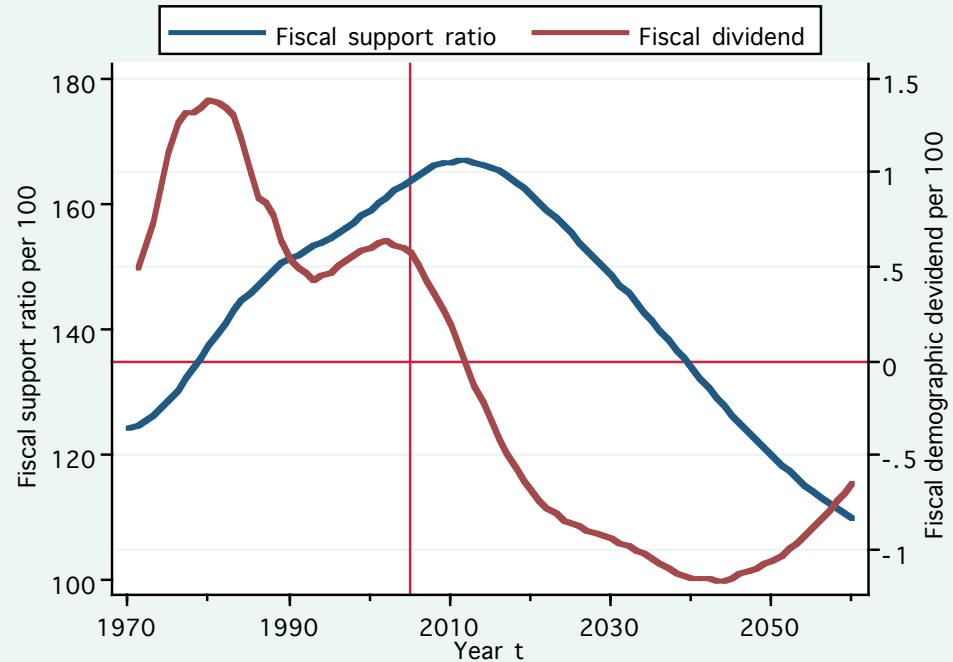
The family demographic dividend

Life cycle deficit in families. Costa Rica 2004

Support ratio:

$$\frac{\sum_a W(a)P(a,t)}{\sum_a F(a)P(a,t)} = \frac{L(t)}{FN(t)}$$

The dividend:

$$\dot{L}(t) - F\dot{N}(t)$$

* Intervivos in-transfers--within and between households

Fiscal and family first demographic dividend Costa Rica

The first demographic dividend and its components in Costa Rica
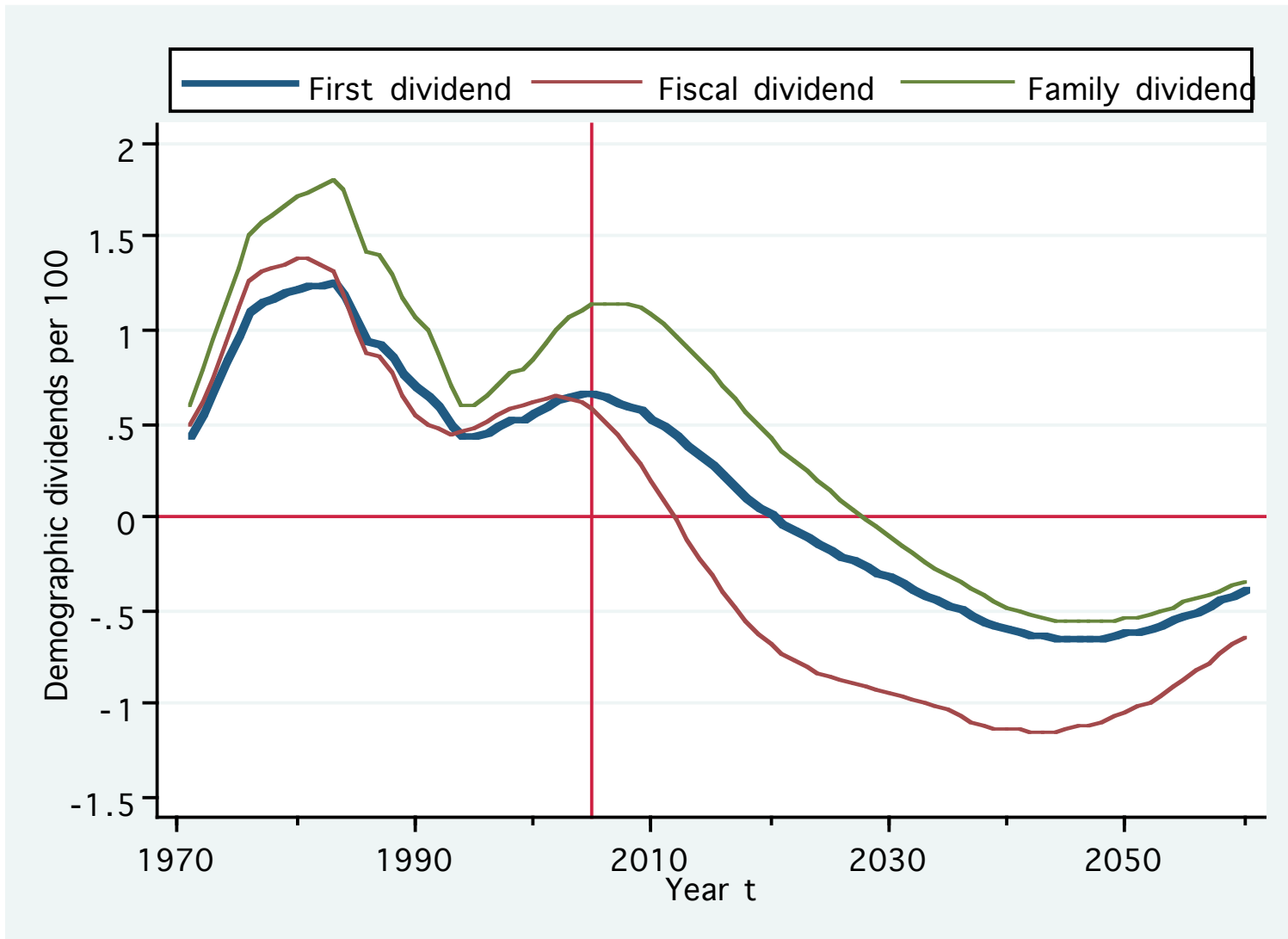
Discussion

- How to improve definitions of the fiscal and family support ratios
- Problem: the first general dividend is not an average of the fiscal and family components