

WELFARE STATE AND THE INTER-GENERATIONAL REDISTRIBUTION OF PUBLIC CONSUMPTION AND PUBLIC TRANSFERS IN THE EU COUNTRIES

Agenta Final Conference: Economic Consequences of
Population Ageing and Intergenerational Equity
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FOR DEMOGRAPHY AND
GLOBAL HUMAN CAPITAL

A COLLABORATION OF IIASA, VID/ÖAW, WU

agenta

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

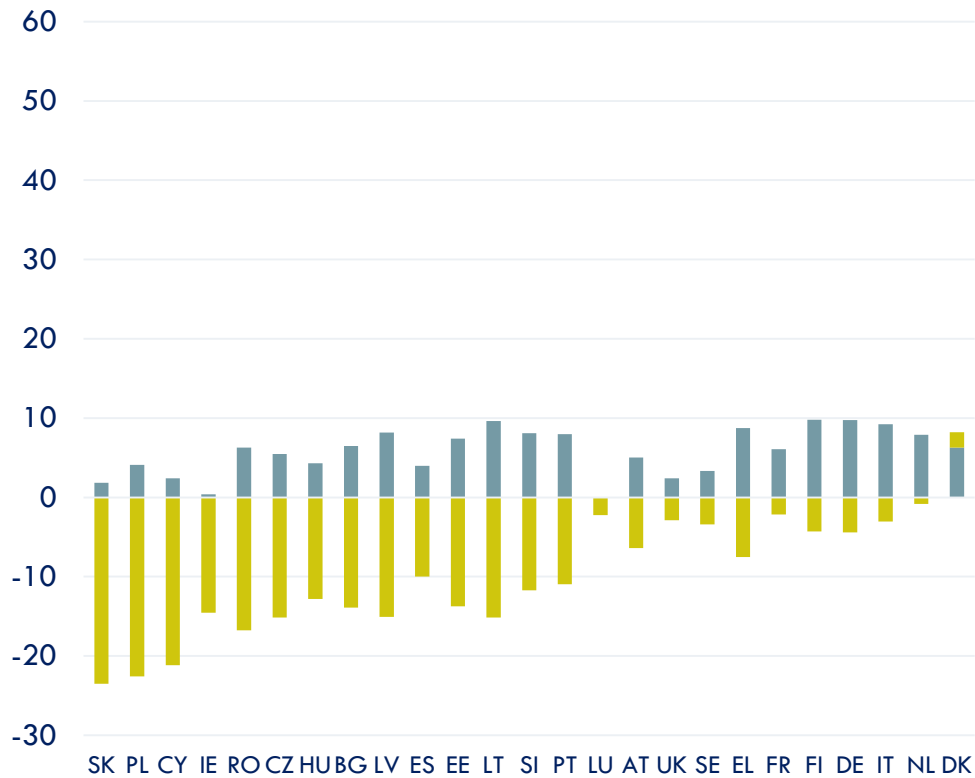
OBJECTIVES

- To broaden the current discussion on the welfare regimes in Europe
 - By use of the National Transfer Accounts (NTA) we provide the quantitative assessment of the intergenerational distribution of public consumption in the EU countries as well as intergenerational differences in public transfers inflows and outflows.
- Analysis of public revenues and expenditures in a demographic context:
 - Link between public revenues and expenditures related to the demographic and institutional contexts in the EU-27 countries

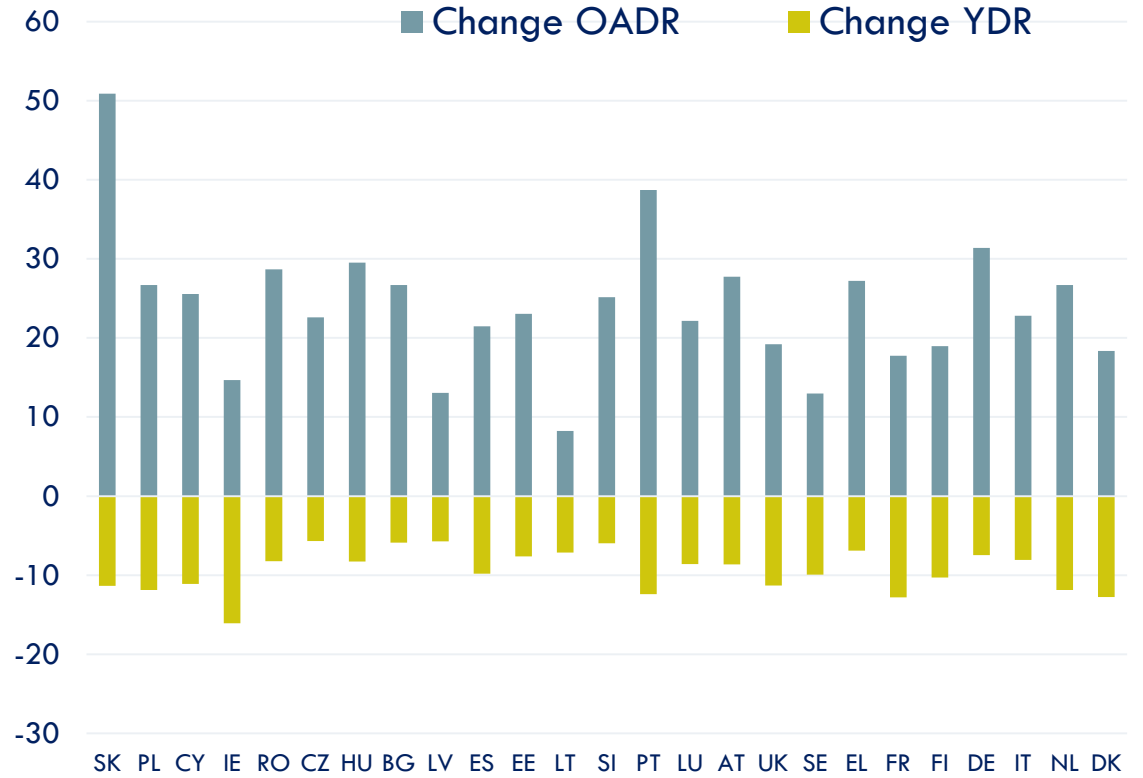
DEMOGRAPHIC OPPORTUNITY IS CLOSING AND ADVANCEMENT OF POPULATION AGEING

CHANGES IN THE DEPENDENCY RATIO, THE EU COUNTRIES BETWEEN 1995, 2014 AND 2070

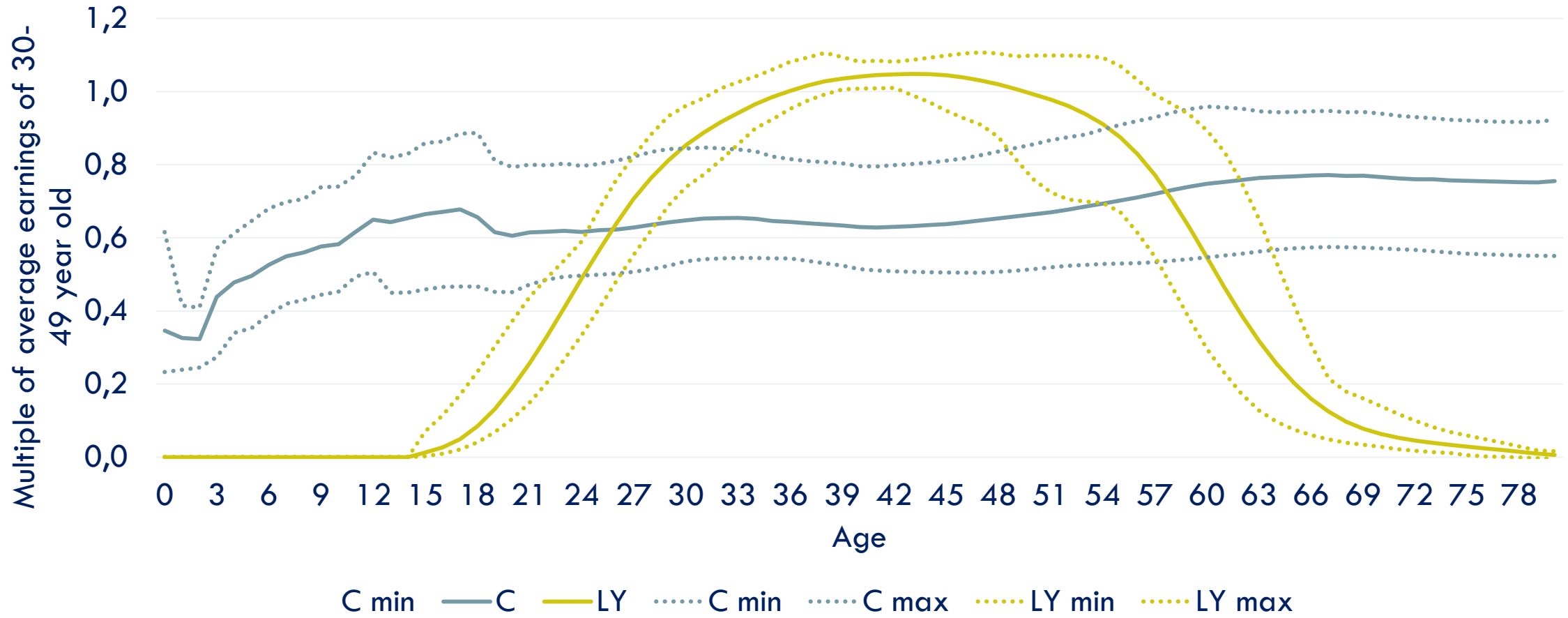
1995 -2014



2014 - 2070

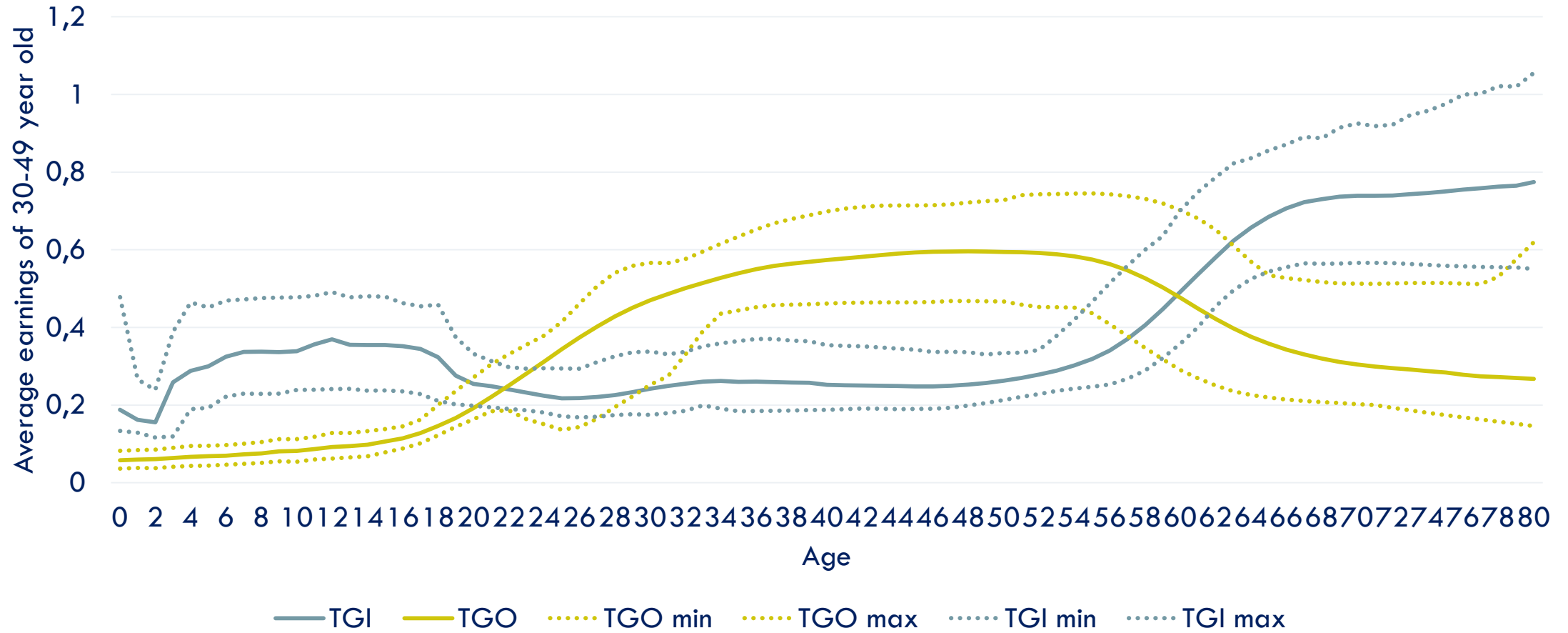


CONSUMPTION AND LABOUR INCOME AGE PROFILES



Note: Estimates based on AGENTA WP1 preliminary results

PUBLIC TRANSFERS INFLOWS AND OUTFLOWS IN THE EU COUNTRIES



Note: Estimates based on AGENTA WP1 preliminary results

RESEARCH APPROACH

Traditional research practice: analysis of macro indicators

Welfare state institutions → Macro indicators → Welfare regime

Alternative approach: testing whether welfare typologies also develop distinct patterns in redistributive outcomes

Design and mix of fiscal and social policies → (Re-) distributive effects captured by micro data

Alternative approach with NTA: testing whether welfare typologies also develop distinct patterns in public consumption and transfers by age

Age redistribution of public consumption and transfer by NTA data (combining micro data analysis with national accounts)

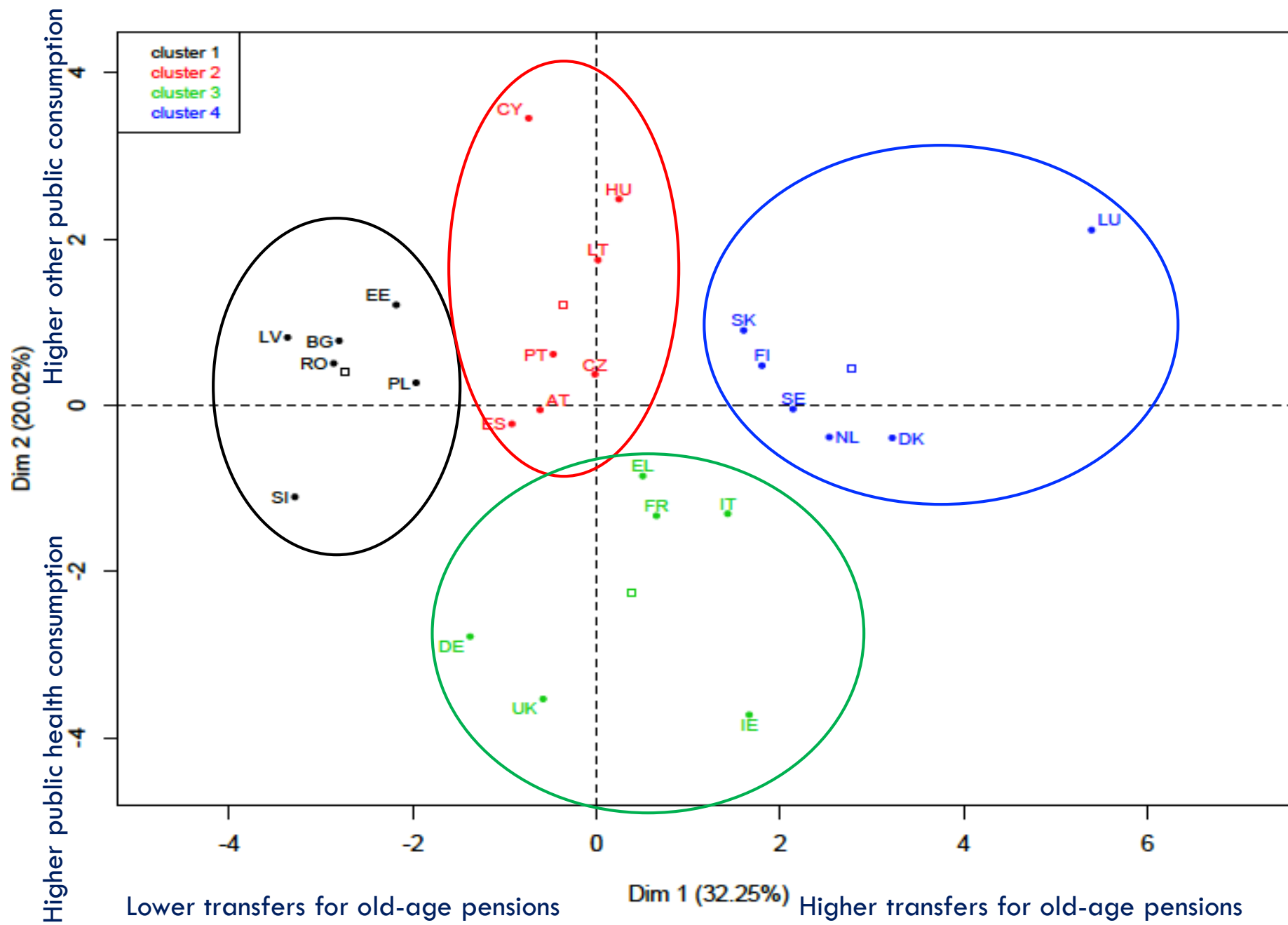
→ Cluster of redistributive outcomes



WELFARE STATE ANALYSIS

- **Classification of welfare states using the NTA age profiles**
- **By age groups and types of transfers**
 - 3 age groups:
 - 0-19 years,
 - 20-64 years,
 - 65 and over
 - Age profiles for:
 - Public consumption education (CGE)
 - Public consumption health (CGH)
 - Public consumption other (CGX)
 - Public transfers inflows (TGI)
 - Public transfers outflows (TGO)
- **Method: hierarchical clustering after principal component analysis**

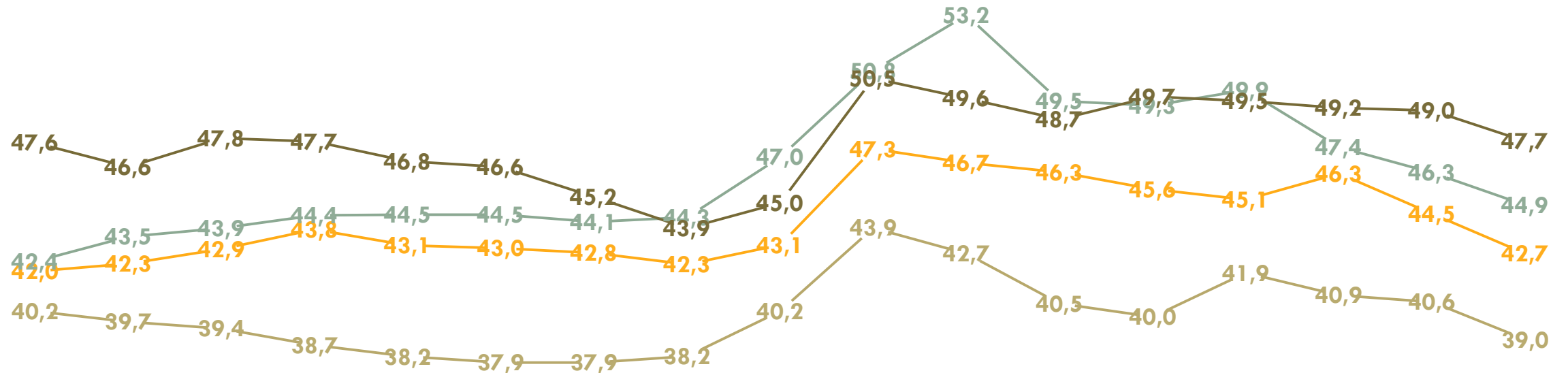
Factor map



FOUR CLUSTERS OF COUNTRIES BY PUBLIC CONSUMPTION AND TRANSFERS BY GENERATION

		Countries:	Central and Eastern Europe	Southern and Central Europe	Continental and Anglo-Saxon	Scandinavian/Social democratic
			LV, SI, RO, EE, BG, PL	LT, AT, PT, CY, CZ, ES, HU	EL, IE, FR, IT, DE, UK	LU, SK, NL, DK, FI, SE
Dimension 1	Public transfers, inflows, 65+	84,6	98,6	107,0	112,9	
	Public transfers, inflows 20-64	90,3	102,2	98,6	113,2	
	Public transfers, outflows 20-64	87,5	101,3	102,5	109,1	
	Public consumption, health 65+	74,9	93,7	119,0	120,1	
	Public consumption, other 65+	92,9	102,9	86,2	125,7	
Dimension 2	Public consumption, health 0-19	92,3	112,6	64,9	126,9	
	Public consumption, health 20-64	78,9	93,8	118,8	116,1	
	Public consumption, other 0-19	90,0	86,7	122,1	101,3	
	Public consumption, other 20-64	92,9	102,9	86,2	125,7	
	Public transfers, inflows 0-19	98,7	106,9	91,2	101,9	

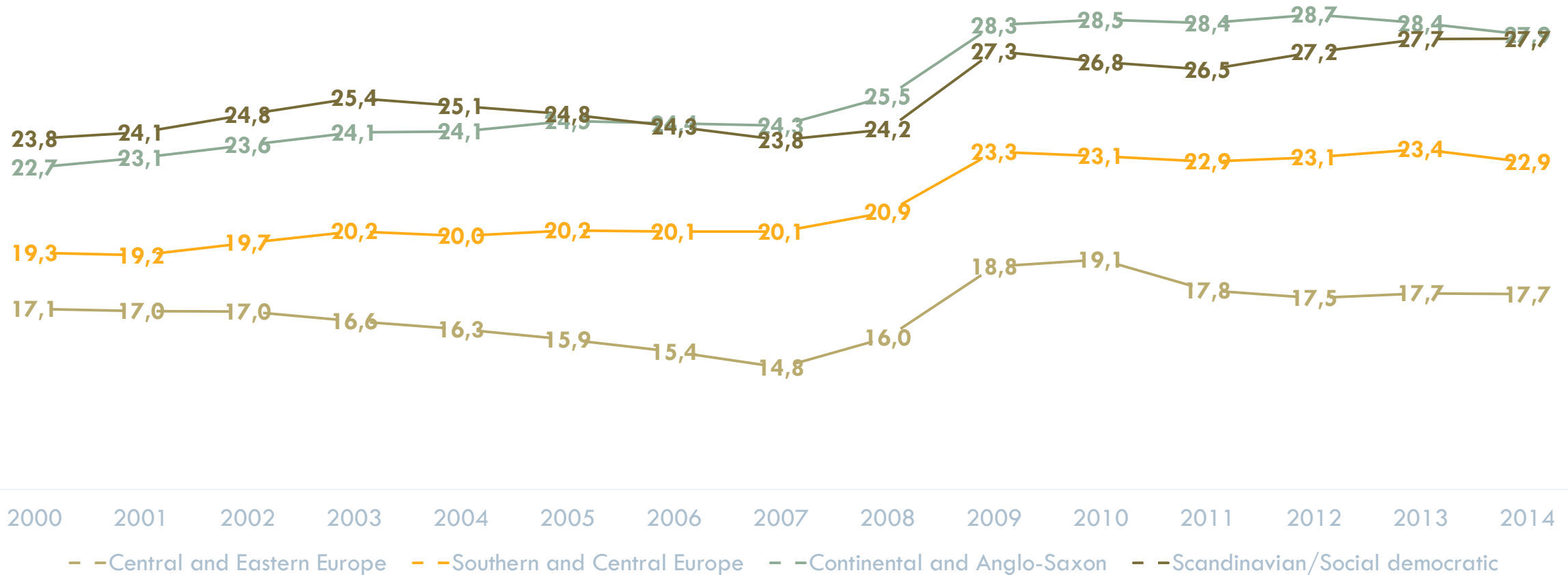
GENERAL GOVERNMENT EXPENDITURE BY CLUSTERS



2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016

— Central and Eastern Europe — Southern and Central Europe — Continental and Anglo-Saxon — Scandinavian/Social democratic

SOCIAL PROTECTION EXPENDITURE BY CLUSTERS



RESULTS OF PANEL REGRESSIONS WITH FIXED EFFECTS: PARAMETERS β OF THE REGRESSIONS VARIABLES

	Total sample	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Until 2007	After 2007
Model with dependent variable: General Government Expenditure							
Demographic Support Ratio	-0.00736 (0.0188)	-0.00323 (0.0492)	0.0873 (0.0944)	0.154*** (0.0511)	-0.198*** (0.0261)	-0.0978* (0.0534)	-0.143* (0.0775)
Model with dependent variable: General Government Revenue							
Demographic Support Ratio	-0.0214 (0.0389)	-0.0270 (0.0357)	0.0949* (0.0553)	-0.0694* (0.0369)	-0.114*** (0.0179)	-0.0191 (0.0512)	-0.136*** (0.0499)
Observations	500	120	140	120	120	325	200
Number of countries	25	6	7	6	6	25	25

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

In Continental/Anglo-Saxon countries with population ageing:

- **Expenditure declined**
- **Tax revenue increased**

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In Scandinavian/Social democratic countries

- Expenditure increased with population ageing
- Tax revenue increased

CONCLUSIONS (1)

- Our study extends research on economic consequences of ageing in several aspects
 - It takes into account the economic flows related to consumption and labour income that are driven by the socio-economic developments as well as the existing welfare systems
 - It applies new approaches to depict the past developments of ageing and economic flows
 - It allows assessing the output of welfare policies through the generational distribution of public transfers

CONCLUSIONS (2)

- Our results are - to some extent - in line with the up-to date literature on the welfare states.
 - They confirm the highly redistributive welfare regimes of the Scandinavian countries.
 - The new EU member states form a cluster of “underdeveloped” welfare policies.
 - In the middle two clusters are those countries with a mixed shape of generational transfers, depending on the type of public consumption or cash transfers.
- We also see some convergence of generational transfers in continental and liberal welfare regimes.
 - results of social reforms and austerity measures introduced in reaction to the 2008 economic crisis, which imposed on reduction of public expenditure and public transfers inflows (benefits)?

CONCLUSIONS (3)

- Countries with different outcomes of welfare regimes also experienced different development of their public expenditure in general as well as expenditure on social protection
 - Countries that have less developed social protection and lower transfers have lower overall public spending, compared to developed countries
 - Anglo-Saxon and Continental countries tend to decrease their public expenditure in recent years that accompanies changing demographic age structure, leading to lowering demographic support ratio
 - Social-democratic countries, including mainly Scandinavian ones, have the highest overall public spending and social protection spending, which increases with population ageing