

# Reallocation of Resources Across Age in a Comparative European Setting. National Transfer Accounts and the AGENTA Project

Symposium on

## **The Future of Welfare in a Global Europe**

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# Motivation

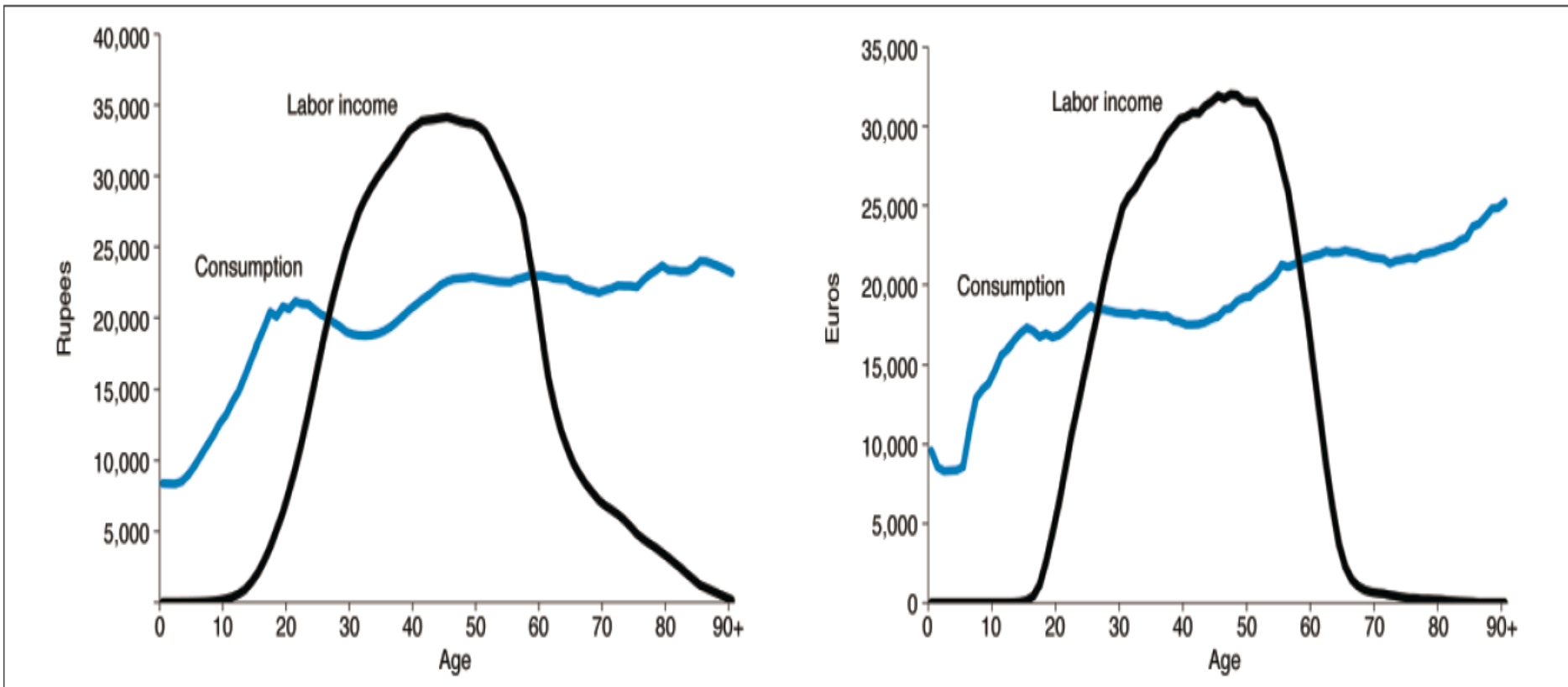


Figure 1. Per-capita labor income and consumption by age in **India** (left) in 2004 and in **Germany** (right) in 2003. *Source: Lee and Mason forthcoming, Figure 1.3.*

# Motivation

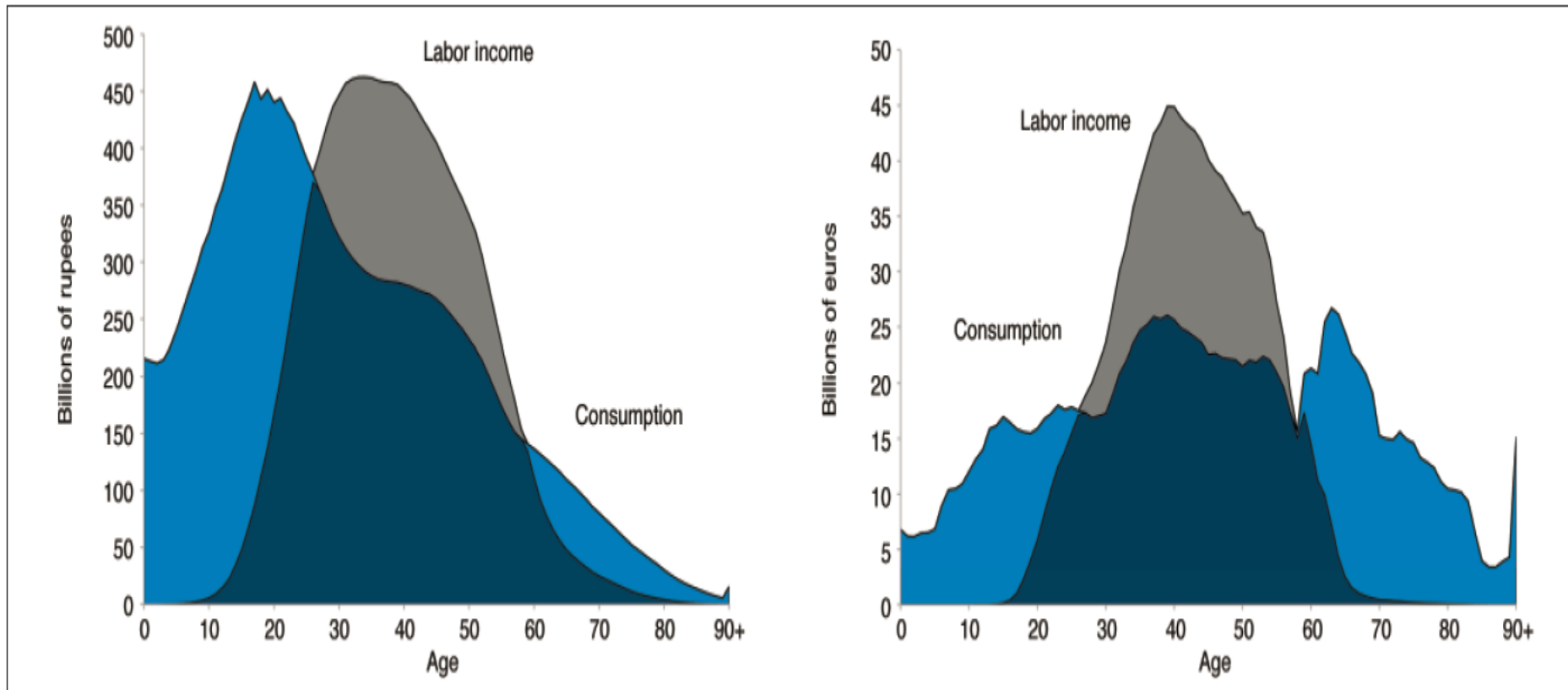


Figure 2. Aggregate labor income and consumption by age in India (left) in 2004 and in Germany (right) in 2003. Source: Lee and Mason forthcoming, Figure 1.3.

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

(FP 7 Collaborative Research Project, no. 613247)

The logo for the AGENTA project, featuring the word "agenta" in a lowercase, teal-colored, sans-serif font.

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

<http://www.agenta-project.eu/en/about-agenta.htm>

Guiding principle:

- To adequately **explain** and **project public finances** and derive evidence-based options for policy reforms we need to consider the **whole system of intergenerational transfers** (private, public, market, non-market)

**National Transfer Accounts (NTA):**

National income: flows among institutions (household, government, ..)

NTA: National income as **flows among cohorts**

## Main objectives:

- Consider links between the **public** and **private sector** in providing resources for children and the elderly population
- Consider links between **different components of the public budget**
- Consider the definition of **stages of the life cycle** (childhood, active age and old age) + how these stages affect economic activity

# NTA methodology

## Flow ACCOUNT identity

### Inflows

- $Y^l(a)$  ...labor income
- $Y^a(a)$  ...asset income
- $\tau^+(a)$  ...transfers received

=

### Outflows

- $C(a)$  ...consumption
- $S(a)$  ...savings
- $\tau^-(a)$  ...transfers paid

$$\underbrace{Y^l(a) + Y^a(a) + \tau^+(a)}_{\text{inflows}} = \underbrace{C(a) + S(a) + \tau^-(a)}_{\text{outflows}}$$

$$\underbrace{C(a) - Y^l(a)}_{\text{lifecycle deficit}} = \underbrace{Y^a(a) - S(a)}_{\text{asset-based reallocations}} + \underbrace{\tau^+(a) - \tau^-(a)}_{\text{net transfers}}$$

age reallocation

(Source: Mason 2007)

# NTA methodology

**life cycle deficit** can be financed through:

- a) **public transfers** (health, pensions, unemployment, ...)
- b) **private transfers** (parents financing consumption of children)
- c) **asset reallocation** (savings, interests on bonds, selling house)

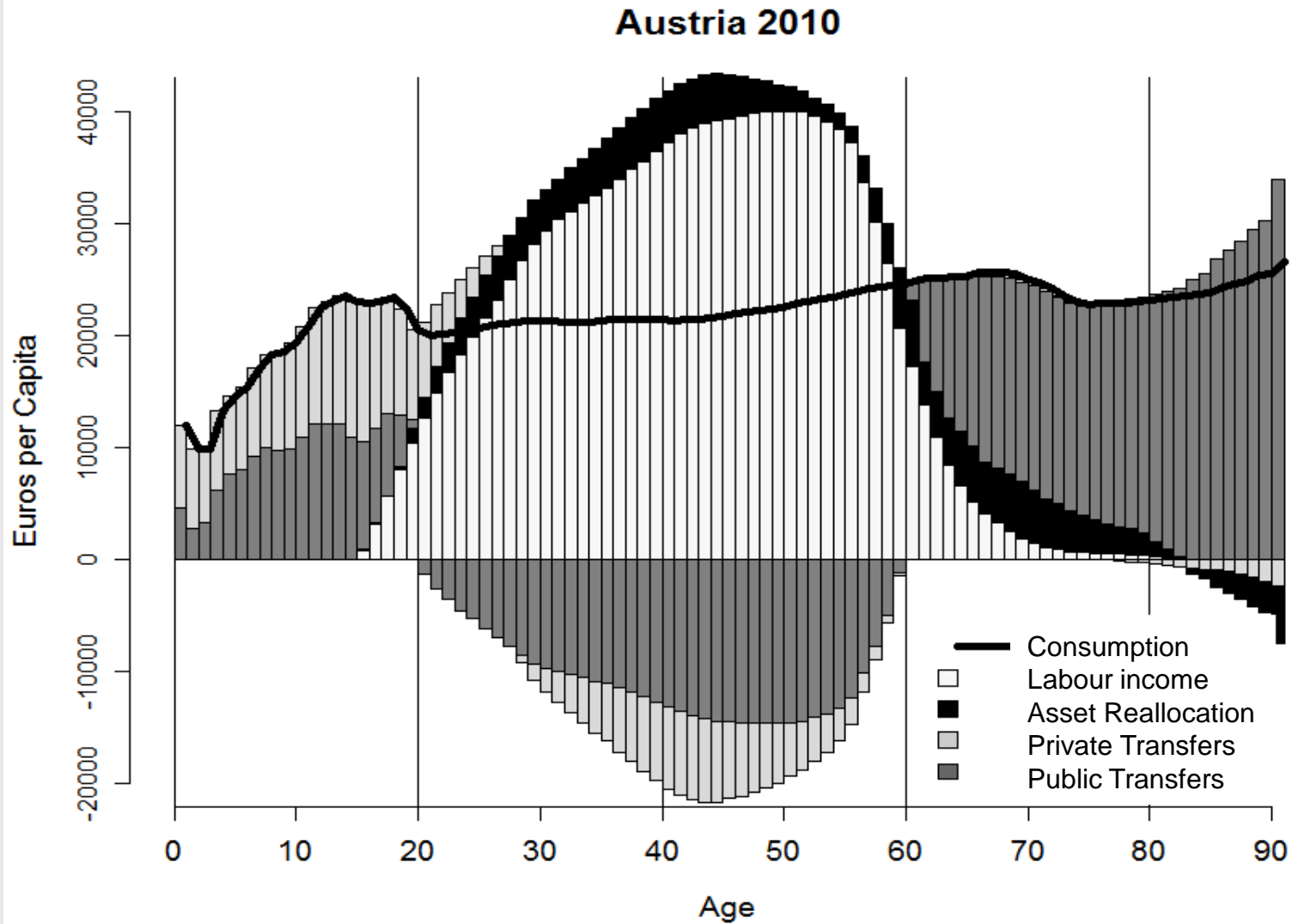
These flows are mediated by

**public and private institutions**

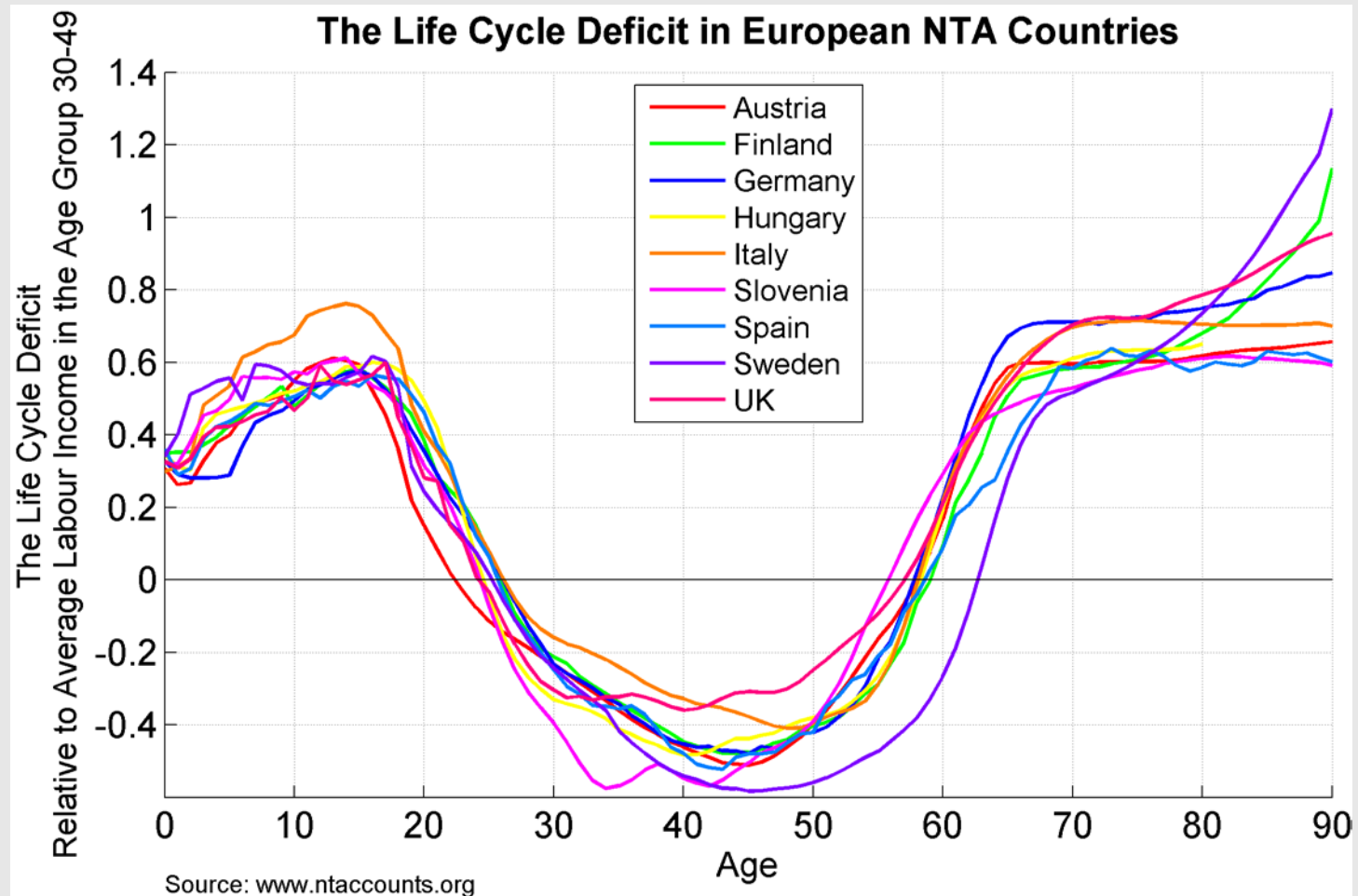
*“The **mechanisms by which assets are shifted across age groups** is important because it determines whether population ageing leads to accumulation of assets or to the expansion of public and private transfer programs.”* (Mason and Lee 2006)



# NTA Austria



# Life Cycle Deficit – comparative European setting



# Life Cycle Deficit

## an alternative measure of dependency

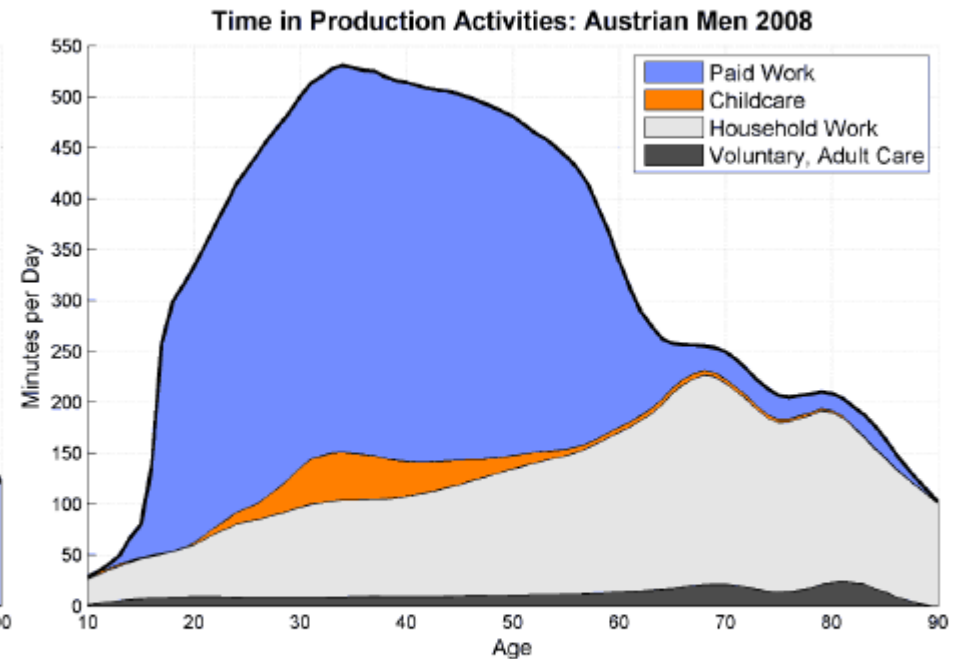
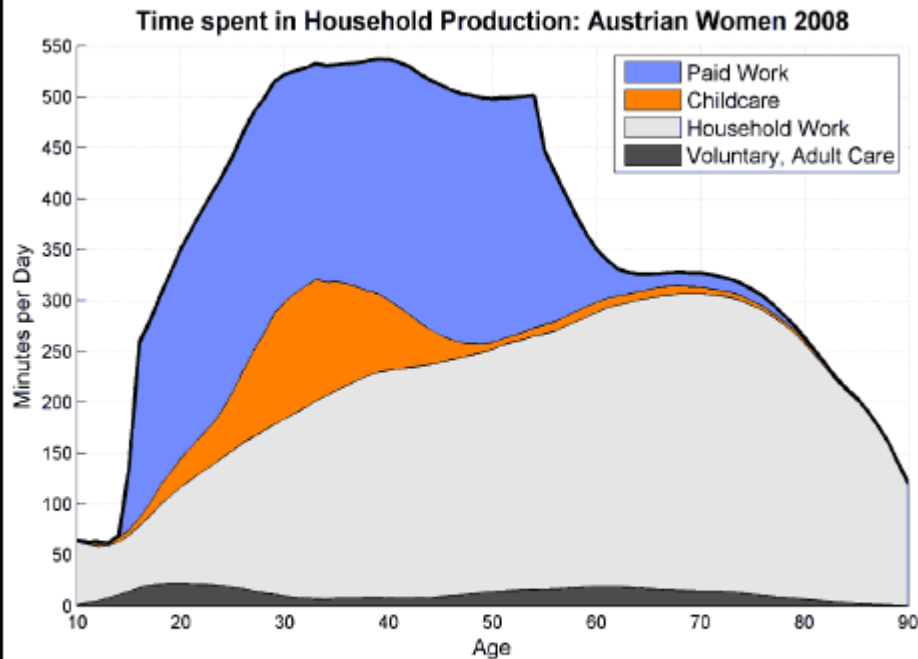
Table 1: The Life Cycle Deficit in European Countries

Country	Aggregate Life Cycle Deficit/Surplus in % of Labour Income			Age Borders LCD		Standard Demographic Dependency Ratio	
	Young	Working Age	Old	pos. until	pos. from	Young	Old
Austria	20	32	25	24	59	34	29
Finland	26	28	25	26	60	38	28
France	29	31	24	23	59	42	28
Germany	18	31	30	26	60	31	34
Hungary	22	32	27	24	58	33	27
Italy	26	24	32	27	60	31	33
Slovenia	24	39	24	25	58	30	26
Spain	25	27	23	26	60	31	27
Sweden	25	39	23	26	64	40	31
UK	27	23	25	26	59	40	28

Sources: EUROSTAT (Population); EU-SILC 2011 (Labour income); [www.ntaccounts.org](http://www.ntaccounts.org) (Consumption)

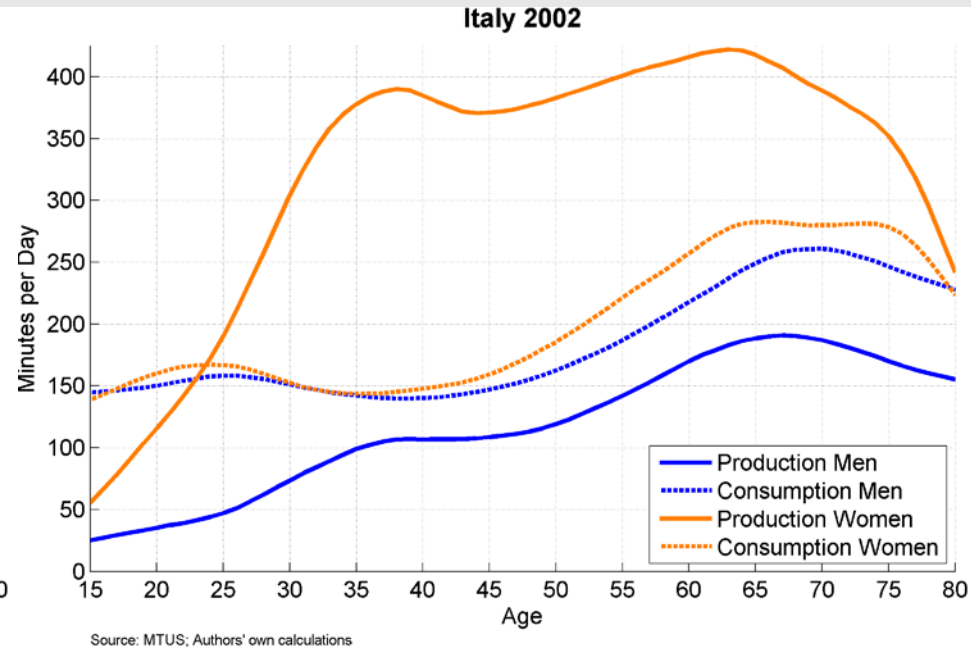
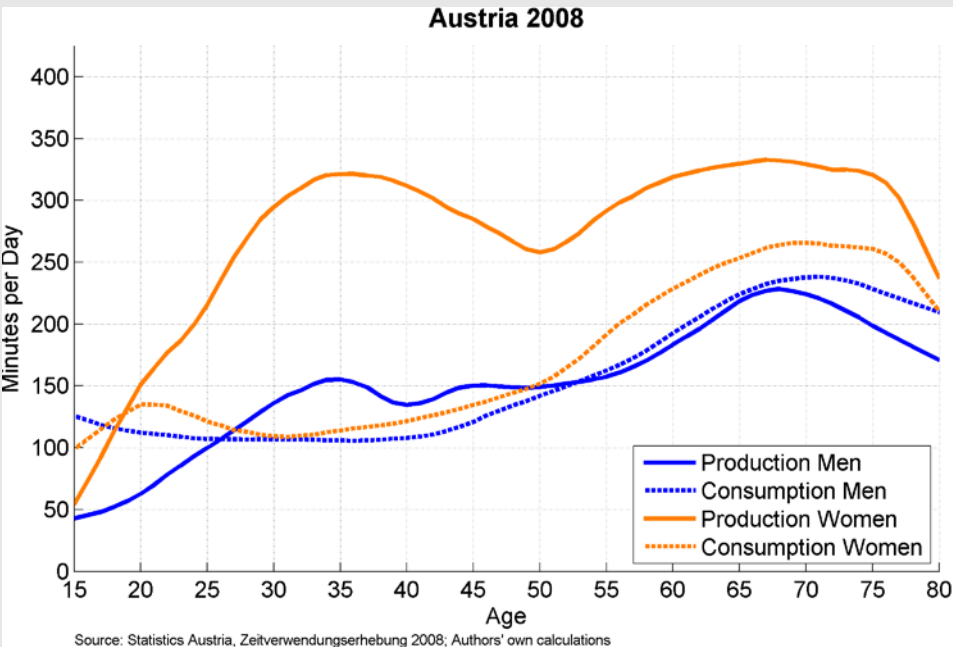
# Extension to NTTA

Need to complement paid production with **unpaid production**



# Unpaid work: production & consumption

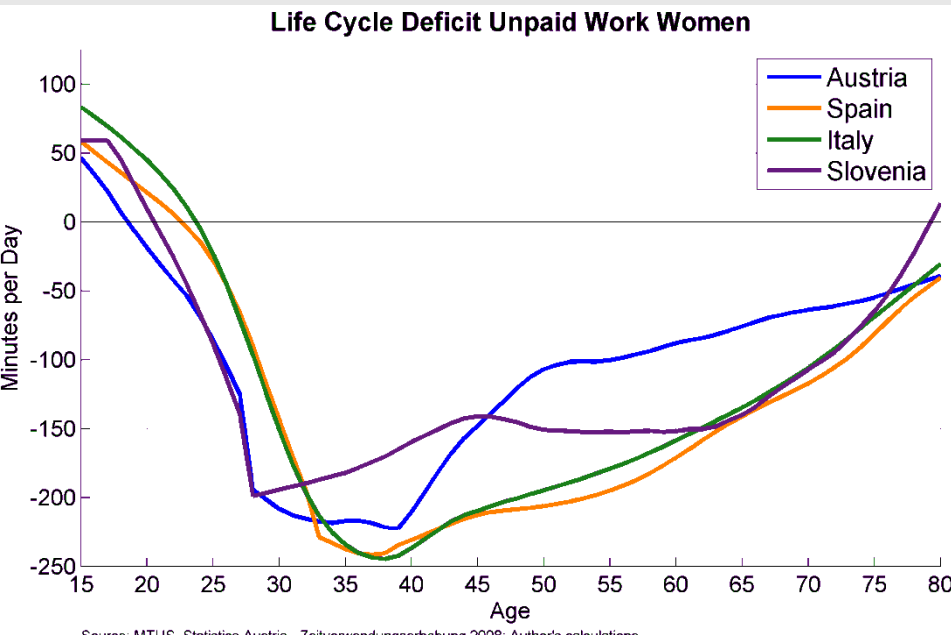
amount **women** spent to non-market production activities  
**5 hours** **almost 7 hours**



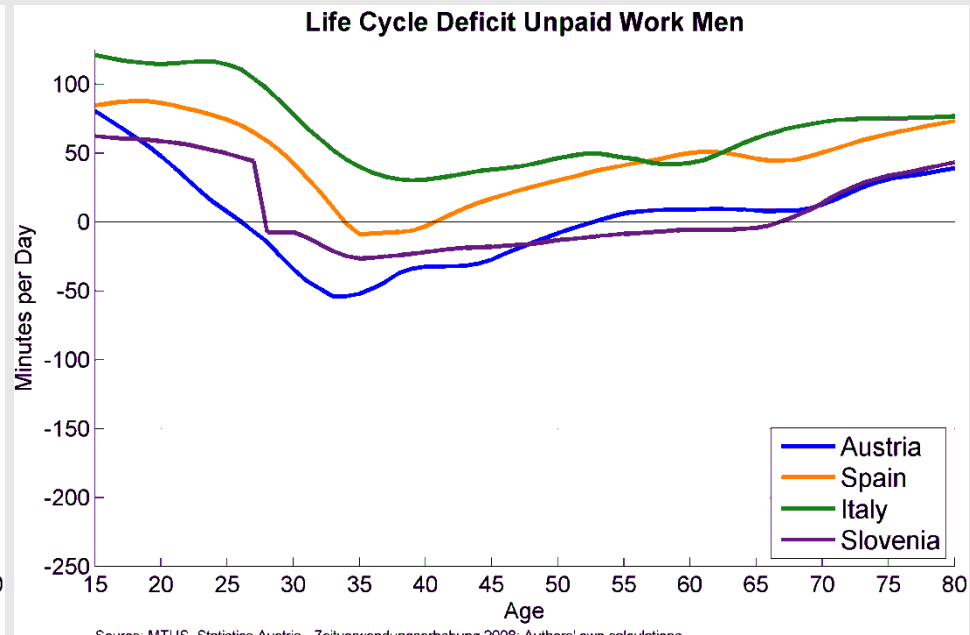
amount **men** spent to non-market production activities  
**between 2 and 2.5 hours**

# Unpaid work: the life cycle deficit by gender

**women** produce more non-market goods and services than they consume except during teen ages



Source: MTUS, Statistics Austria - Zeitverwendungserhebung 2008; Author's calculations

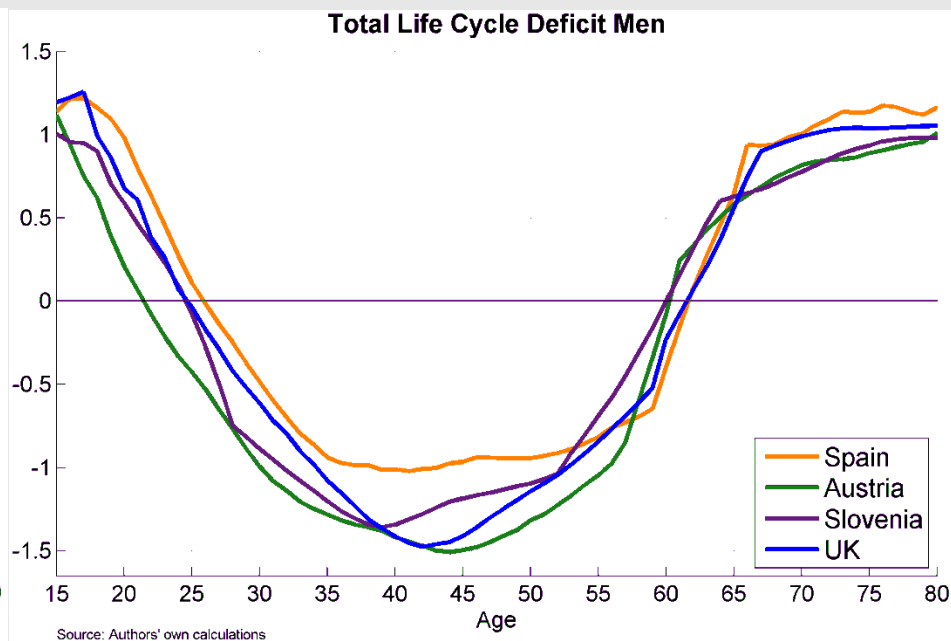
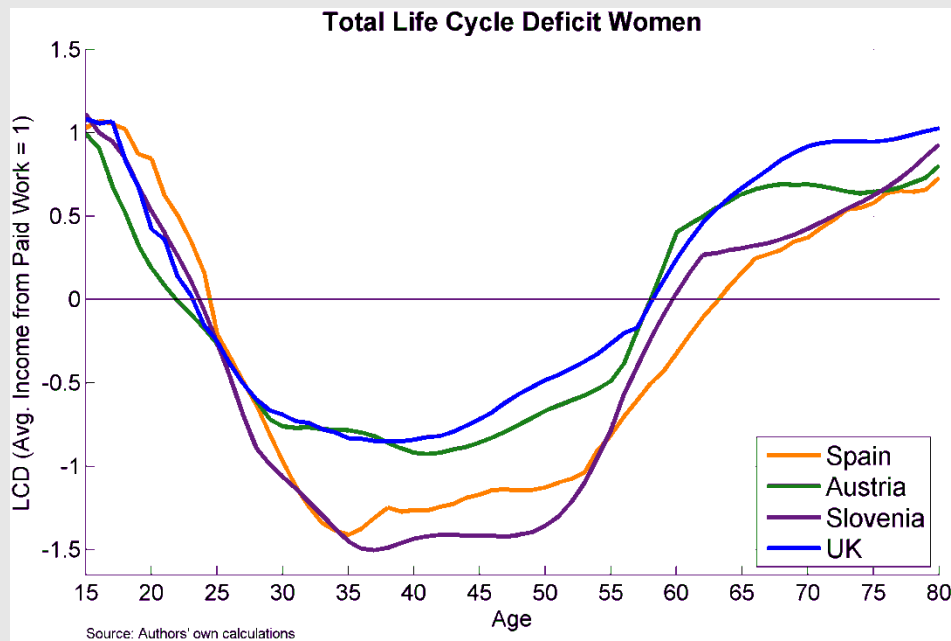


Source: MTUS, Statistics Austria - Zeitverwendungserhebung 2008; Author's own calculations

The life cycle deficit is very low for **men** and stays positive over the whole age range in case of Italy

# NTTA life cycle deficit by GENDER

**gender differences** are lower compared to only using NTA



high contribution of women to production in **Slovenia and Spain**

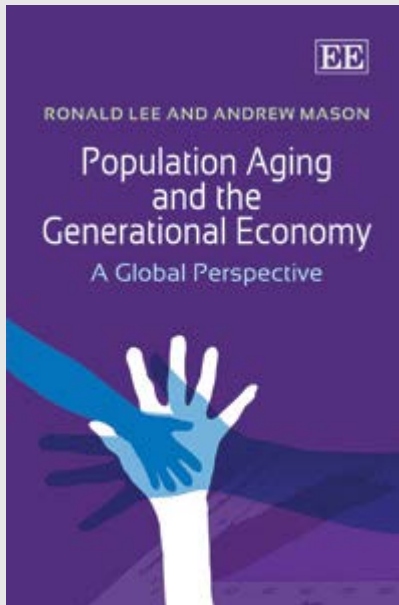
# Life Cycle Deficit for paid and unpaid work

Country	Sex	Aggregate Lifecycle Surplus/Deficit in % of Labour Income		Age Borders LCD	
		Working Age	Old	pos. until	pos. from
Austria	Women	15	14	24	58
	Men	31	12	21	60
	<b>Total</b>	<b>45</b>	<b>25</b>	<b>23</b>	<b>59</b>
Finland	Women	21	14	23	61
	Men	22	11	25	59
	<b>Total</b>	<b>42</b>	<b>24</b>	<b>24</b>	<b>60</b>
France	Women	19	12	23	59
	Men	25	12	23	60
	<b>Total</b>	<b>44</b>	<b>23</b>	<b>23</b>	<b>59</b>
Germany	Women	16	17	24	58
	Men	31	11	26	62
	<b>Total</b>	<b>47</b>	<b>28</b>	<b>25</b>	<b>60</b>
Italy	Women	18	13	27	60
	Men	21	13	28	61
	<b>Total</b>	<b>38</b>	<b>26</b>	<b>27</b>	<b>60</b>
Slovenia	Women	30	13	24	59
	Men	23	13	26	59
	<b>Total</b>	<b>53</b>	<b>26</b>	<b>25</b>	<b>59</b>
Spain	Women	27	10	25	62
	Men	19	13	27	60
	<b>Total</b>	<b>46</b>	<b>24</b>	<b>26</b>	<b>61</b>
UK	Women	13	16	23	57
	Men	27	10	25	61
	<b>Total</b>	<b>39</b>	<b>26</b>	<b>24</b>	<b>60</b>



# Conclusion/Discussion

- Consequence of population ageing not just determined by demographic change but to large extent by **design of economic life cycle**
- LCD as a **new measure of dependency** that takes into account age-specific levels of production and consumption
- To maintain the fiscal sustainability of the current public transfer system in many European countries requires **changes in the design of the average economic life cycle**
- Reforms of the transfer system need to take into account not only public transfers but also **private transfers**, particularly those in form of services to other household members through **unpaid work**



“Over coming decades, changes in population age structure will have profound implications for the macroeconomy, influencing **economic growth, generational equity, human capital, saving and investment, and the sustainability of public and private transfer systems.** How the future unfolds will depend on key actors in the generational economy: governments, families, financial institutions, and others. This path-breaking book provides a comprehensive analysis of the macroeconomic effects of changes in population age structure across the globe.”

# Thank you