NTA results for Spain:

Measuring
the degree of intervention of the public sector
on intergenerational intra family transfers
in Spain using NTA/GA

Preliminary draft
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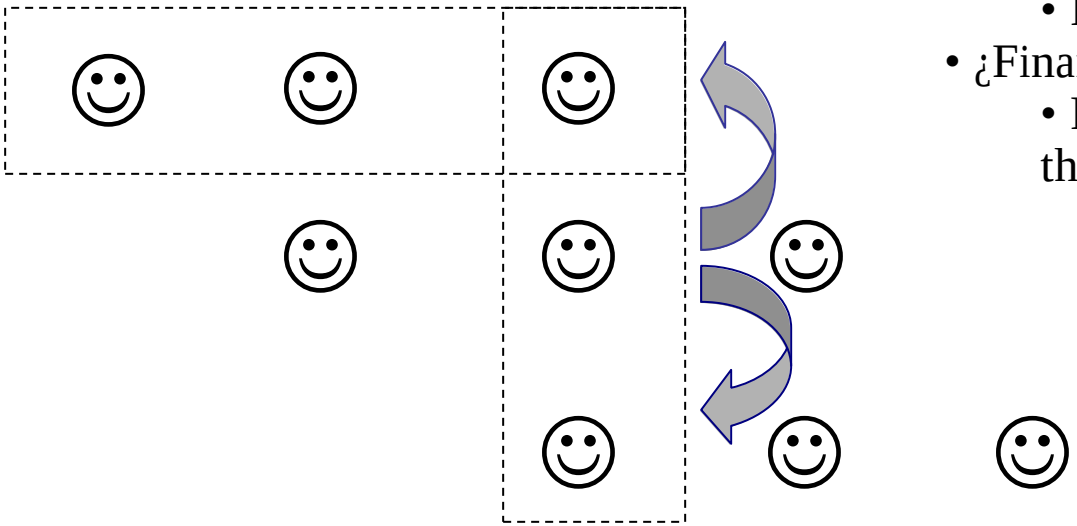
Outine

1. Motivation: rethinking the role of the welfare state
2. Measuring the degree of intervention of public sector in intergenerational intra family transfers using GA/NTA
    1. Theoretical Background
    2. NTA application
    3. GA application

1. Motivation: rethinking the role of the welfare state

Overlapping generations



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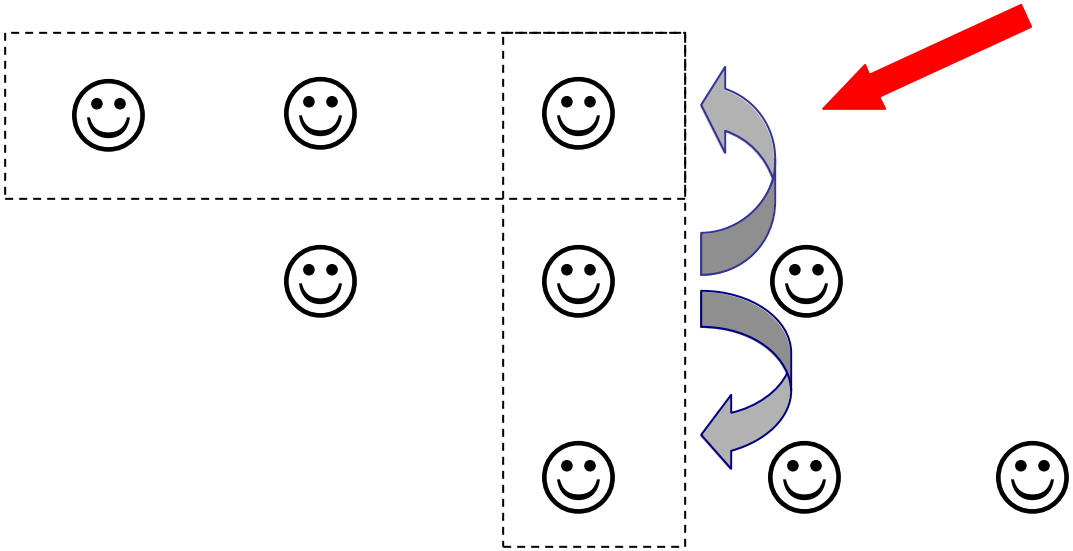
Before the welfare state: "Extended family"

- Intergenerational intra family transfers:
  - Backwards: from kids to old parents
  - Forward: from parents to kids
- ¿Financed? PAYG:
  - PAYG –except for some renters in the absence of capital markets



Public pensions system

Substitutes ONLY backward transfers
PAYGO Financing
Subject to demographic risk
¿causing decrease in fertility? *social security hypothesis*

The *transition problem*:

Initial "gift" -"pensions to non contributors"- must be now supported by the transition generation who bears "2 burden"

In fact three "burdens"

Raising children = future contributors to pensions for all the aged

2.1. Theoretical framework

Two main strands of literature:

- Private motives for intergenerational intra family transfers (IIT) and for government intervention on it
  - Saving motives: bequest motive
  - Motives for other IIT (inter-vivos donation, bequest, gifts to parents) –including fertility
  - Public sector intervention: Social policy as government intervention on IIT.
- Population ageing:
  - Effects on the economy and on the public budget
  - Is the demographic transition endogenous (economic decision)

Theoretical tool: Dynamic macroeconomic general equilibrium models (Overlapping generations models, GE-OLG): allowing for the analysis of IIT, i.e. with

- Backward and forward altruism
- Strategic behavior

Applied techniques: GA, NTA, large scale OLG, / microsimulation

Previous well known result:

Diamond model without any altruism –non private IIT– and exogenous fertility

Competitive economy is not Pareto optimal in Diamond model: Over or under accumulation. Pension policy:

- Under accumulation: Funding Though NOT Pareto optimal
- Over accumulation: PAYG is Pareto optimal

Samuelson's Serendipity Theorem: the only golden rule that is a steady state of the CE is the goldenest (optimal *n* planner), only reached by chance –n^* = exogenous *n* in the CE

- The policy above does not lead to the goldenest, nor to the golden rule.

Why?:

- Both "production factors" need to be optimized at once.
- We need to consider endogenous fertility.

Endogenous fertility Effects of increasing *n* (both external)

$$f(k_t)+(1-d)k_t = c_t + \frac{d_{t+1}}{(1+n)} + (1+n)k_t$$

Interest: More that "optimal *n*" be aware that policy interacts with fertility

- A unique instrument internalizing the externality
  pension = children contributions (IBC system)
- You can "save" in both "assets" – returns equated, GR reached.
- Unfeasible policy? Forgets status quo rights, insurance aspects…
- Equivalent policy:
  - PAYG family allowance of the same size
  - If transition: partially funded system equilibrating 3 burdens

¿General practice?:

- First socializing the old, though asset market can do the job. ¿Poverty?
- Second: socializing child –educational investment (effects on g!!)
- Lessons for DC both at the same time!

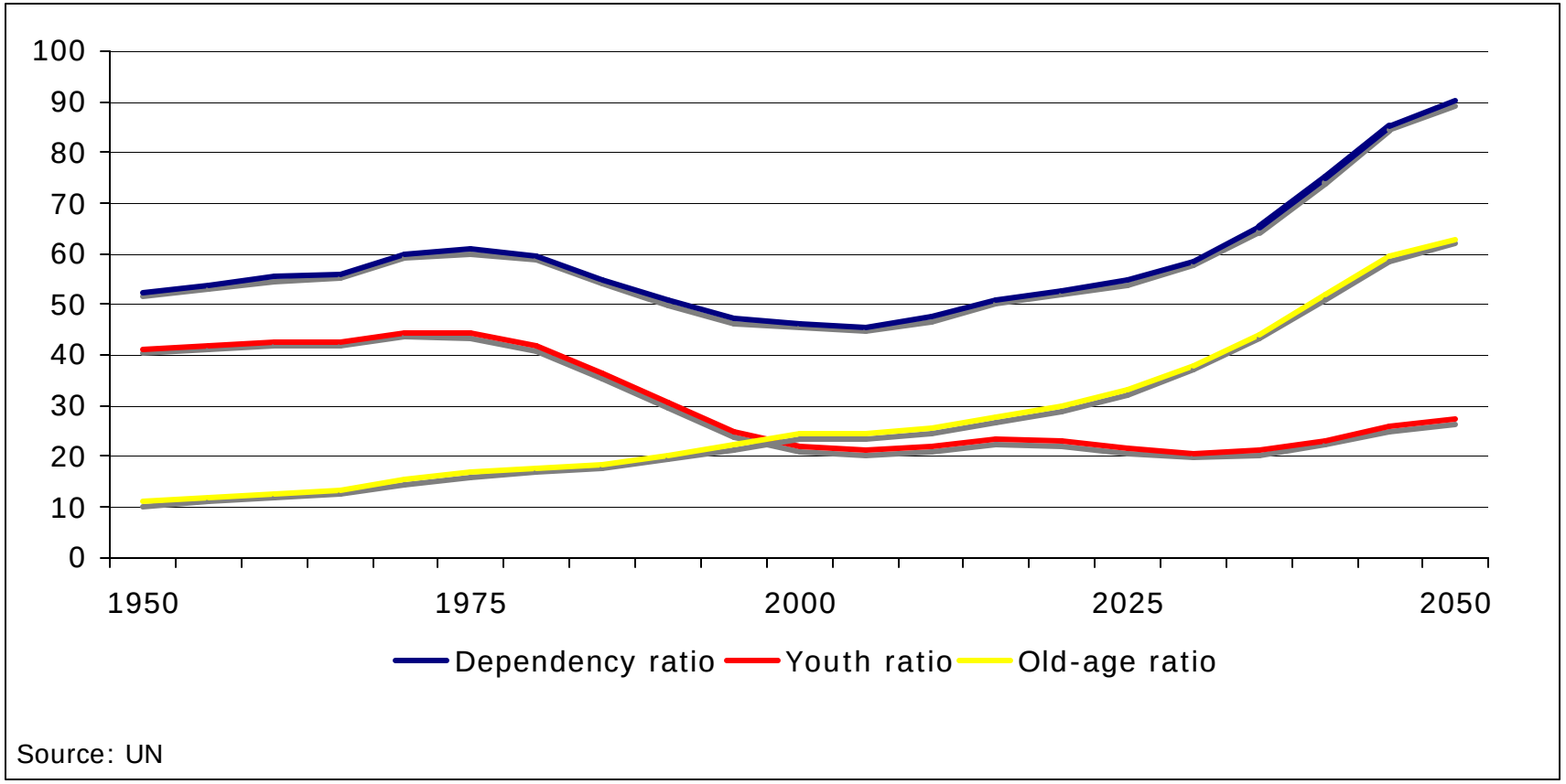
Spanish case: very low intervention on backward, very low fertility!!

NTA for Spain

Background

- Population
  - 2000 - 40.499.000 hab
  - 2006 - 44.708.000 hab
- High recent immigration
  - 2000 - 2.23%
  - 2006 - 9.26%
- TFR: Huge and quick fall from 3 at the end of 70s
  - 1998 - 1.155
  - 2006 - 1.382
- e_0 in 2000
  - Women - 82.46 || Men - 75.64

Background Spain



Source: UN

Objectives

First approach to the Lifecycle Deficit in Spain for 2000

First approach of the Public transfers profiles by age for the year 2000 in Spain

Comparison of both profiles: measuring the degree of intervention of public sector in intergenerational intra family transfers using NTA/GA

Data sources

All data bases used where from 2000

ECPF - Household Budget Survey

- Longitudinal Data
- 3766 households - 11840 individuals
- Only consumption information

PHOGUE - European Household Panel

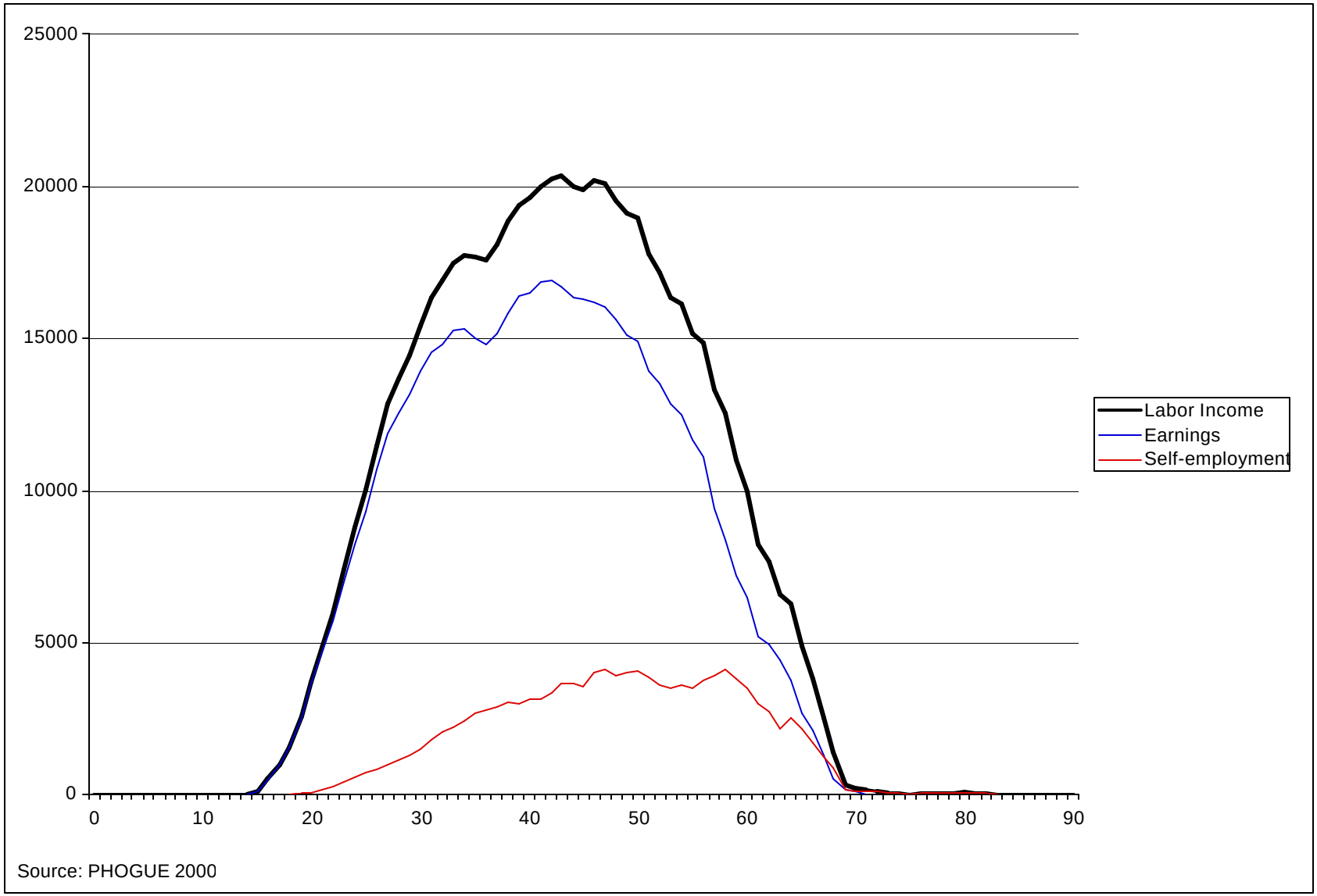
- 15614 households - 46045 individuals
- Only income information

MTAS - Ministry of Labor and Social Security

- Information about pensions and social benefits

INE - National Statistical Institute

Labor Income per capita



Source: PHOGUE 2000

Labor Income

Self-employment income represents 13% of total labor income

Labor income starts at age 14 and finishes drastically at age 70, both for earnings and self-employment

In Spain it *was not allowed* to receive any labor income while you receive retirement benefits

Consumption

Private

Education - Data only includes tuition, which excludes public students consumption in other education related goods

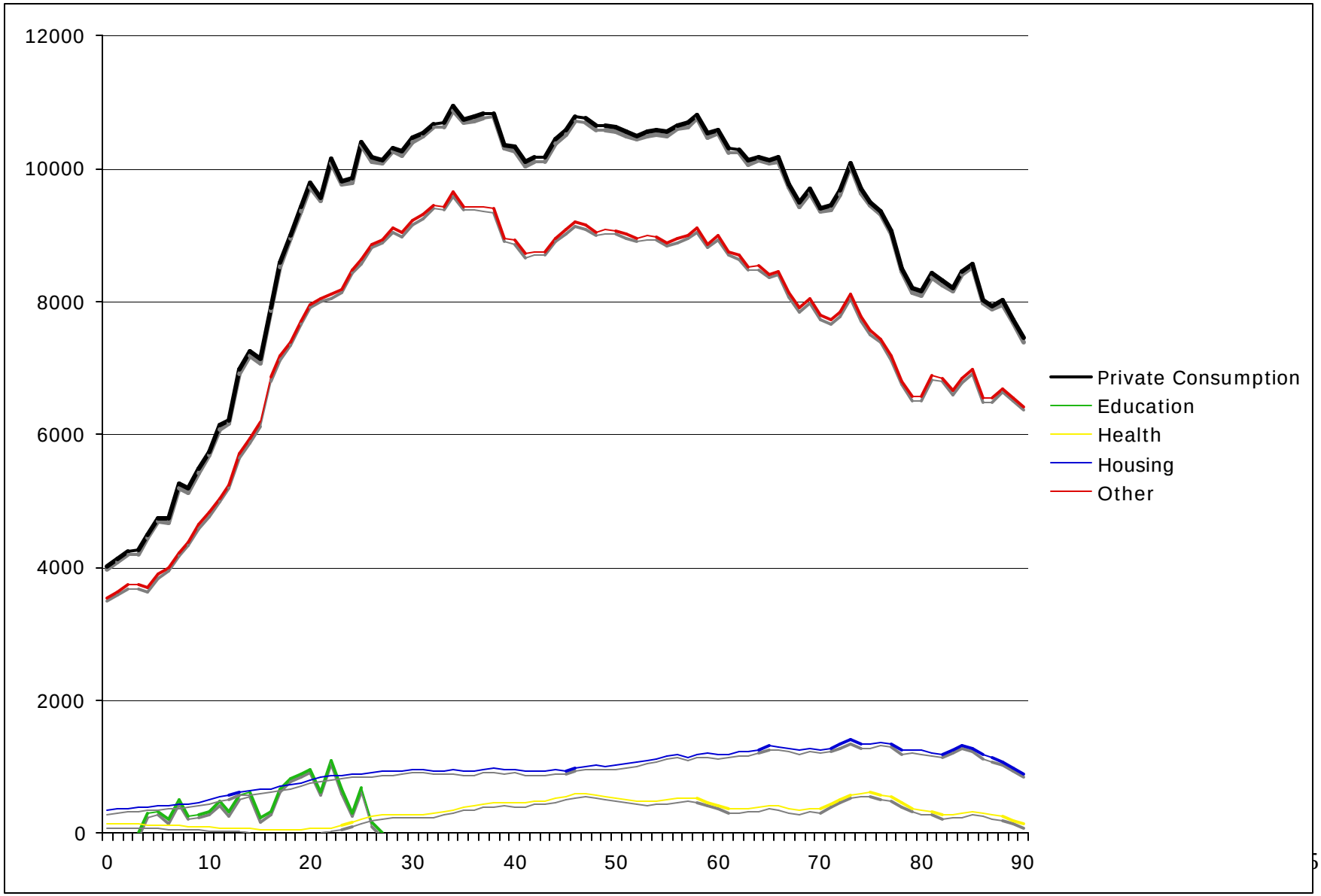
Health - Includes private health insurances

Public

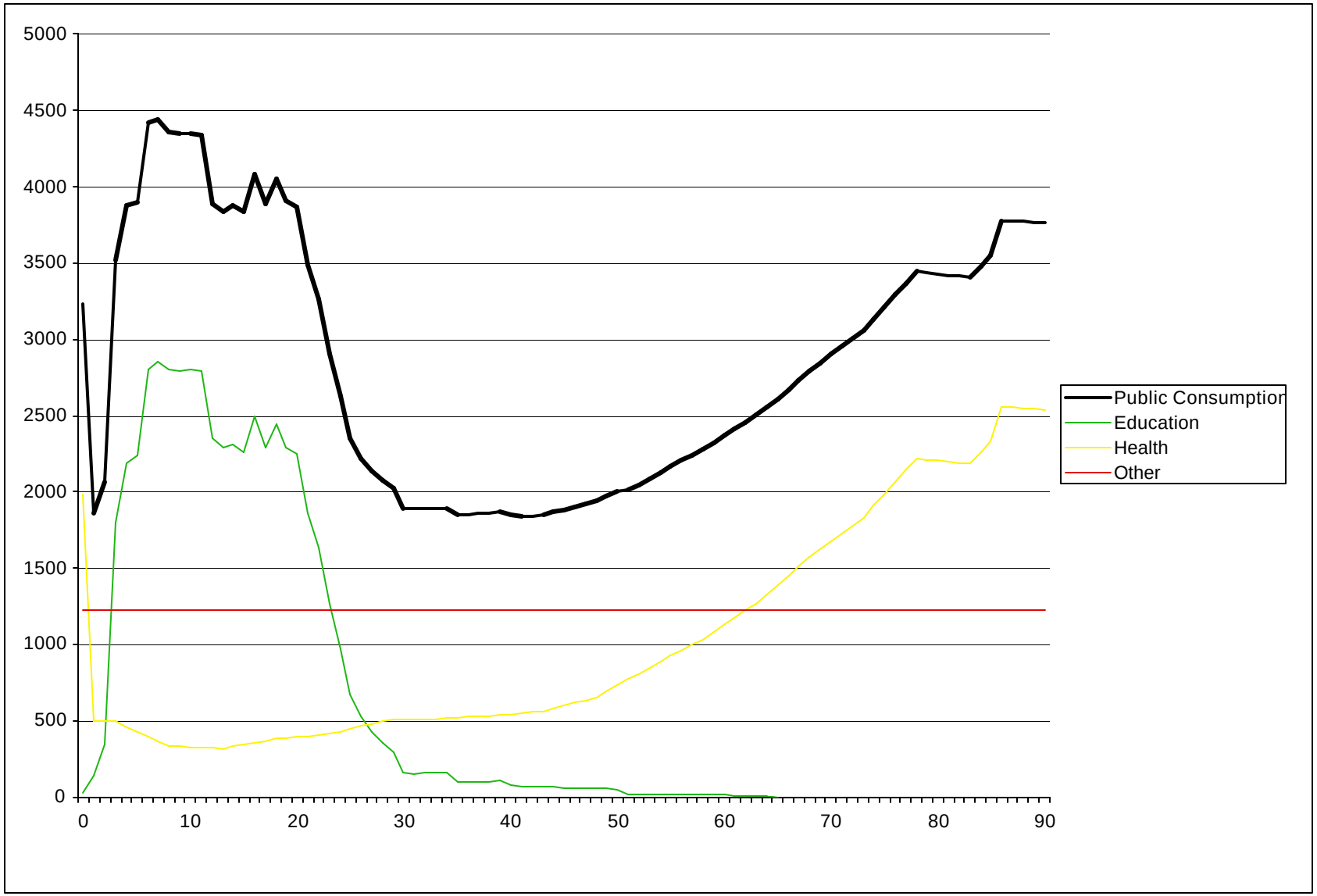
Education - Official data

Health - Using hospital processes expenditures. Represent 50% of public consumption

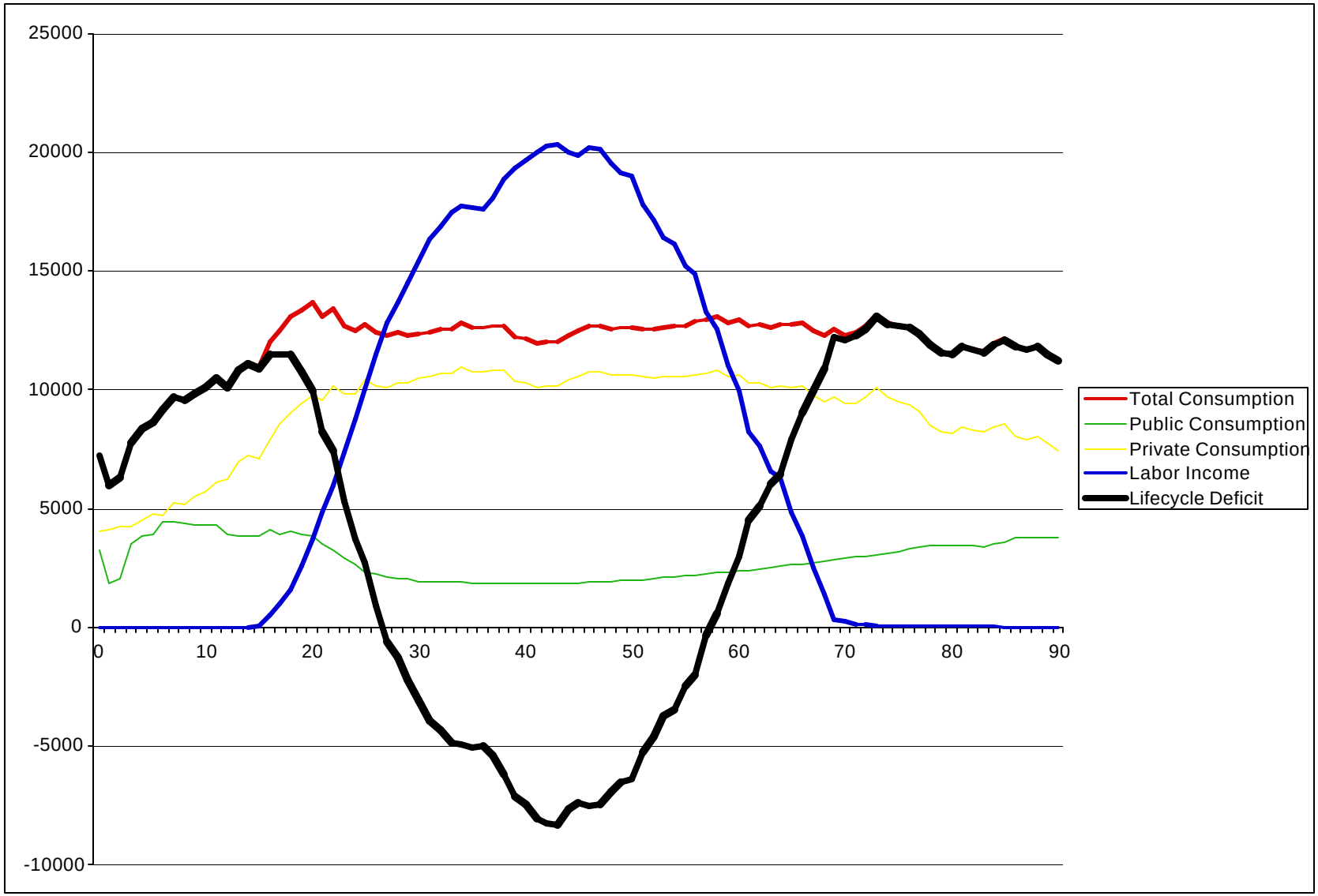
Private consumption



Public consumption



Lifecycle Deficit



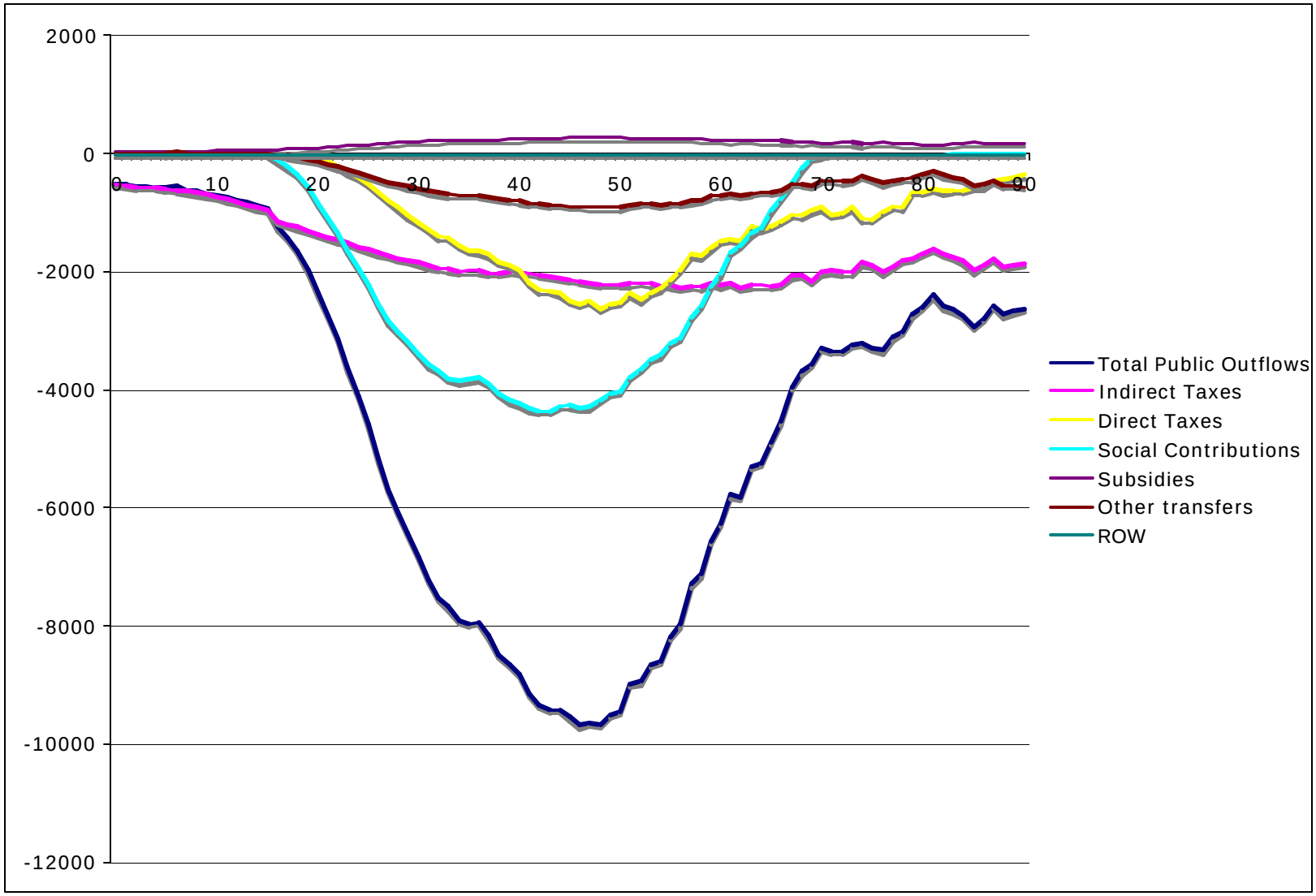
Lifecycle Deficit

Surplus from 27 to 57 - 30 years

Bigger deficit for the elderly than for the children

Long-term care is included in other public consumption

Public transfers outflows



Public transfers inflows

Education

Health

Retirement benefits

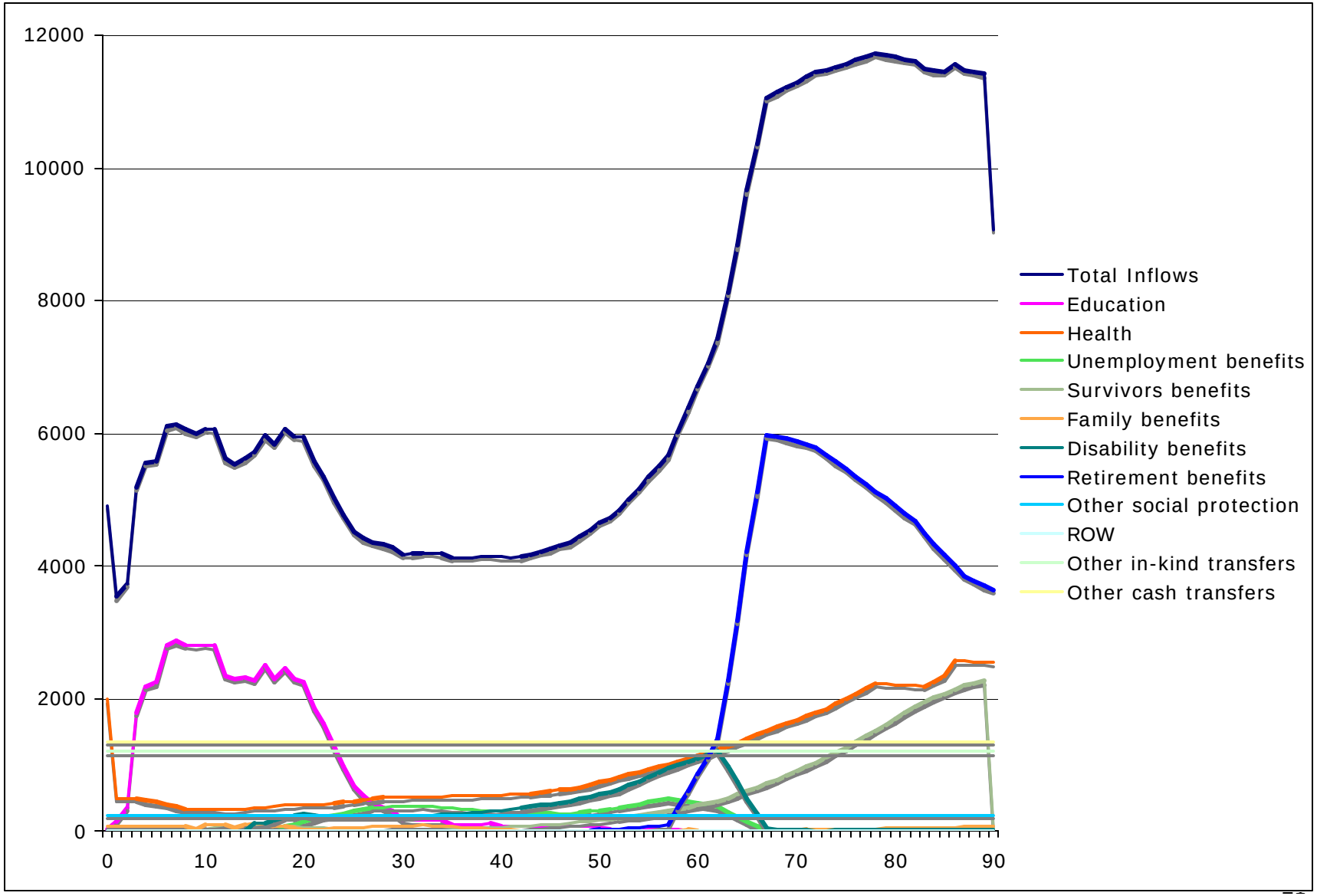
Social Protection benefits

Other public transfers (in-kind and cash)

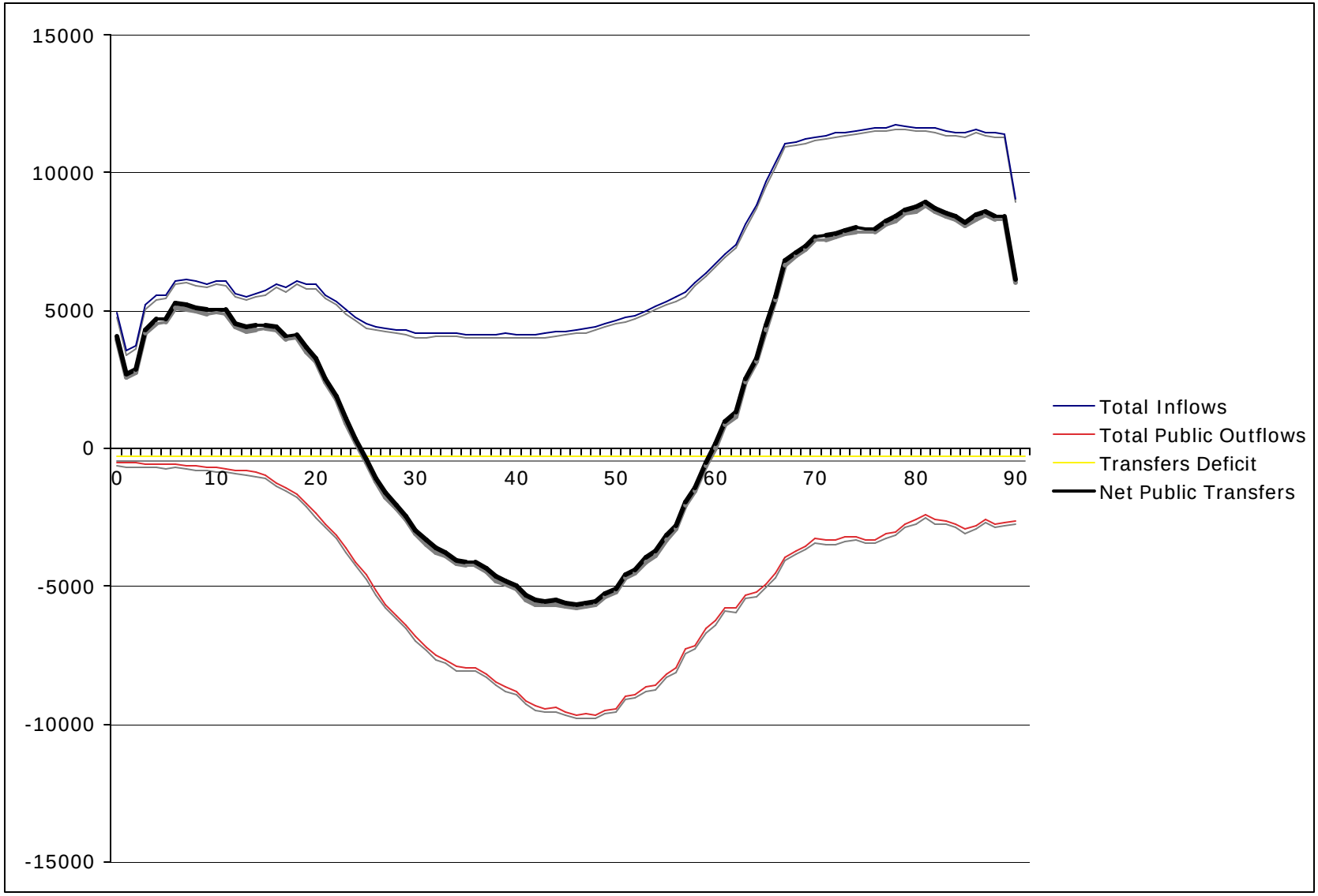
Transfers from the rest of the world (ROW)

Age profiles from public consumption (health and education) and from MTAS for Social Protection benefits

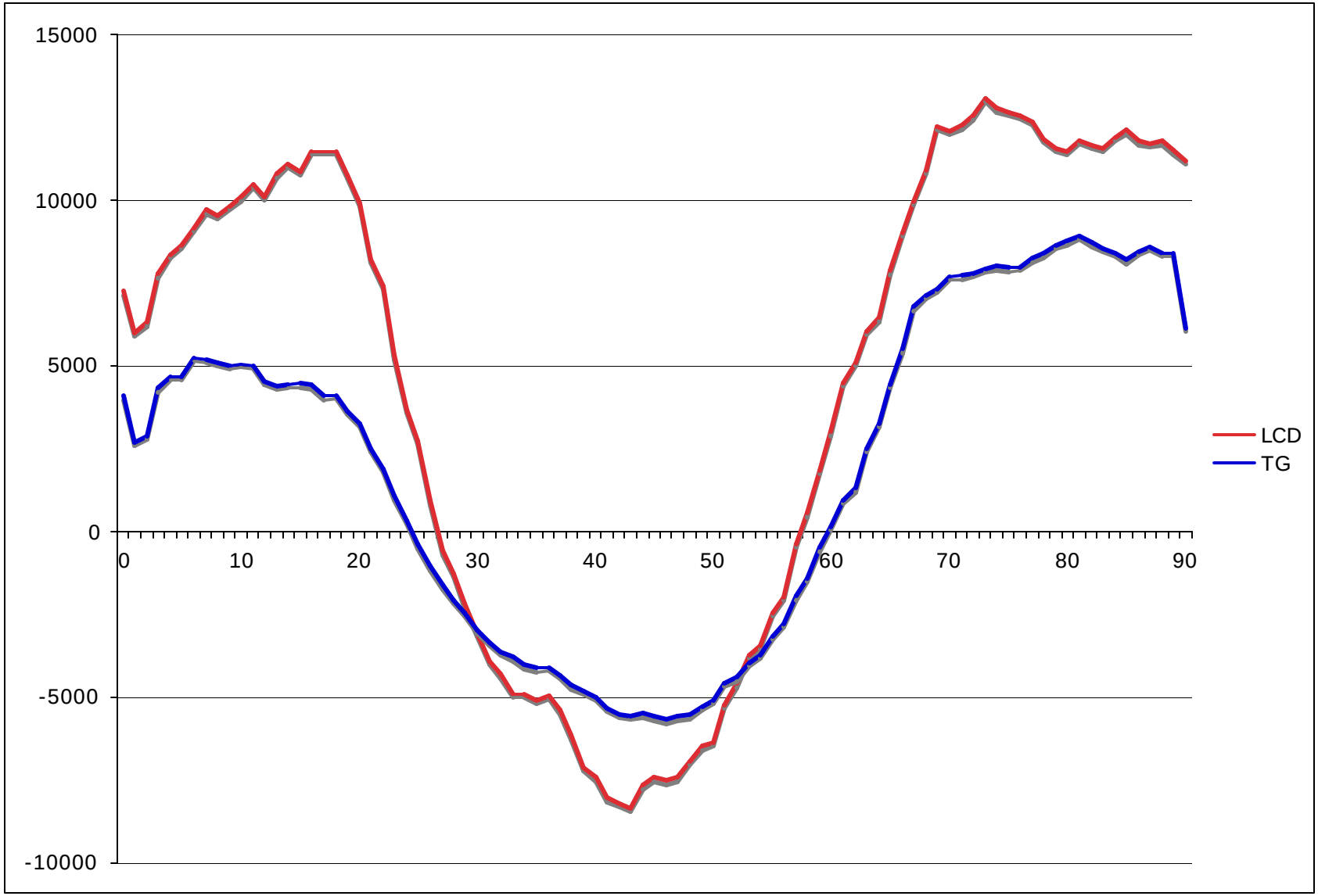
Public transfers inflows



Net Public Transfers



LCD and TG



Measuring the balance of public intervention in IIF

Public transfers represent a big share of the LCD for elderly

Young ages relay more in other sources than in public transfers to finance their deficit

Indicaitors? Share of adult income, share LCD…

	% 2004 GDP	%2050 GDP	SGap (% intertp PIB)
Public budget primary balance	+ 1,91	– 7,48	2.02
Public budget primary balance (excluding debt)	+ 1,91	– 7,48	0.85
Balance contributory –bismakian- pensions system	+ 0,9	– 6,17	1.49
Expenditure in contributory pensions (Social Security)	– 8,23	– 15,21	10,53
Health expenditure	– 5,29	– 8,5	6,50
Long term care expenditure	– 0,33	– 0,97	0,58
Family expenditure	– 0,5	– 0,47	0,47
Education expenditure	– 4,41	– 4,21	4,11

Measuring the degree of intervention of the public sector on intergenerational intra family transfers in Spain using GA

Transfer	**Generational Account**	**Expenditure/GDP (%)**	
From parents to kids		**2.004**	**2.050**
Education	38,90	4,41	4,21
Family	5,20	0,5	0,47
Health –children	7,80	0,71	0,69
Total	**51,9**	**5,60**	**5,37**
From children to parents		**2.004**	**2.050**
Retirement pensions	31,50	6,02	13,54
Dependency	0,60	0,33	0,97
Health -adults	14,00	4,58	7,81
Total	**46,10**	**12,16**	**22,32**

Thanks
for your attention