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INEQUALITY AND POVERTY IN GREECE: CHANGES IN TIMES OF CRISIS

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Presentation Outline

1. The Greek Council of Economic Advisors
2. Introduction – Background information
3. Data and methods
4. Empirical results
 - i. Inequality indices
 - ii. Poverty indices
 - iii. Income distribution
 - iv. Structure of inequality and poverty
5. Conclusion

Greek Council of Economic Advisors

1. Directly reports to the Minister of Finance/Alternate Minister Finance
2. Represents the Ministry of Finance to the Working Groups and Committees of DG ECFIN that precede Eurogroup and Ecofin
3. Active role in the negotiations of the Greek Economic Adjustment Programmes
4. Recently (August 2017) established a unit responsible for “**Microeconomic policy and Microsimulations**” – a need that occurred during the years of the economic crisis from the continuous requests for fiscal estimations for the design and implementation of reforms (mainly on the field of taxation, social security contributions, social transfers and to a lesser extent pensions). Especially after 2013, the prolonged crisis raised the need to take seriously into account not only the fiscal but also the distributional effects of the reforms.

Greek Council of Economic Advisors

5. Assistance : Joint Research Centre (JRC) of European Commission & World Bank
6. Some examples of Undertaken & on-going projects that involve simulation exercises – Simulations are:
 - National rollout of GMI, abolition of small benefits
 - Redesign of family benefits, Introduction of a housing benefit
 - Social Dividend (end of fiscal year)
 - VAT reforms using Household Budget Survey data
 - Changes in PIT (reducing tax allowance, tax expenditures, changes the rates of general PIT scheme and Social Solidarity Contribution)
 - Changes in Recurrent property taxation (ENFIA)
 - Calculation of adequate living expenses threshold for introducing a safety net against auction of 1st residence of over-indebted households
7. Building an **alternative dataset for Euromod** with administrative data, sample from the PIT database
8. Cooperation with Greek universities (research – paper writing)

Aim of the paper

Inequality and Poverty in Greece: Changes in Times of Crisis

Aim of the paper: To explore the effects of the crisis on the level and structure of aggregate inequality and poverty using the data of EU-SILC for the period 2008-2016 (2007-2015 incomes) and investigate how the living standards of various population groups have been affected in both absolute and relative terms

- Result of cooperation with Athens University of Economics and Business
- Joint work with Alexandros Karakitsios and Panos Tsakloglou

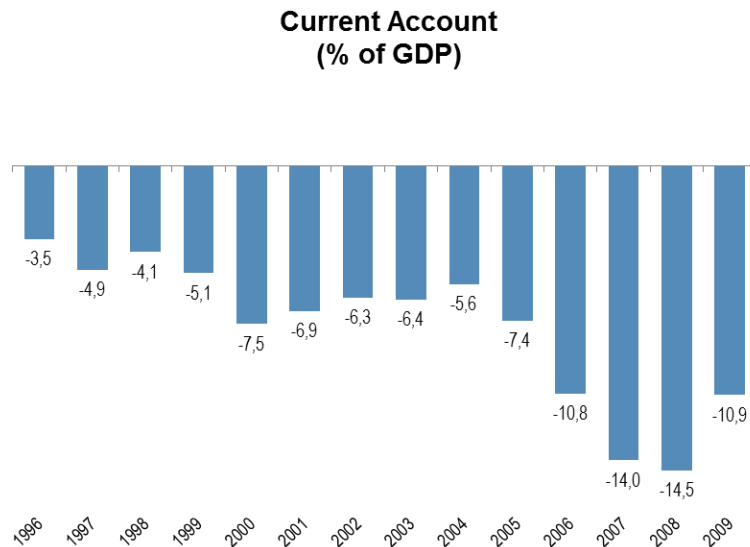
Background

Why studying the Greek crisis?

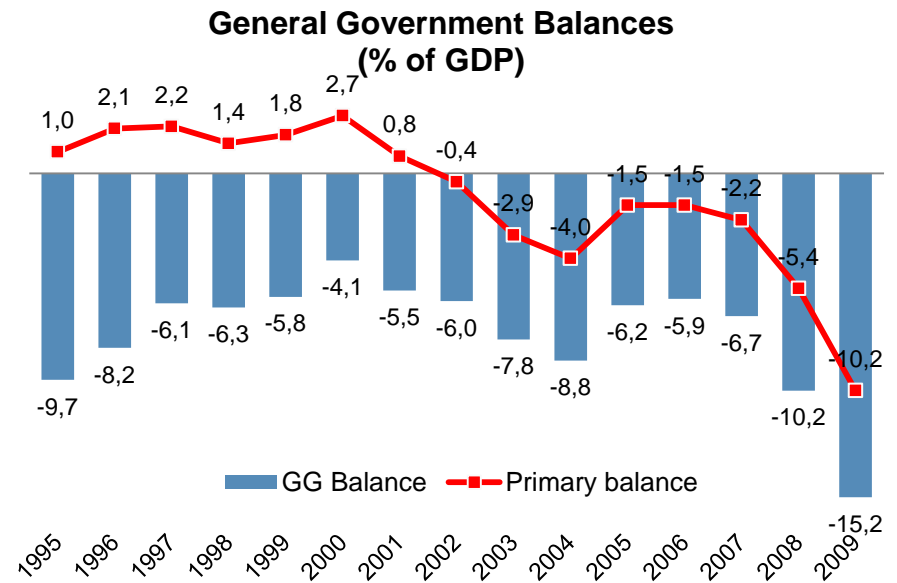
- The deepest and longest ever recorded in an OECD country in the postwar period (output declined by over 25%, disposable income by more than 40%, unemployment rate exceeded 27%)
- In 2010 Greece was cut off from international capital markets
- Three bailout programmes (2010, 2012, 2015)
- Fiscal consolidation and structural reforms in exchange for loans to avoid (disorderly) bankruptcy
- Largest loan in history (over €260 bn in total)
- Many reforms implemented in a short period of time and huge fiscal consolidation (primary balance from -10% in 2009, 0 in 2014, 1.9% 2017, 3.5% 2018)

Background

- Growth model based on consumption and borrowing
- Typical case of “twin deficits” (Fiscal and Current Account)



Source: Eurostat, Ameco



Background information

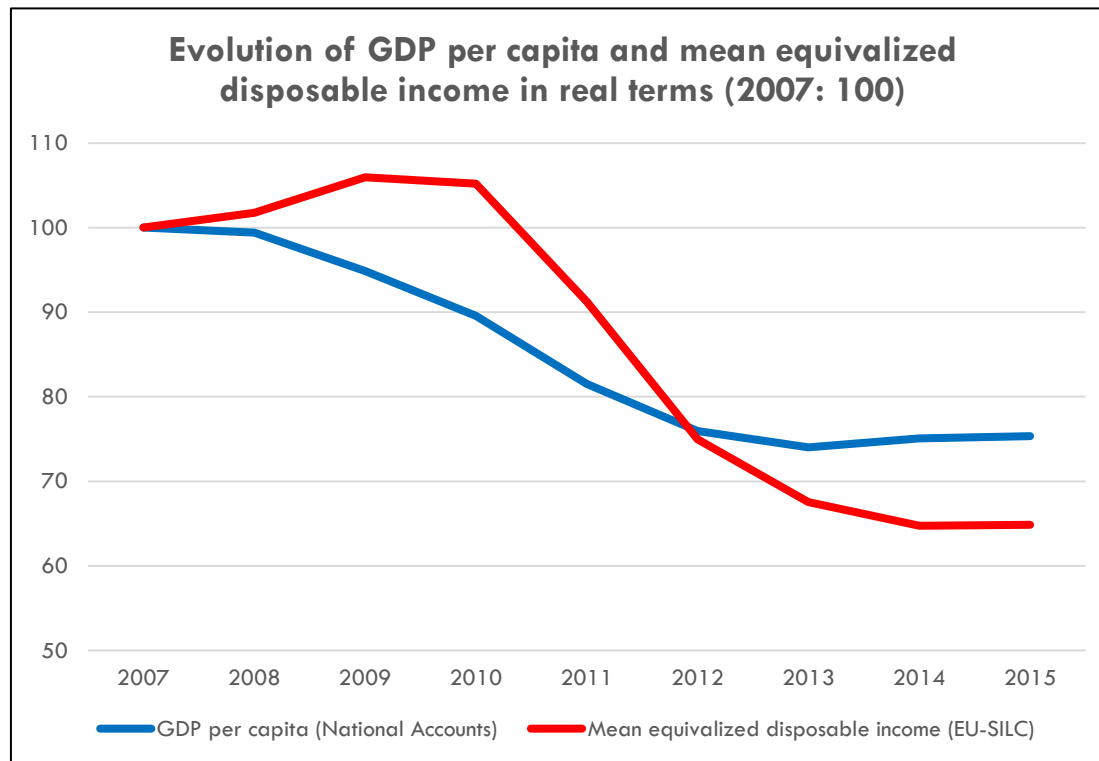
Inequality in Greece 1974–2007	Poverty in Greece 1974–2007
<ul style="list-style-type: none">▪ Declining gradually but not continuously▪ Inequality “within population groups” far more important is shaping aggregate inequality than inequality “between population groups”, irrespective of the partitioning criterion (regional, demographic, occupation or educational – with the possible exception of the latter)▪ Higher than in most EU countries	<ul style="list-style-type: none">▪ When “relative” (or “floating”) poverty lines were employed, poverty recorded a modest decline▪ The decline was very substantial when the poverty line used was “anchored” in real purchasing power terms▪ In earlier years, poverty was primarily a rural phenomenon; in recent years the elderly became the largest group in poverty, although they did not experience extreme poverty▪ Relative poverty higher than the EU average▪ Lower poverty-reducing effect of social transfers than in almost all EU countries▪ Evidence that poverty was, to some extent, “state dependent”

Data and Methods

- Greek data set of the EU-SILC for the period 2008-2016 (2007-2015 incomes)
- Income concept: disposable monetary household income
 - Fiscal consolidation effort relied substantially on tax increases
 - The share of taxes in GDP rose from 39.2% (2007) to 48.3% (2015)

Data and Methods

- As a result, the decline in mean household disposable income in EU-SILC (35.2%) is substantially larger than the decline in GDP per capita in National Accounts (24.6%)
 - 38.9% if 2009 is taken as base year



Data and Methods

- Household incomes standardized using the household equivalence scale used at EU level (“OECD modified”)
- “Top-bottom coding” is applied: households with equivalized incomes less than 1% and more than ten times the mean equivalized income of the corresponding distribution were removed
 - Surprisingly, small differences in number of households excluded before and during the crisis

Data and Methods

- Inequality indices
 - Gini index
 - Mean Log Deviation (MLD or Second Theil Index)
 - Two members of the Atkinson family of inequality indices for inequality aversion parameters 0.25 and 0.75
- Gini index is relatively more sensitive to changes in the middle of the income distribution.
- ATK0.25 is more sensitive to changes close to the top of the distribution.
- ATK0.75 and MLD are more sensitive to changes close to the bottom of the distribution
- MLD allows the identification of the contribution of each population group to aggregate inequality and the identification of the contribution of disparities between population groups to aggregate inequality

Data and Methods

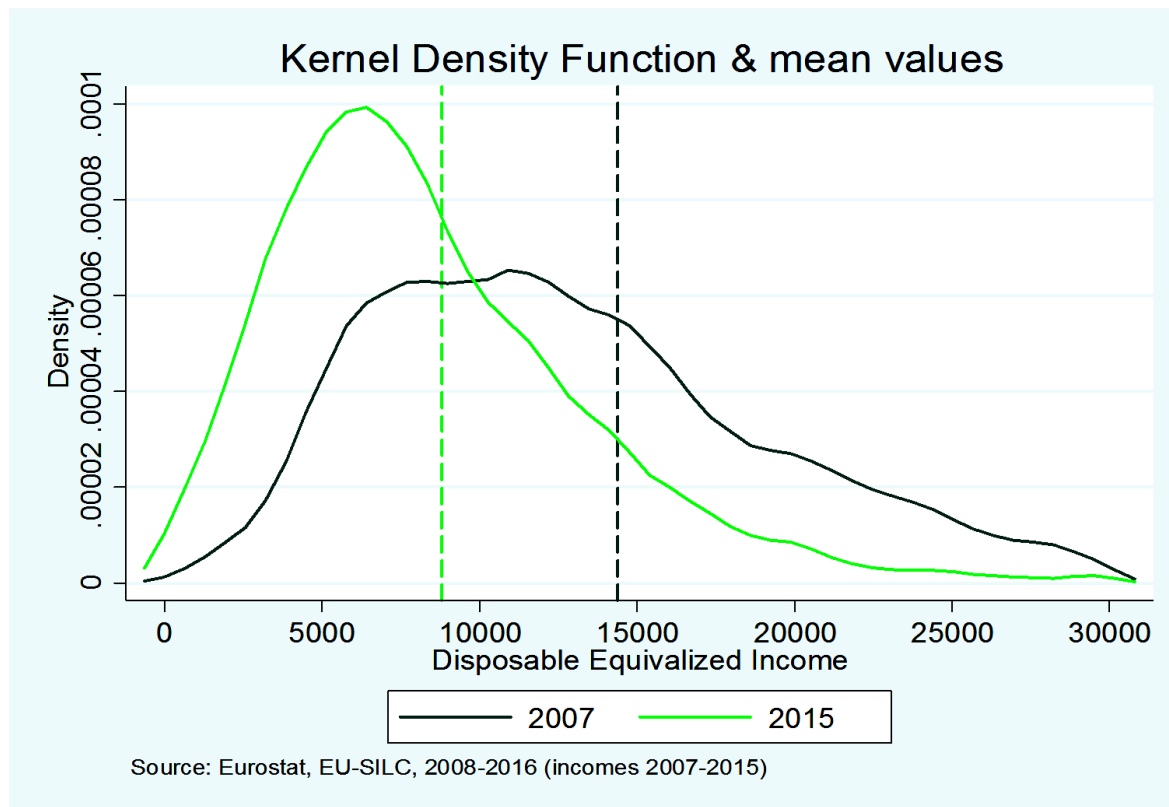
- Poverty indices used:
 - Foster et al (1984) parametric family (FGT)
 - FGT(0) equals to the poverty rate
 - FGT(1) is the “income gap ratio”; that is, the share of the total income that would be needed to eliminate poverty
 - FGT(2) is the squared poverty gap index and satisfies the standard axioms of poverty measurement
 - All are additively decomposable: we can identify the contribution of each population group to aggregate poverty
 - A “floating” – “relative” (60% of median equivalized disposable income) and an “anchored” poverty lines are used in poverty analysis
 - The “anchored” poverty line is the poverty line of the base year (2007) adjusted for the cost of living

Data and Methods

Inequality and poverty decomposition in population groups:

- Socio-economic group of the household head
- Households with/without unemployed members
 - Results shown here mainly for these partitions
- Demographic household type
- Age of population member
- Education level of the household head

Empirical Results – Income Distribution



- Higher concentration around the mode in 2015 than in 2007 (could be an indication of a decline in inequality). Yet, many more observations concentrated close to the bottom of the distribution in 2015 (operates in the opposite direction).

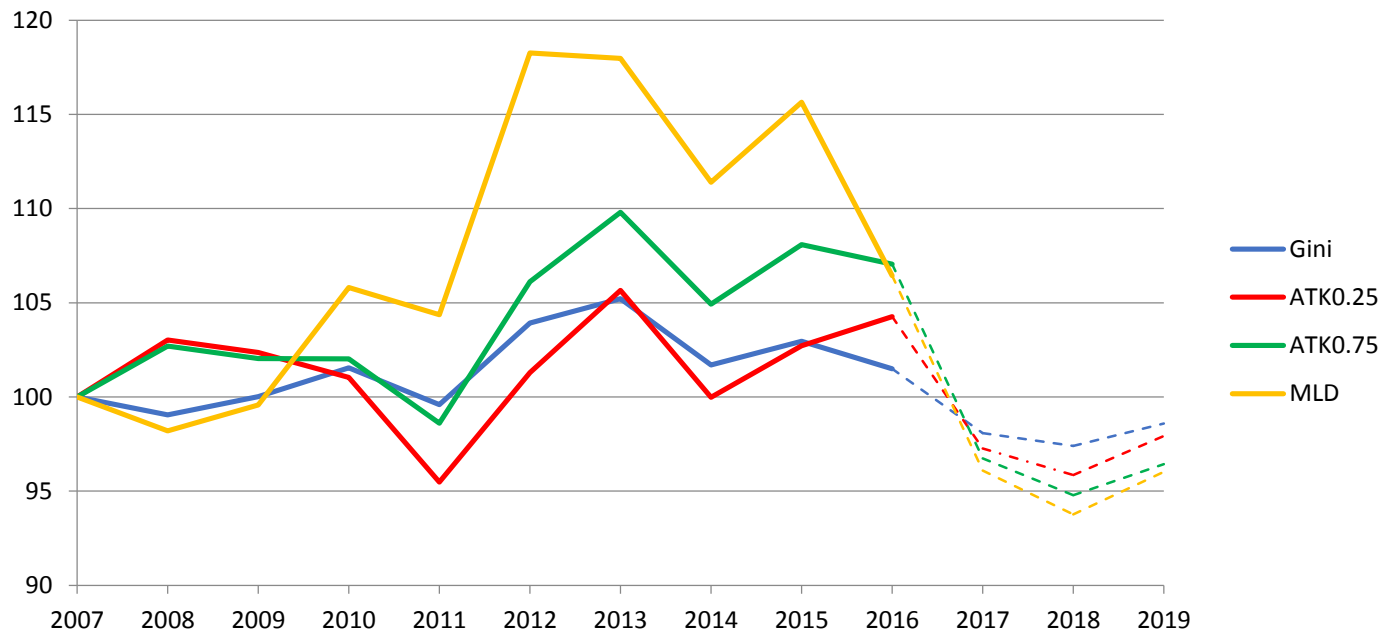
Empirical Results: Population shares and mean group incomes

Population Group	Population share		Mean income	
	2007	2015	2007	2015
Socio-economic group of household head				
Employer	7.3	4.7	1.35	1.27
Self-employed (agriculture)	5.8	4.7	0.65	0.68
Self-employed (non-agriculture)	3.6	3.1	1.00	1.04
Employee (private sector)	31.4	25.1	1.01	1.04
Employee (public sector)	9.4	9.2	1.24	1.23
Unemployed	2.2	9.4	0.64	0.53
Pensioner	28.9	33.6	0.95	1.07
Other	11.4	10.2	0.91	0.92
Households with/without unemployed				
No unemployed in household	88.1	69.8	1.03	1.13
At least 1 unemployed in household	11.9	30.2	0.78	0.71
GREECE	100.0	100.0	1.00	1.00

- Changes in population shares and mean incomes of the group of households headed by unemployed and pensioners explain to a large extent the observed changes in inequality and poverty

Empirical Results: Inequality trends

Trends in inequality indices: Greece, 2007-2015 & *Euromod* projection 2016-2019



- In the first two years (pre-crisis), movements in opposite directions
 - Lorenz curve intersections
- Then, all indices in all years move in the same direction
- Inequality higher in 2015 than in 2007
 - But by a very different proportion according to alternative indices
 - Gini and ATK.25: less than 3%, ATK.075: 8%, MLD: 16%

Empirical Results: Inequality decomposition I

Population Group	Inequality		% Contribution		Change
	2007	2015	2007	2015	
Socio-economic group of household head					
Employer	33.3	35.1	13.3	7.8	-5.5
Self-employed (agriculture)	14.2	21.2	4.5	4.7	0.2
Self-employed (non-agriculture)	27.3	32.4	5.4	4.8	-0.6
Employee (private sector)	15.7	17.7	27.2	21.1	-6.1
Employee (public sector)	7.6	10.4	4.0	4.5	0.6
Unemployed	22.2	30.3	2.6	13.5	10.9
Pensioner	13.9	12.1	22.1	19.4	-2.7
Other	21.4	26.2	13.4	12.7	-0.6
“Within groups”	16.8	18.6	92.6	88.7	-3.9
“Between groups”	1.4	2.4	7.4	11.3	3.9
Households with/without unemployed					
No unemployed in household	17.8	17.1	86.2	56.7	-29.5
At least 1 unemployed in household	17.8	23.1	11.7	33.2	21.5
“Within groups”	17.8	18.9	97.9	89.9	-8.0
“Between groups”	0.4	2.1	2.1	10.1	8.0
GREECE	18.2	21.0			

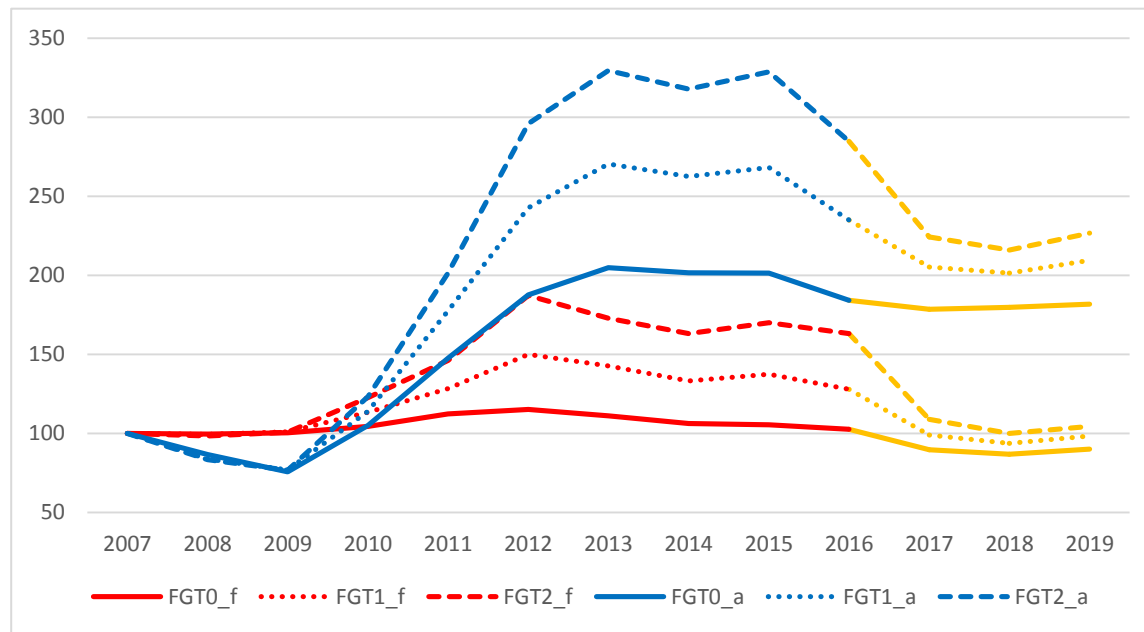
Empirical Results: Inequality decomposition II

Contributions of disparities between groups

Population Group	Number of groups	% Contribution of "between groups" component		Change
		2007	2015	
Socio-economic group of household head	8	7.4	11.3	3.9
Households with/without unemployed	2	2.1	10.1	8.0
Household type	7	2.9	3.7	0.8
Age of household member	3	1.2	0.2	-1.0
Educational level of household head	6	20.9	13.0	-7.9

Empirical Results – Poverty trends

Trends in poverty indices: Greece, 2007-2015 & *Euromod* projection 2016-2019



Floating pl: the values of all indices are higher in 2014 than in 2007, but the differences in the proportional increases are substantial. FGT0 is 5.5% higher (initial value: 19.8%) , while FGT1 and FGT2 are 37.4% and 69.9% higher, respectively.

Anchored pl (2007): In 2014 that poverty picks up the values of FGT0, FGT1 and FGT2 are 101.4%, 168.1% and 228.7% higher than in 2007 – a tremendous increase, accounted primarily by the decline in disposable income. Almost 40% of the population classified as poor in 2015 with pl of 2007.

Empirical Results – Poverty decomposition I

Population Group	FGT0		FGT0 Contributions %		FGT2		FGT2 Contributions %	
	2007	2015	2007	2015	2007	2015	2007	2015
Socio-economic group of household head								
Employer	19.7	16.4	7.2	3.7	2.97	2.21	9.5	2.7
Self-employed (agriculture)	43.5	48.7	12.7	11.0	5.00	8.97	12.8	10.9
Self-employed (non-agriculture)	30.1	23.2	5.5	3.5	4.15	4.26	6.6	3.4
Employee (private sector)	16.2	18.9	25.7	22.7	1.78	2.77	24.6	18.0
Employee (public sector)	3.0	3.1	1.4	1.3	0.26	0.19	1.1	0.5
Unemployed	40.1	55.8	4.3	25.0	9.36	14.60	8.8	35.4
Pensioner	18.6	13.2	27.1	21.2	1.37	1.29	17.3	11.2
Other	27.7	25.1	15.9	12.3	3.84	4.66	19.2	12.4
Households with/without unemployed								
No unemployed in household	18.6	13.4	82.6	44.6	1.92	1.84	74.3	33.2
At least 1 unemployed in household	28.9	38.3	17.4	55.4	4.90	8.54	25.6	66.9
Age of household member								
18-	22.7	26.6	18.9	21.1	2.90	4.99	21.0	21.3
18-64	18.3	22.4	59.5	65.8	2.33	4.49	65.8	71.3
64+	22.5	12.6	21.6	13.3	1.57	1.34	13.1	7.6
GREECE	19.8	20.9	100.0	100.0	2.27	3.86	100.0	100.0

Empirical Results – Poverty decomposition II

Population Group	FGT0		FGT0 Contributions %		FGT2		FGT2 Contributions %	
	2007	2015	2007	2015	2007	2015	2007	2015
Household type								
One person 65- or childless couple (both 65-)	16.6	19.2	8.7	10.6	2.22	4.31	10.2	12.9
One person 65+ or childless couple (both 65+)	23.8	11.7	15.4	9.2	1.56	1.12	8.8	4.8
Couple with 1 or 2 dependent children	19.9	21.7	32.1	27.9	2.58	4.41	36.3	30.7
Couple with 3+ dependent children	30.3	37.8	3.5	10.1	3.38	6.98	3.4	10.1
Mono-parental household	26.4	28.9	2.4	2.7	3.33	6.54	2.6	3.3
Other household type no dep. child	13.8	17.5	18.7	18.6	1.57	3.18	18.5	18.4
Other household type with at least 1 dep. ch.	27.5	28.7	19.2	20.9	3.31	5.05	20.2	19.9
Educational level of household head								
Tertiary education	5.4	8.8	5.5	10.4	0.77	1.66	6.8	10.6
Post secondary non-tertiary education	13.6	19.0	2.2	4.3	1.19	2.94	1.7	3.6
Upper secondary education	15.0	22.2	22.1	33.1	1.75	4.17	22.4	33.6
Lower secondary education	26.6	30.6	13.6	15.7	3.75	6.23	16.7	17.3
Primary education	28.7	26.7	42.9	30.2	2.79	4.76	36.5	29.1
Primary education not completed	35.2	27.8	13.8	6.6	4.69	4.73	16.0	6.1
GREECE	19.8	20.9	100.0	100.0	2.27	3.86	100.0	100.0

Conclusions

- Main driver of observed changes (a) sharp increase in unemployment and (b) improvement in the relative position of the elderly
- Greece traditionally “male breadwinner model” / “Southern” model of welfare
 - No benefit of last resort (apart from the pensioners/elderly)
 - Inadequate protection for the unemployed
 - Fast increase in welfare spending (mainly pensions) / Limited poverty-reducing effects
- Crisis: Increase in need, drop in resources
 - Weaknesses of the welfare state safety net apparent in the crisis
- ✓ New policies introduced, but “too little, too late”, under a very hard budget constraint
 - ✓ GMI, family benefits, unemployment assistance
 - ✓ Role of tax increases and expenditure cuts
- Public discourse...

*Thank you very much
for your attention!*