What We Have Achieved?

Rikiya Matsukura
NUPRI

What is NTA ?

Objectives of NTA Project

1. Quantify the Lifecycle Deficit and Its Components by Age
   - Labor Income
   - Consumption
     - Private (household consumption)
     - Public (education, health, national defense)

Objectives of NTA Project

2. Quantify the means by which resources are reallocated from productive generations to dependent generations
   - Capital accumulation and dis-accumulation
   - Intergenerational transfers
     - Public programs, e.g., education, health care, and public pension programs
     - Familial transfers – from adults to their children and from adults to their elderly parents

Objectives of NTA Project

3. Document and study the evolution of support systems and international differences in support systems.
4. Study the macroeconomic effects of intergenerational transfers and support systems:
    - Economic growth
    - Saving, capital, and wealth
    - Generational equity

Objectives of NTA project

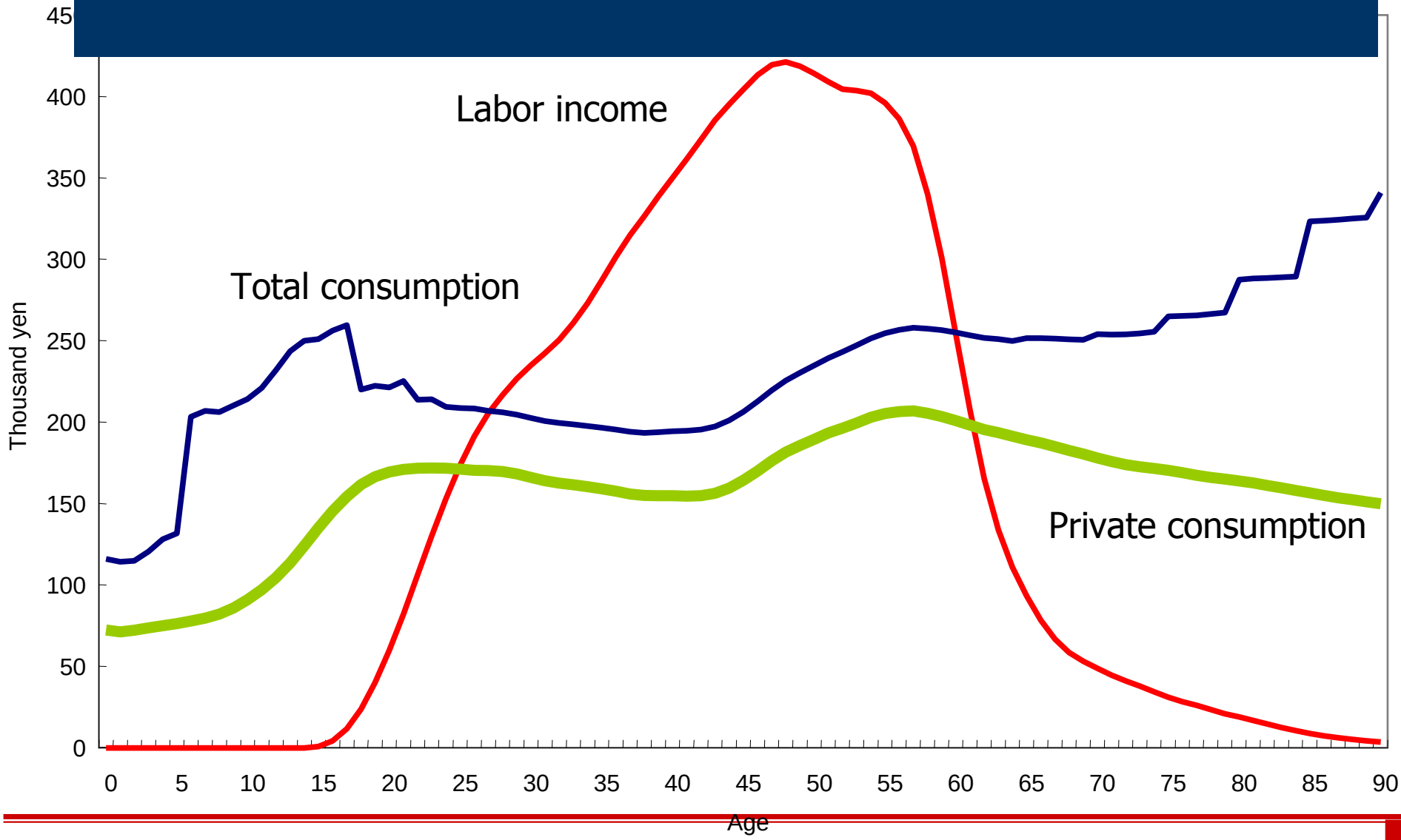
5. Improve policy analysis related to the economics of aging, familial support systems, public programs for education, health, and public pensions.

How to report ?

Is NTA useful?

How to use for policy implication

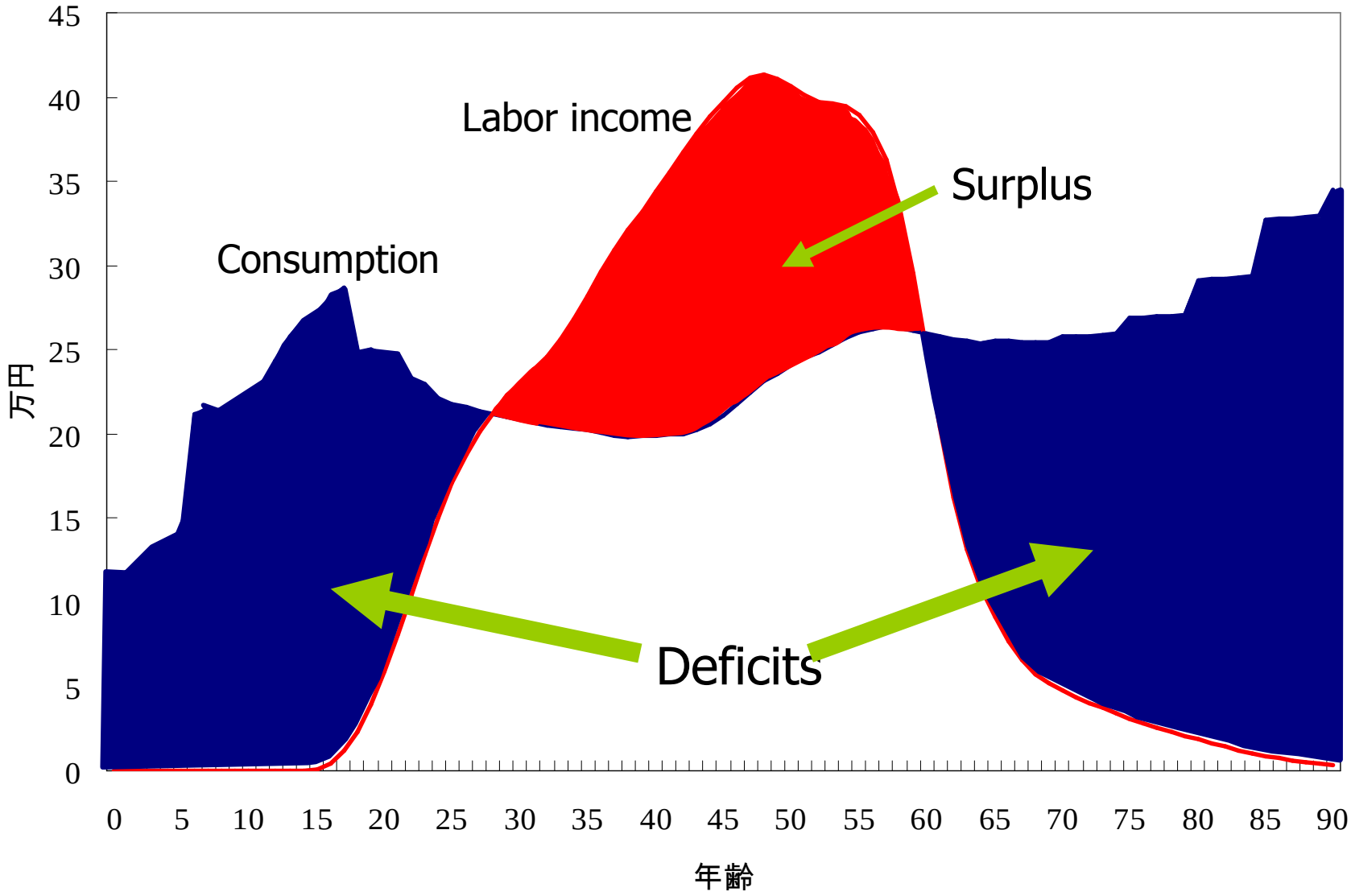
Japan's Most Important Graph



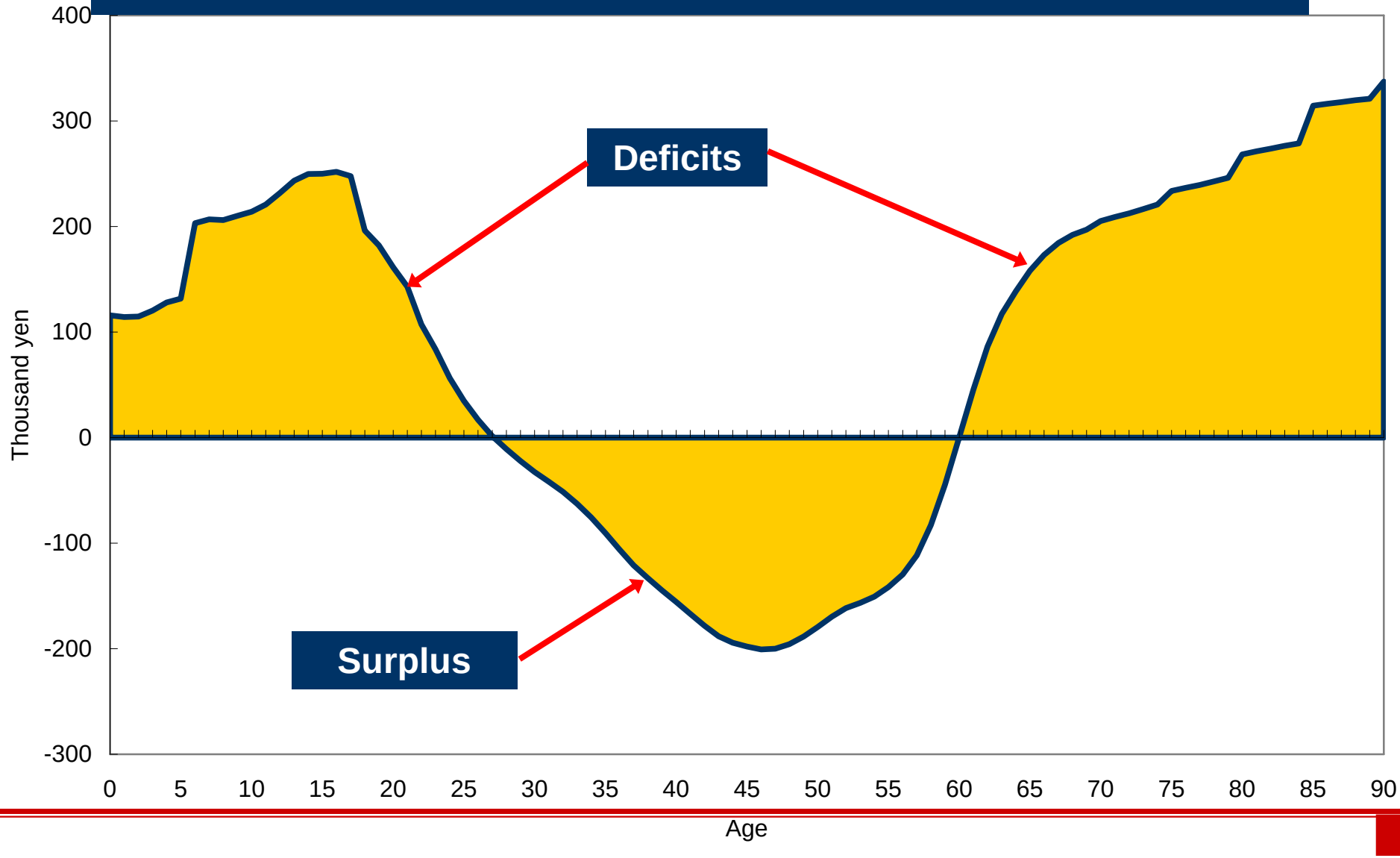
Lifecycle Deficiets

Japan's most important Graph,

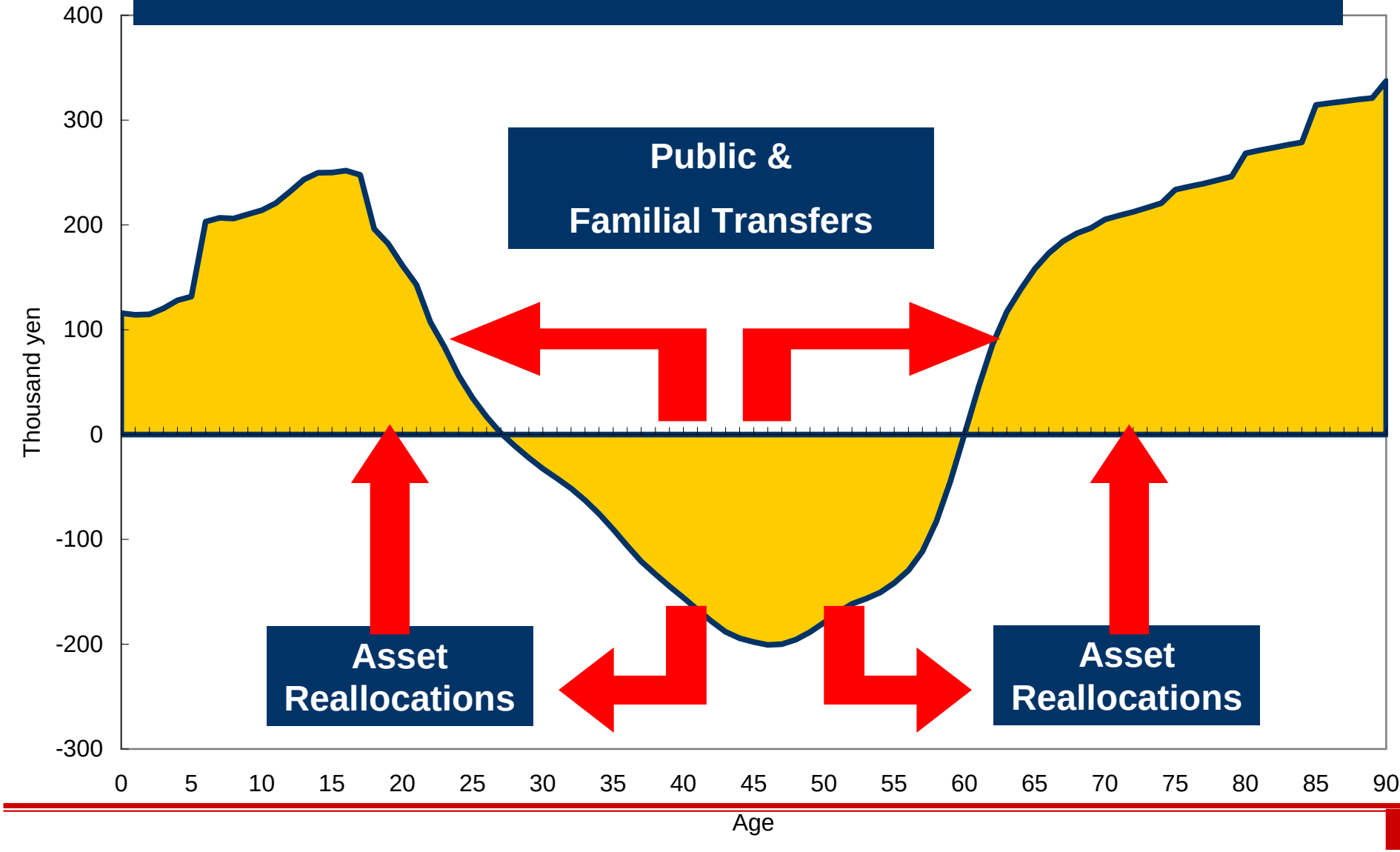
(2004, per capita and per month)



Total Reallocations:Lifecycle Deficits



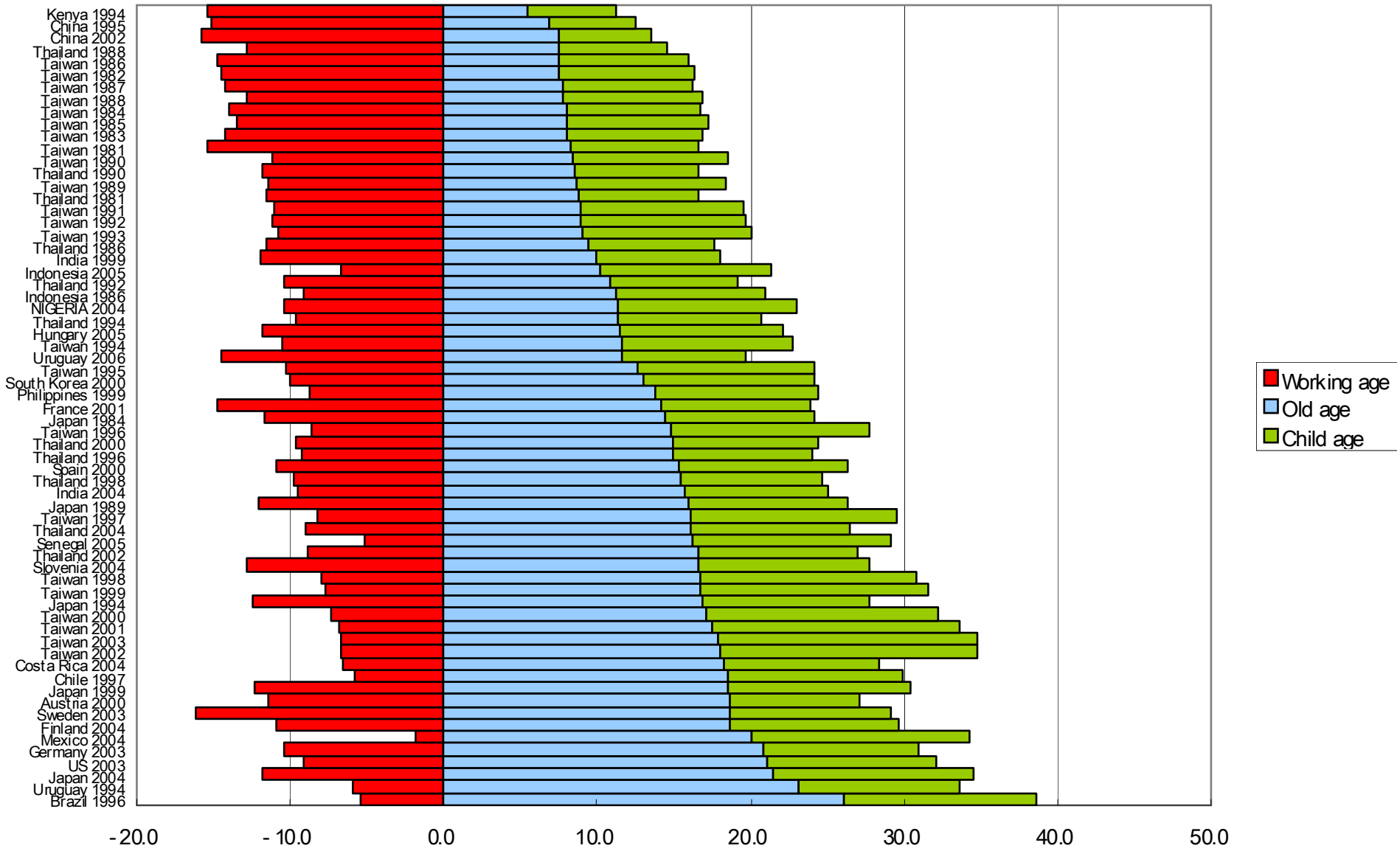
Total Reallocations:Lifecycle Deficits



Produce and consume:
The Economic Lifecycle

- Measure by comparing what people at each age consume to what they produce through their labor.
- Three distinct periods in all contemporary societies:
  - Beginning: Lifecycle deficit.
  - Middle: lifecycle surplus.
  - End: Lifecycle deficit.
- Size and age pattern of deficits and surplus depend on many factors

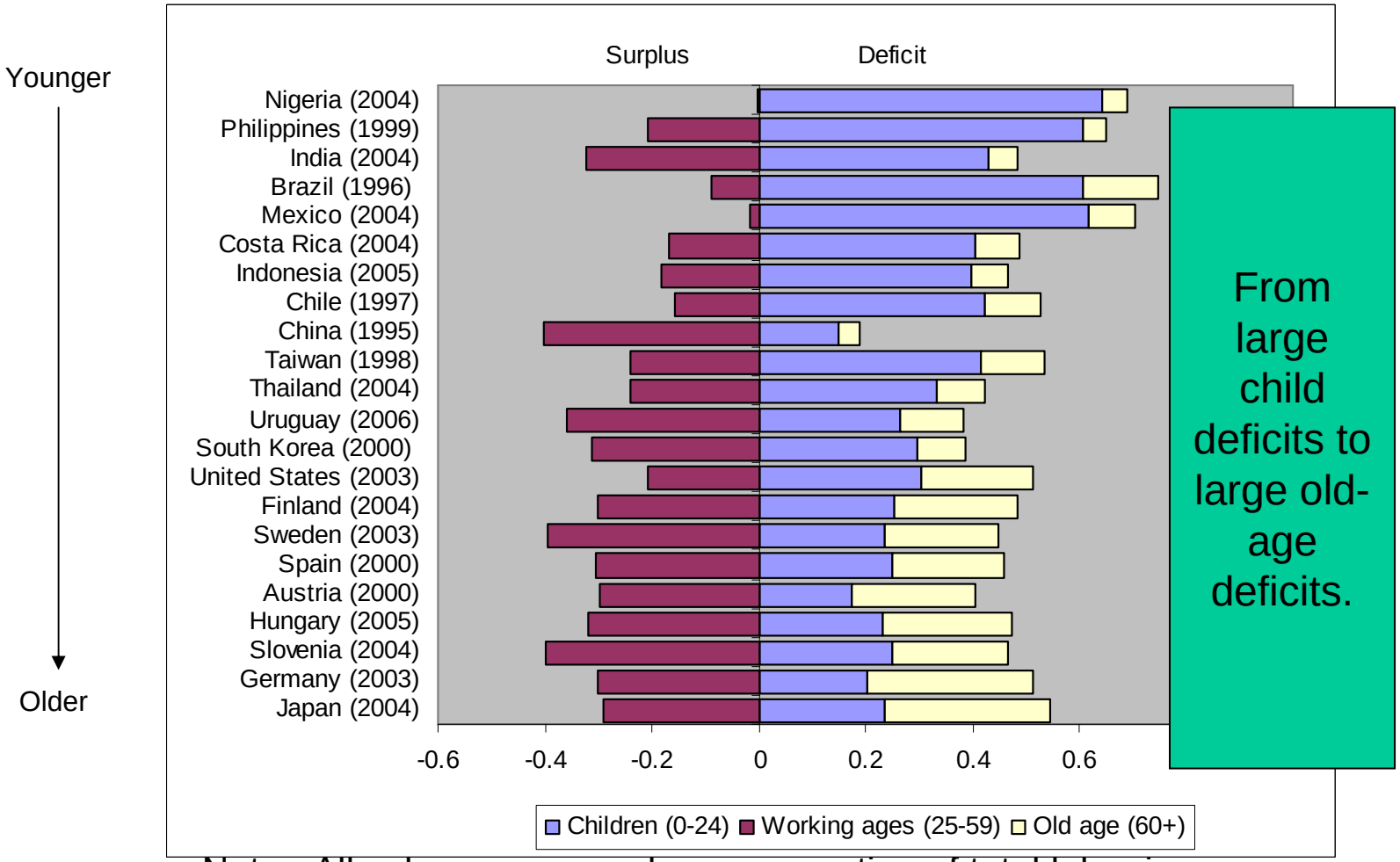
Summary of Per capita Lifecycle



NTA is 2 dimension

Per capita VS Aggregate

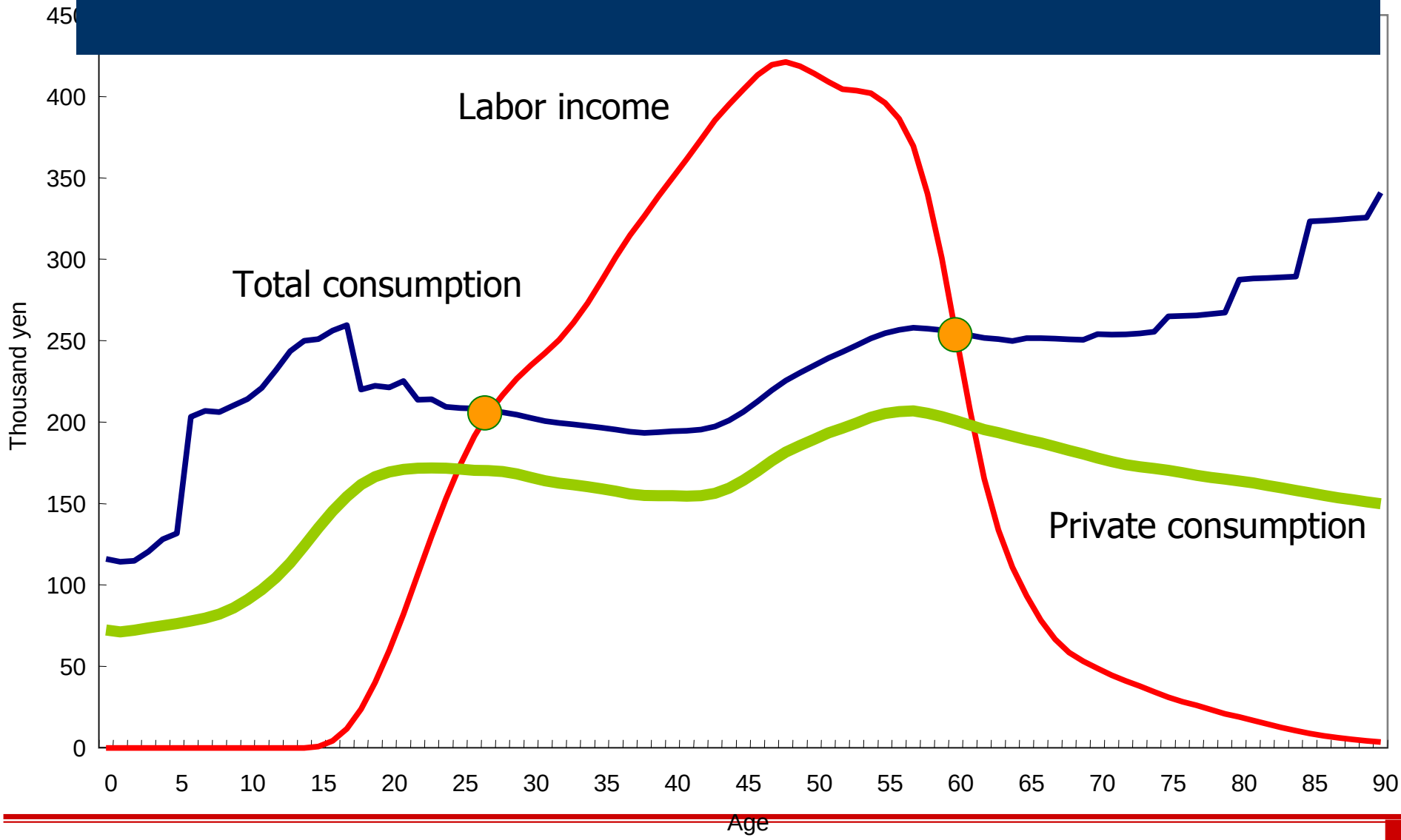
Summary of Aggregate Lifecycle

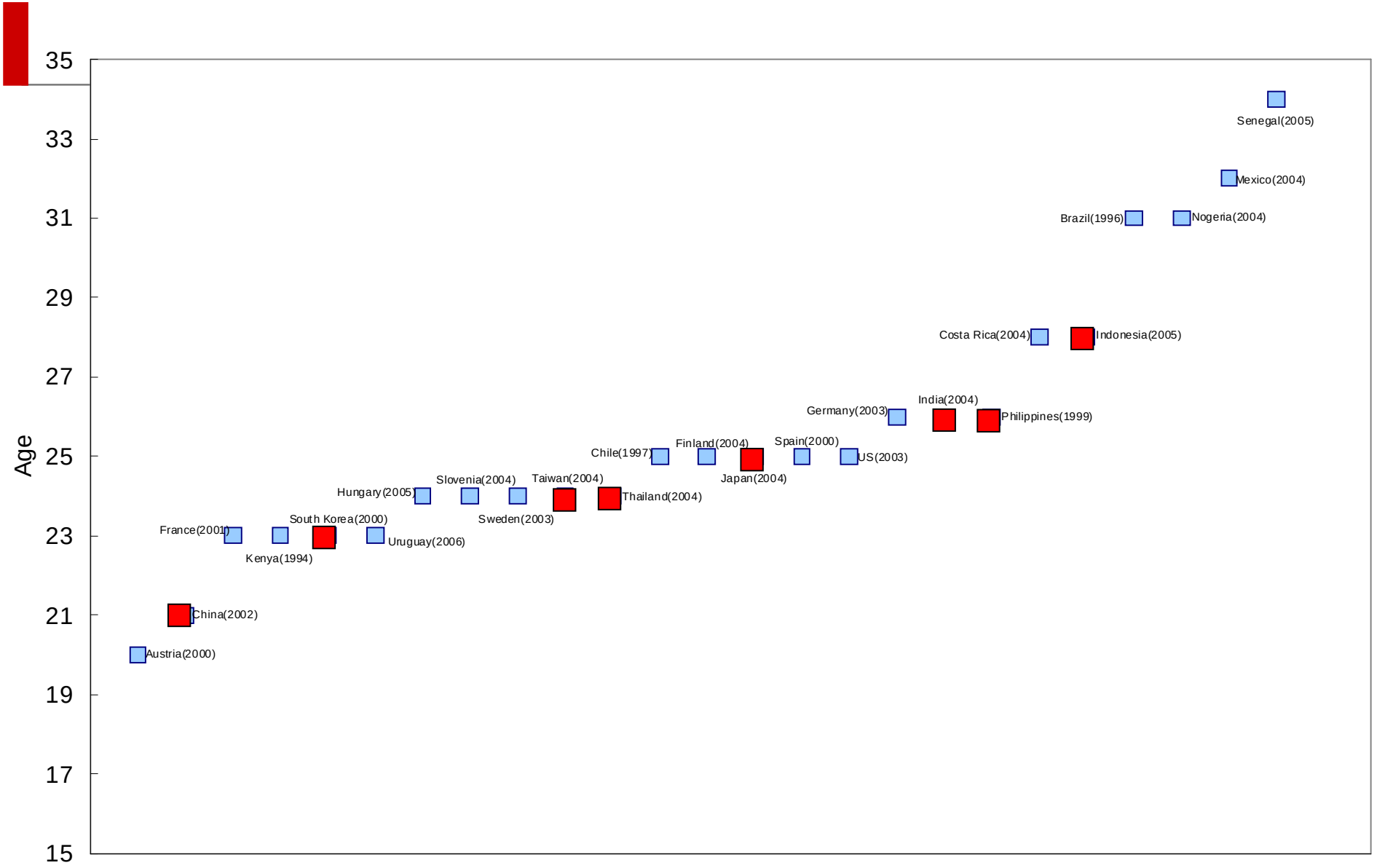


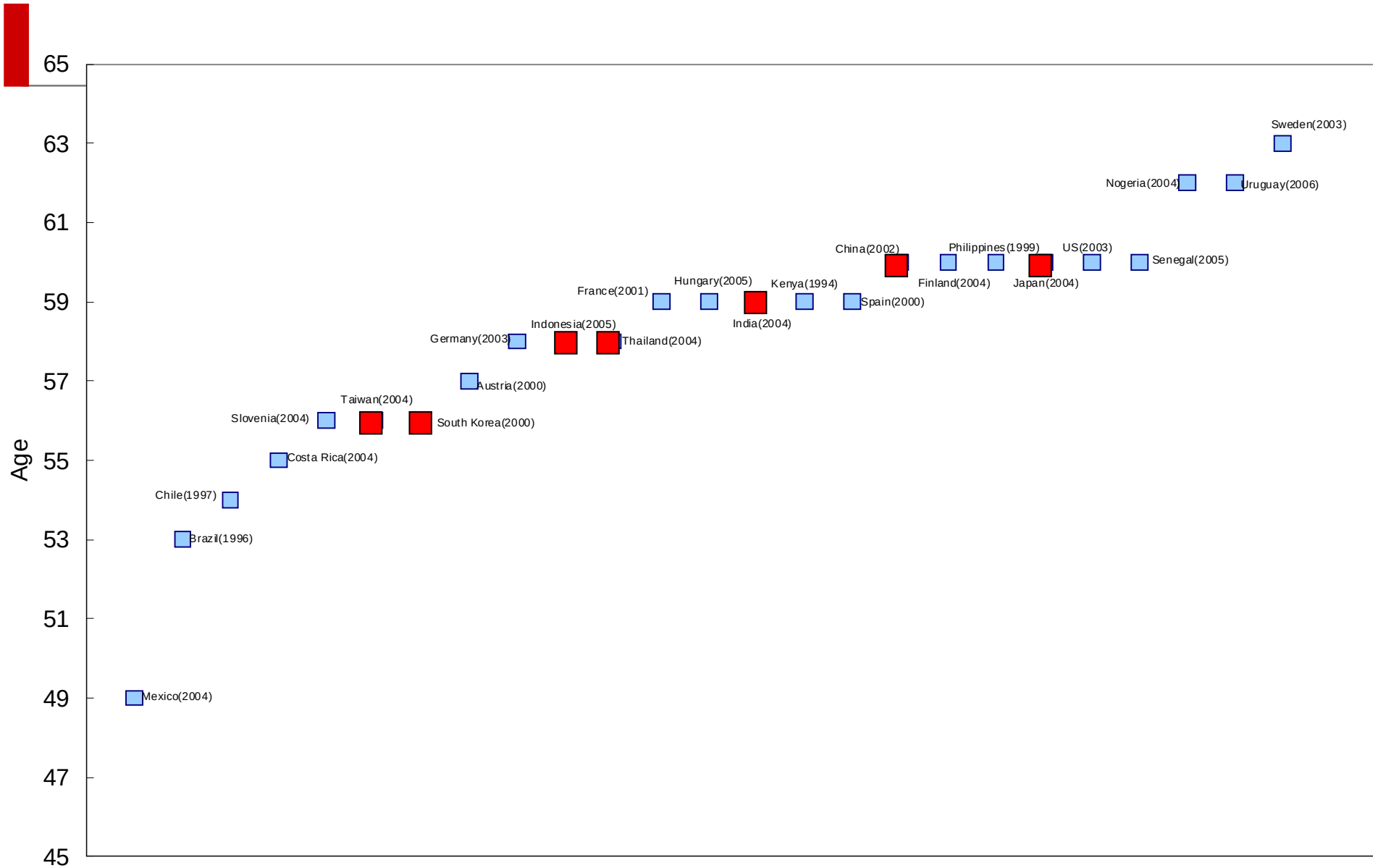
Note: All values expressed as a proportion of total labor income.
Countries ordered using percentage of population under age 25.

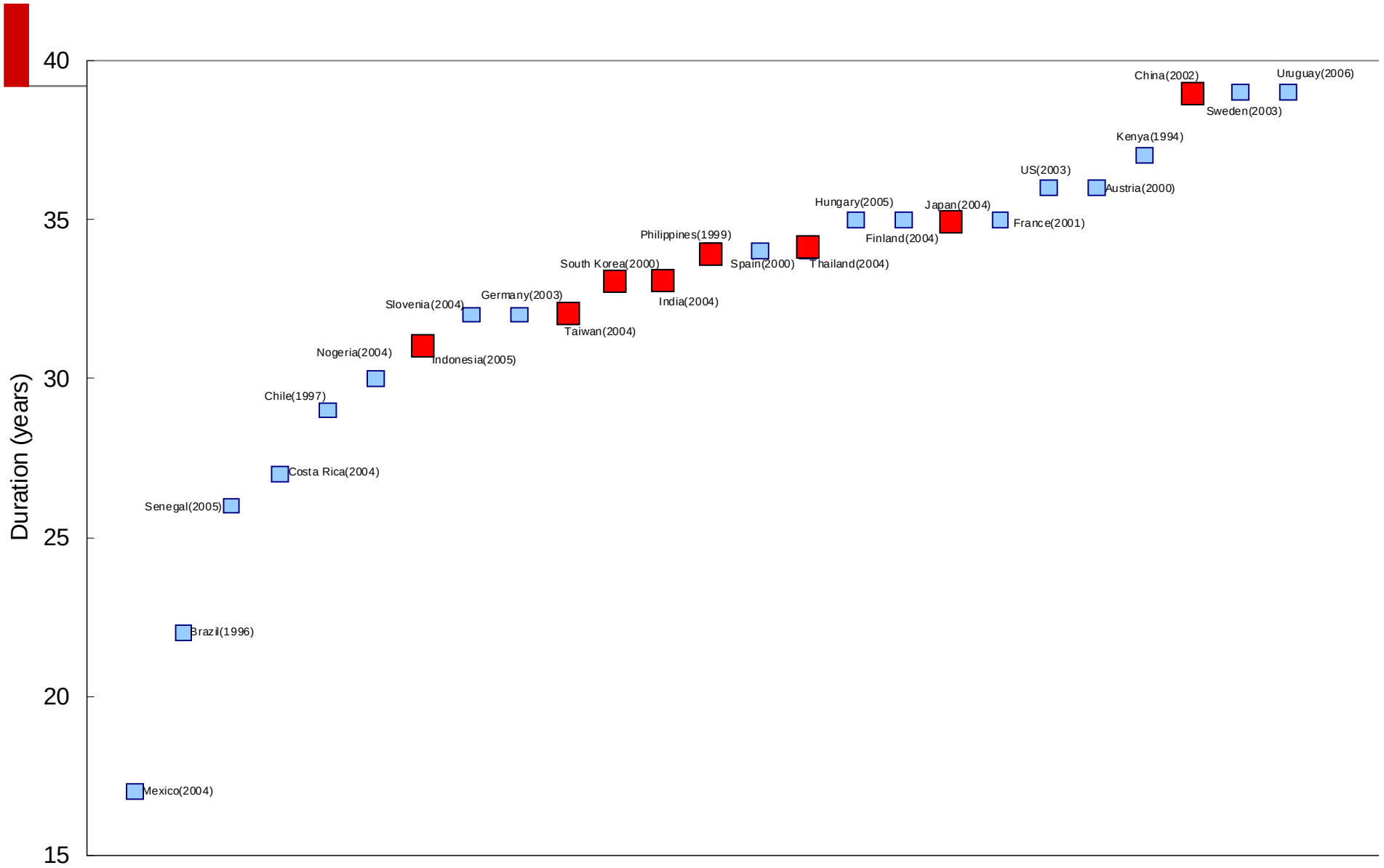
Cutting Age

Japan's Most Important Graph




Age
35
33
31
29
27
25
23
21
19
17
15
Senegal(2005)
Mexico(2004)
Brazil(1996)
Nogeria(2004)
Costa Rica(2004)
Indonesia(2005)
India(2004)
Germany(2003)
Philippines(1999)
Finland(2004)
Spain(2000)
Chile(1997)
US(2003)
Japan(2004)
Slovenia(2004)
Taiwan(2004)
Hungary(2005)
Thailand(2004)
Sweden(2003)
South Korea(2000)
France(2001)
Uruguay(2006)
Kenya(1994)
China(2002)
Austria(2000)


Age
65
63
61
59
57
55
53
51
49
47
45
Sweden(2003)
Nogeria(2004)
Uruguay(2006)
China(2002)
Philippines(1999)
US(2003)
Senegal(2005)
Finland(2004)
Japan(2004)
France(2001)
Hungary(2005)
Kenya(1994)
Spain(2000)
India(2004)
Indonesia(2005)
Germany(2003)
Thailand(2004)
Austria(2000)
Taiwan(2004)
Slovenia(2004)
South Korea(2000)
Costa Rica(2004)
Chile(1997)
Brazil(1996)
Mexico(2004)


Duration (years)
40
35
30
25
20
15
China(2002)
Uruguay(2006)
Sweden(2003)
Kenya(1994)
US(2003)
Austria(2000)
Hungary(2005)
Japan(2004)
France(2001)
Finland(2004)
Philippines(1999)
Spain(2000)
Thailand(2004)
South Korea(2000)
India(2004)
Germany(2003)
Slovenia(2004)
Taiwan(2004)
Nogeria(2004)
Indonesia(2005)
Chile(1997)
Costa Rica(2004)
Senegal(2005)
Brazil(1996)
Mexico(2004)

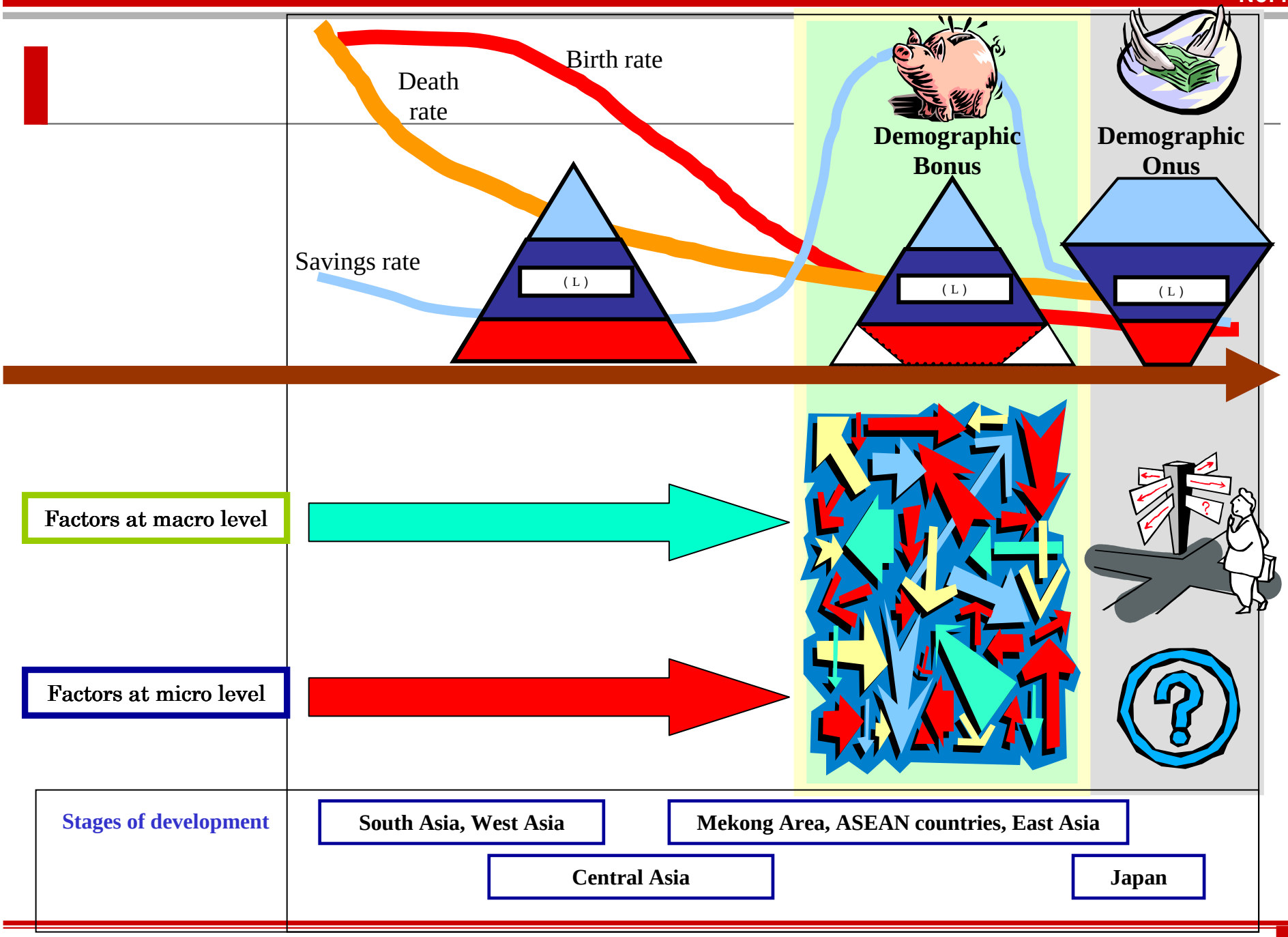
Demographic Transition

And

Demographic Bonus/Dividend

Global Age Transition

- The global age transition is universal:
  1. Increase in share of children
  2. Increase in the working-age share
  3. Increase in the share of elderly
- Rapid for many middle- and low-income countries
- Countries are at different points of the global age transition.


Birth rate
Death rate
Savings rate
Demographic Bonus
Demographic Onus
(L)
(L)
(L)
Factors at macro level
Factors at micro level
Stages of development
South Asia, West Asia
Mekong Area, ASEAN countries, East Asia
Central Asia
Japan

NTA is important because of the Population Age Transition

- Global phenomenon
- In the middle of the transition
  - Earlier: Share of children was increasing world-wide
  - Currently: Working-age population is increasing in most countries
  - Future: Growth in elderly population will dominate
- Changes are unprecedented
- Inevitable consequence of
  - Continuing gains in life expectancy
  - Low and very low fertility most important

Many ways to define and compute

the demographic .....

Demographic Bonus* or *Window of Opportunity

(UNFPA, 1999; Birdsall and Sinding, 2001; Merrick, 2002)

Demographic Gift

(Williamson, 2001)

Demographic Opportunity

(Fargues, 2001)

Demographic Golden Age

(Vallin, 2002)

Demographic Dividend

(United Nations, 2003)

Double Windows

(Chen and Lin, 2004)

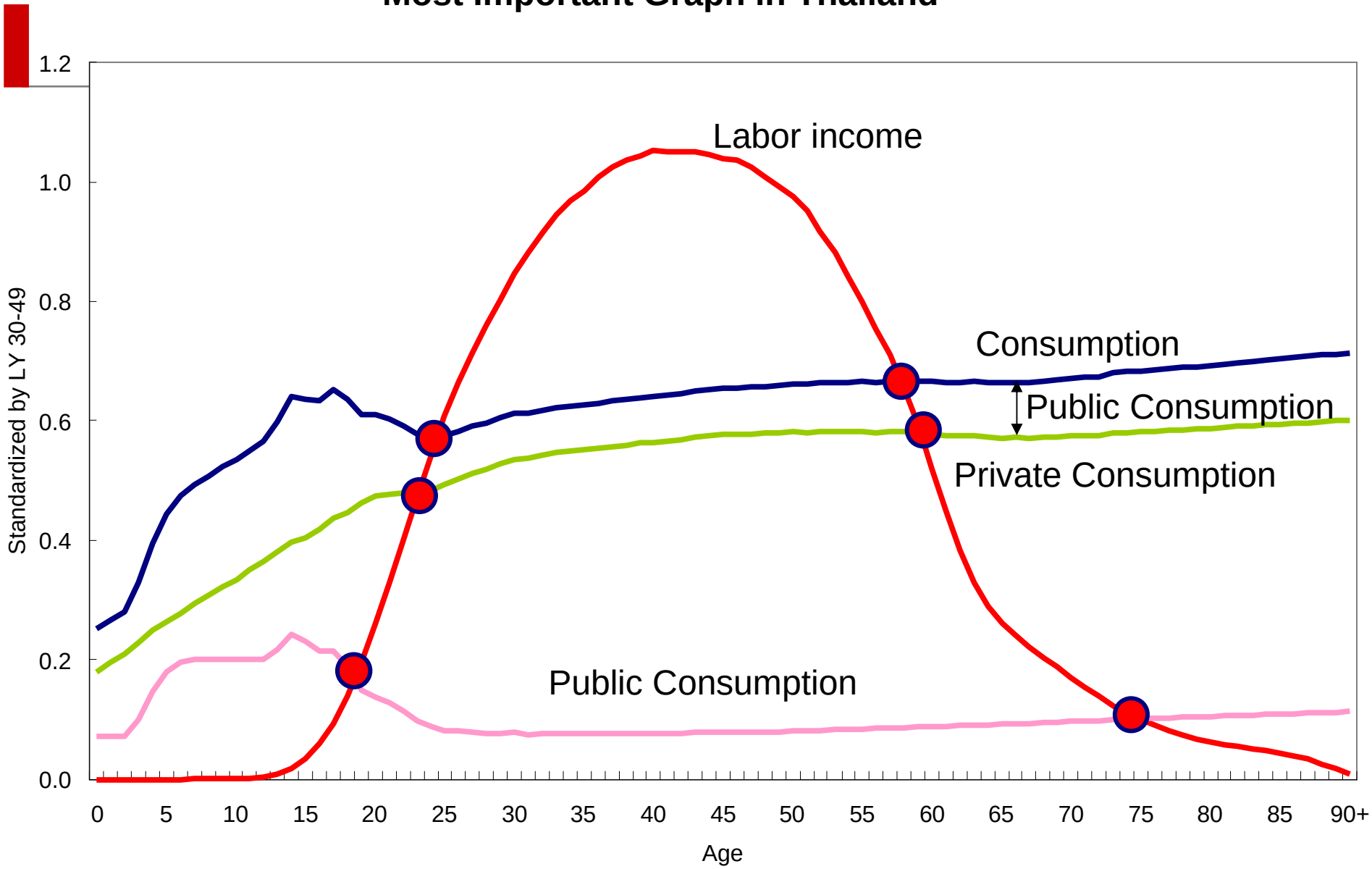
First and Second Dividends

(Mason and Lee, 2005)

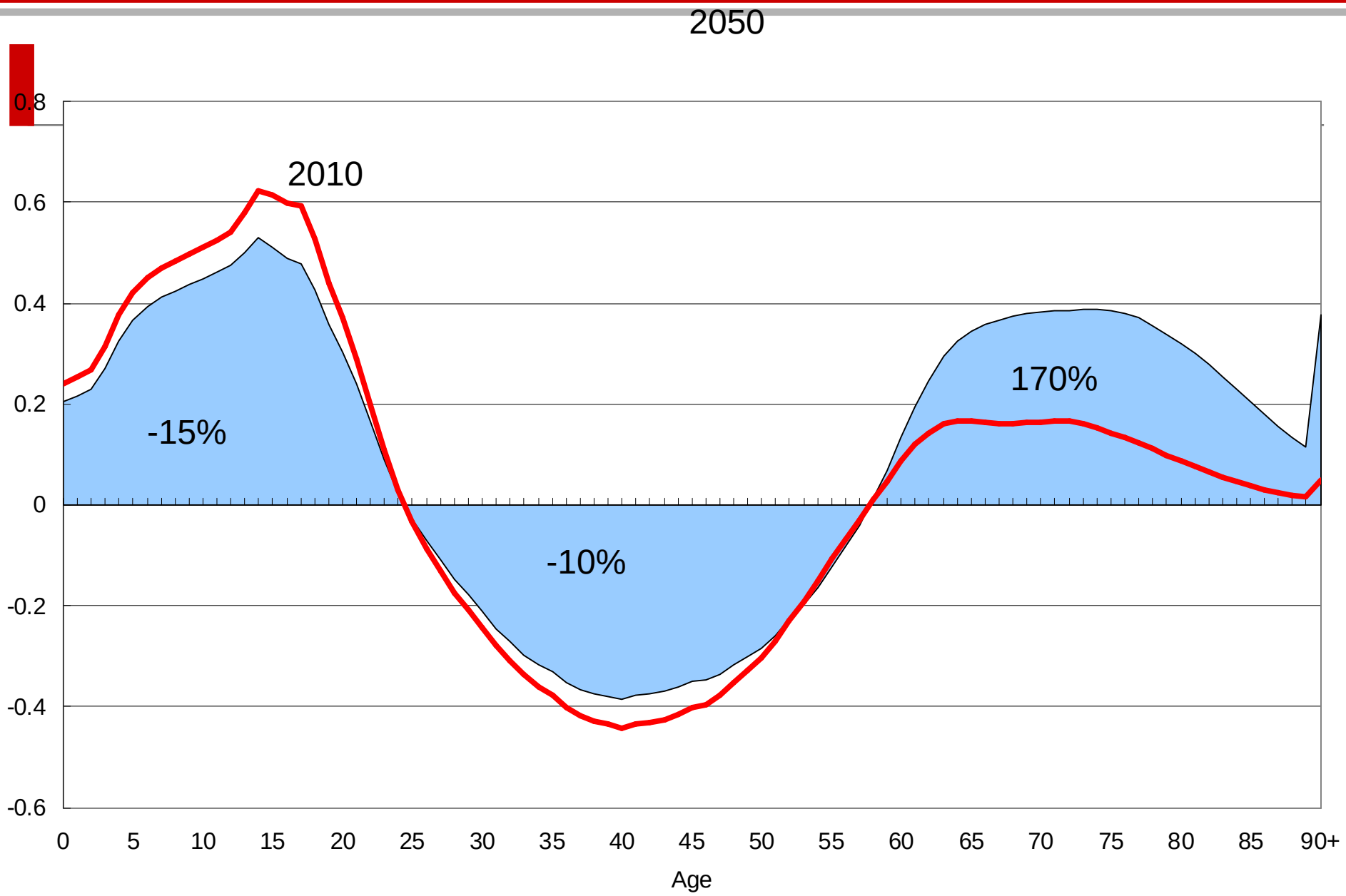
In most of these studies, the conventional total dependency ratio is used…

Example: Thailand

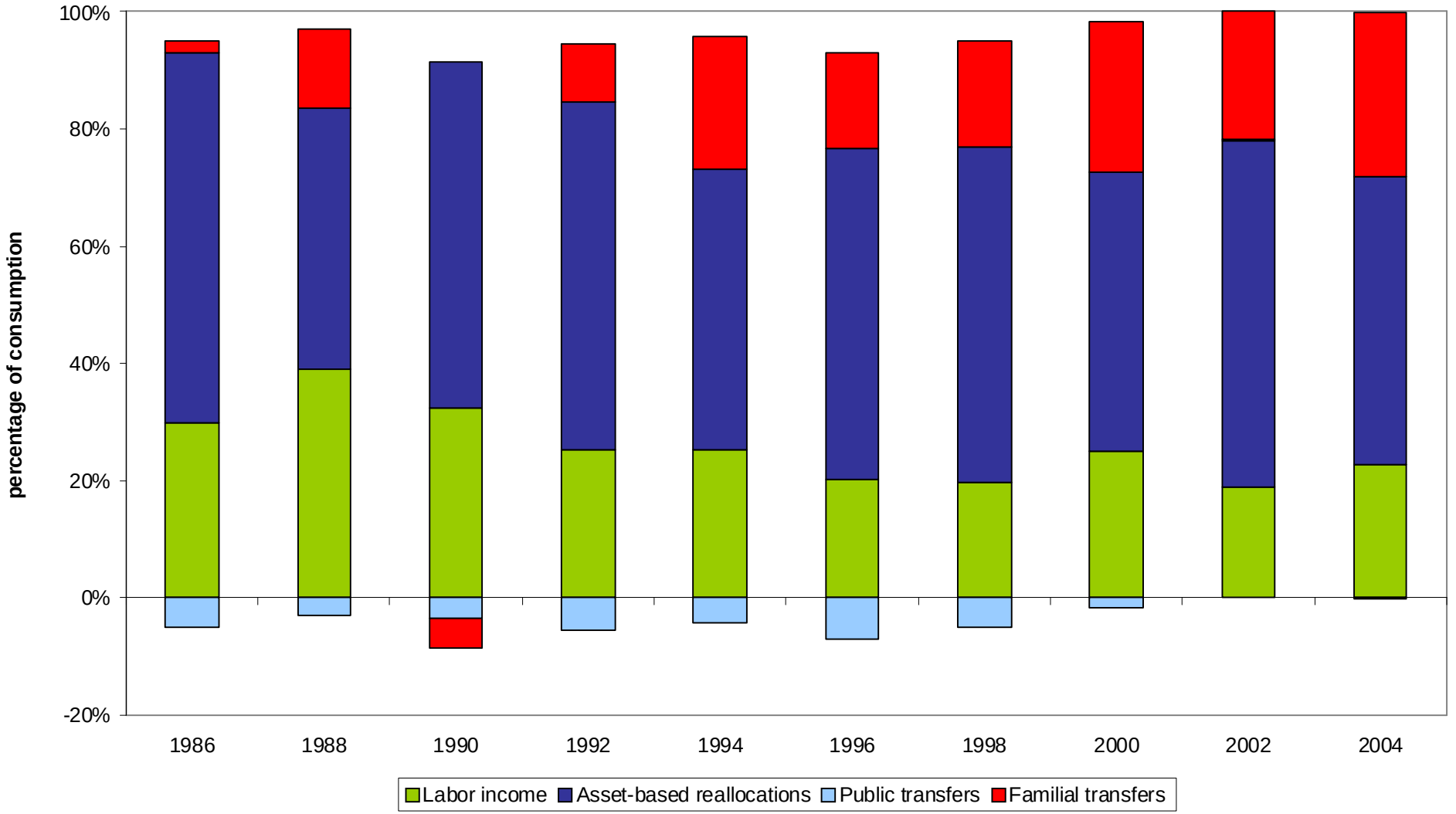
Most Important Graph in Thailand



Impact of aging


2050
2010
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-15%
-10%
170%
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90+
Age

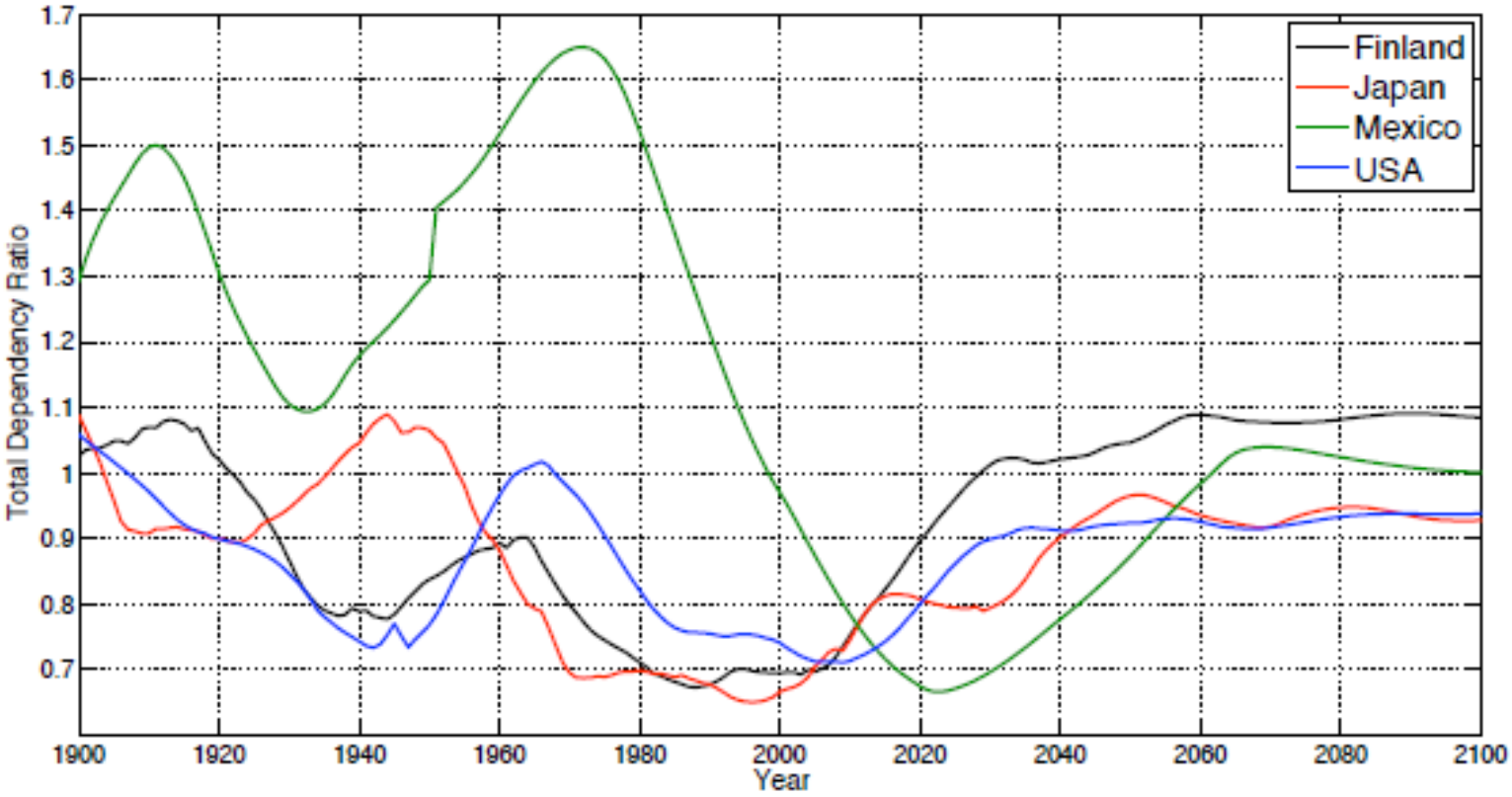
Consumption Finance by the Elderly in Thailand



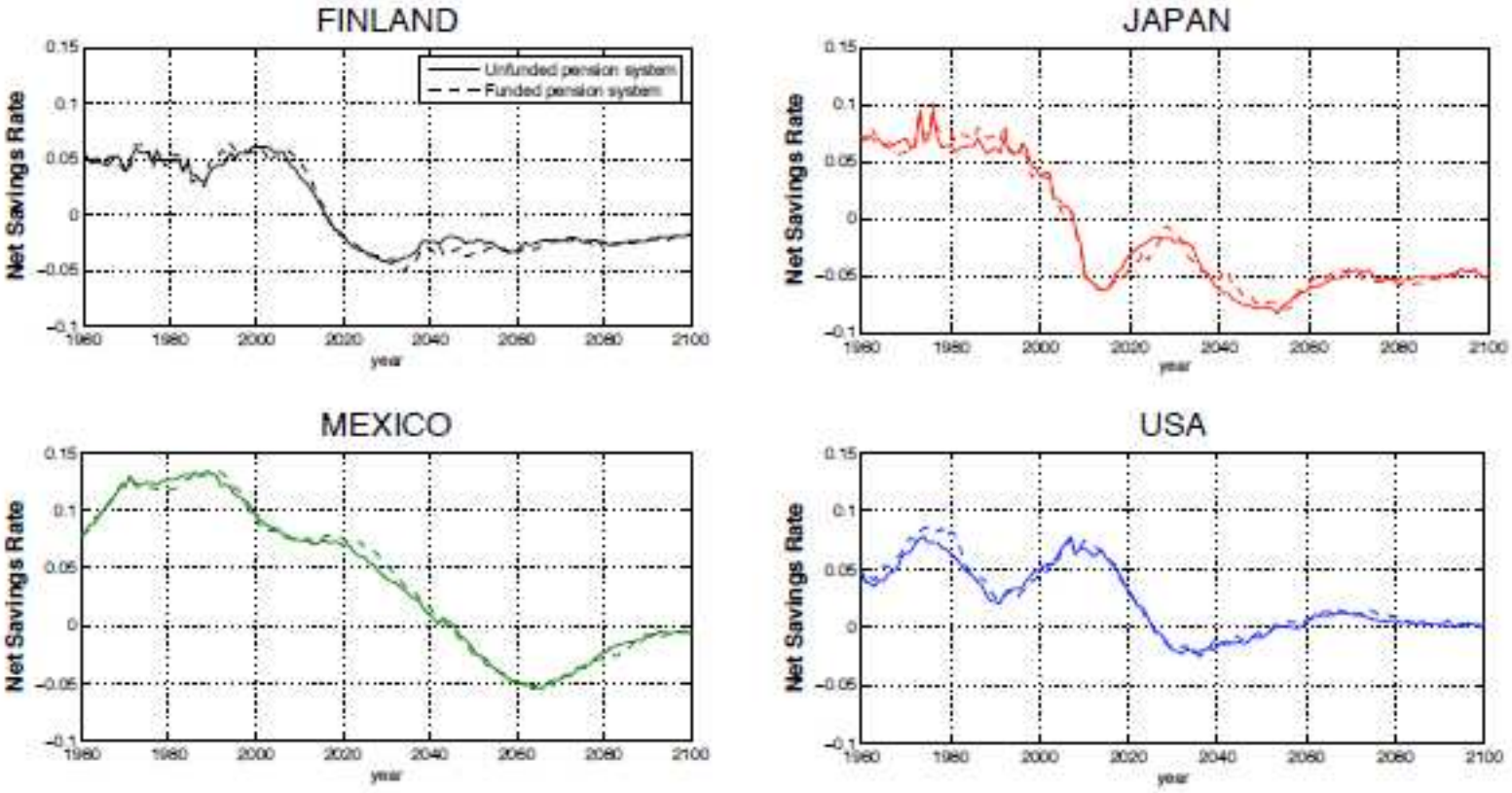
Next step

Simulation Modeling

Total dependency ratio



Net saving rate



Thanks