



# Earnings, employment, and income inequality

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# GINI Lay out

- 1. Importance of labour incomes
- 2. A tale of two literatures
- 3. Bridging the gap individuals  $\Leftrightarrow$  households
  - A. Earnings
  - B. Employment
- 4. Multiple earners: A coping strategy?
- 5. Do the country groupings stand up ?
- 6. Conclusions
  
- *Focus on Europe (25 from SILC 2009/2010)*



# 1. Importance of labour

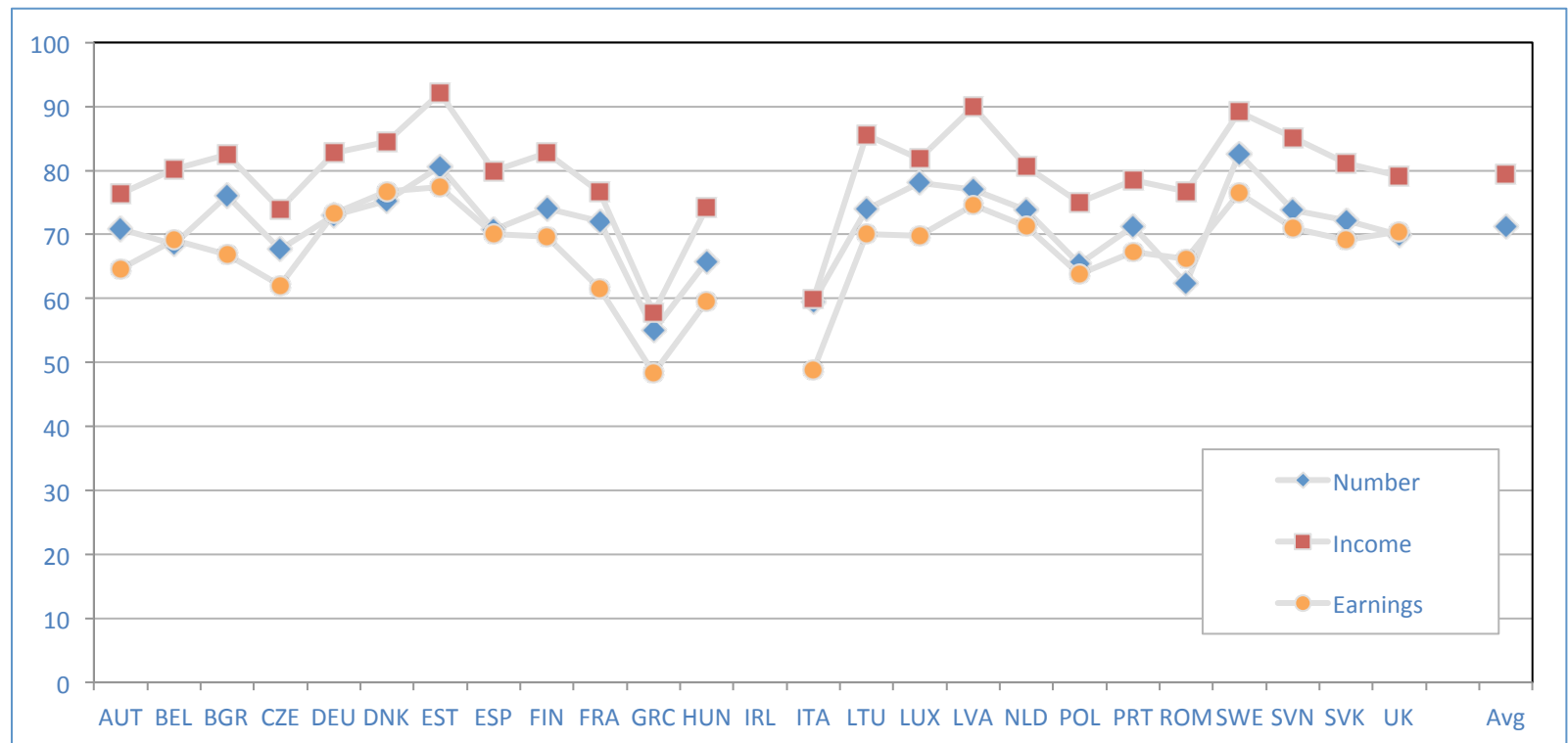
- Earnings are by far the largest income source and concern the most of households
- Households with earnings are found relatively higher up the income distribution
- They contribute to inequality & particularly to top income shares



# 1. Importance of labour

**Labour households: shares in numbers and incomes, and annual earnings to total income, working-age households, 2009**

Incomes 79%, numbers 71% and earnings 67%. GRC + ITA outliers

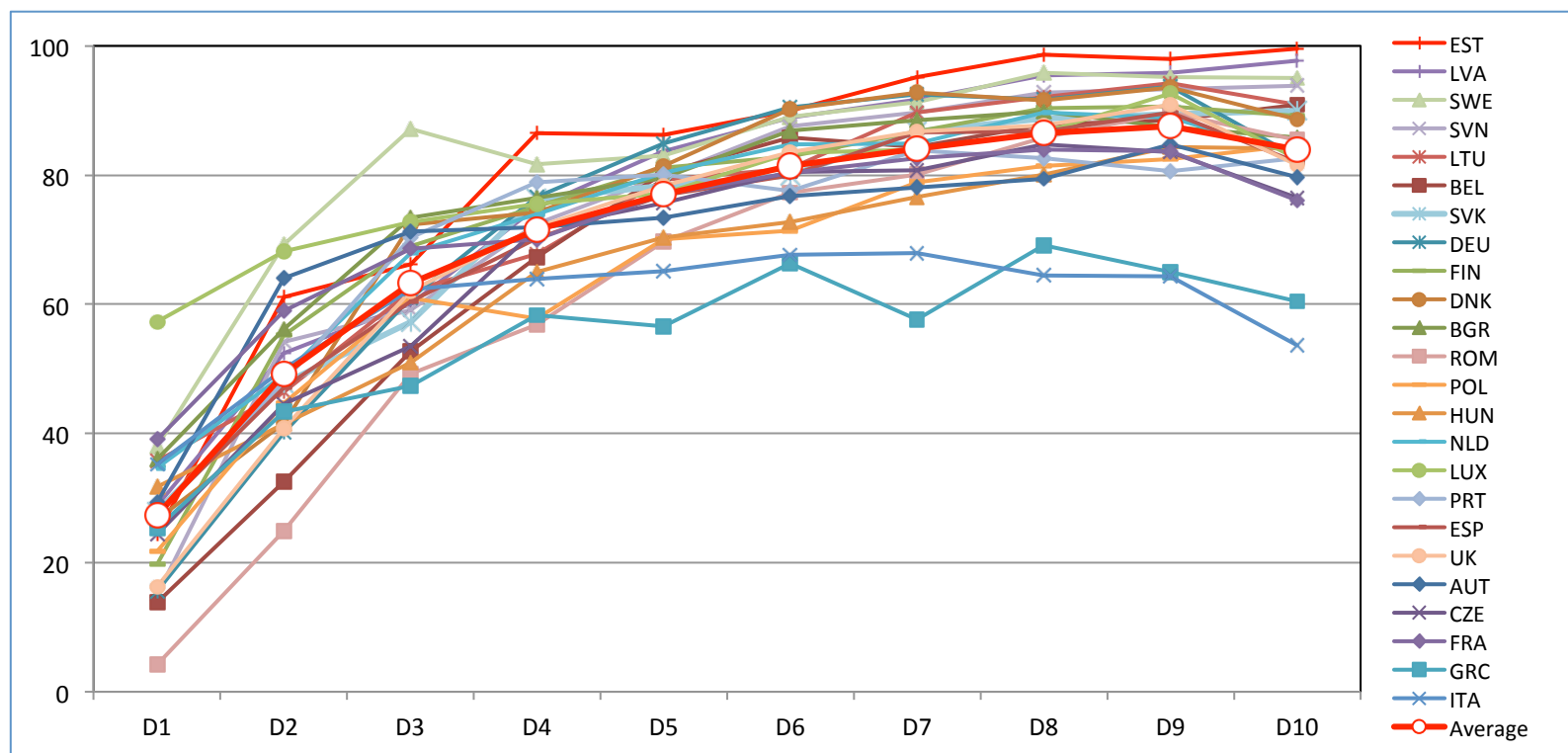




# 1. Importance of labour

***Labour households: % of households within deciles is skewed towards the top of the income distribution, working-age households, 2009***

Very high at top in Baltics, great variation at bottom. GRC + ITA outliers

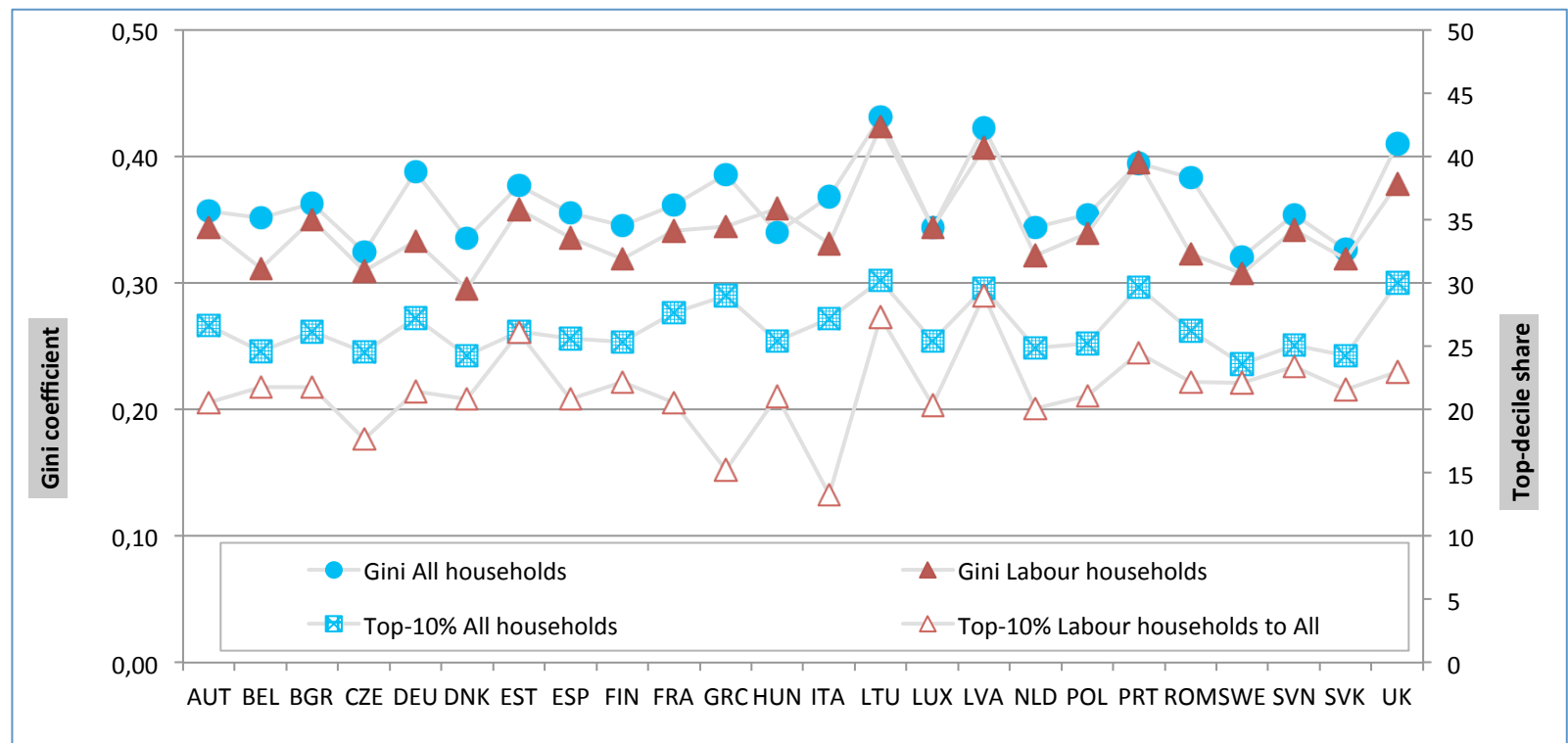




# 1. Importance of labour

**Labour households: Gini coefficients and Top (10%) income shares, working-age households, 2009**

Very similar patterns; complete coverage of top Baltics, PRT. GRC + ITA outliers





## 2. Tale of two literatures

Analysis, measurement and measures

- Wage inequality
  - Hourly earnings,
  - Next to nothing on household environment
  - Never Gini but percentile ratios – but not suited for analysing households
- Income inequality
  - Annual earnings
  - Next to nothing on labour market situation
  - Usually Gini, share/means ratios are better suited than percentile ratios



## 3.A Earnings & households

- Households and corresponding individuals, ranking them correspondingly (by aggregate household earnings)
- Individuals ranking them by their households and by their own earnings
- Always on an annual basis x annual hours = annual earnings; employees only; working-age households; earner = labour income  $\neq$  other income (e.g. pensions)





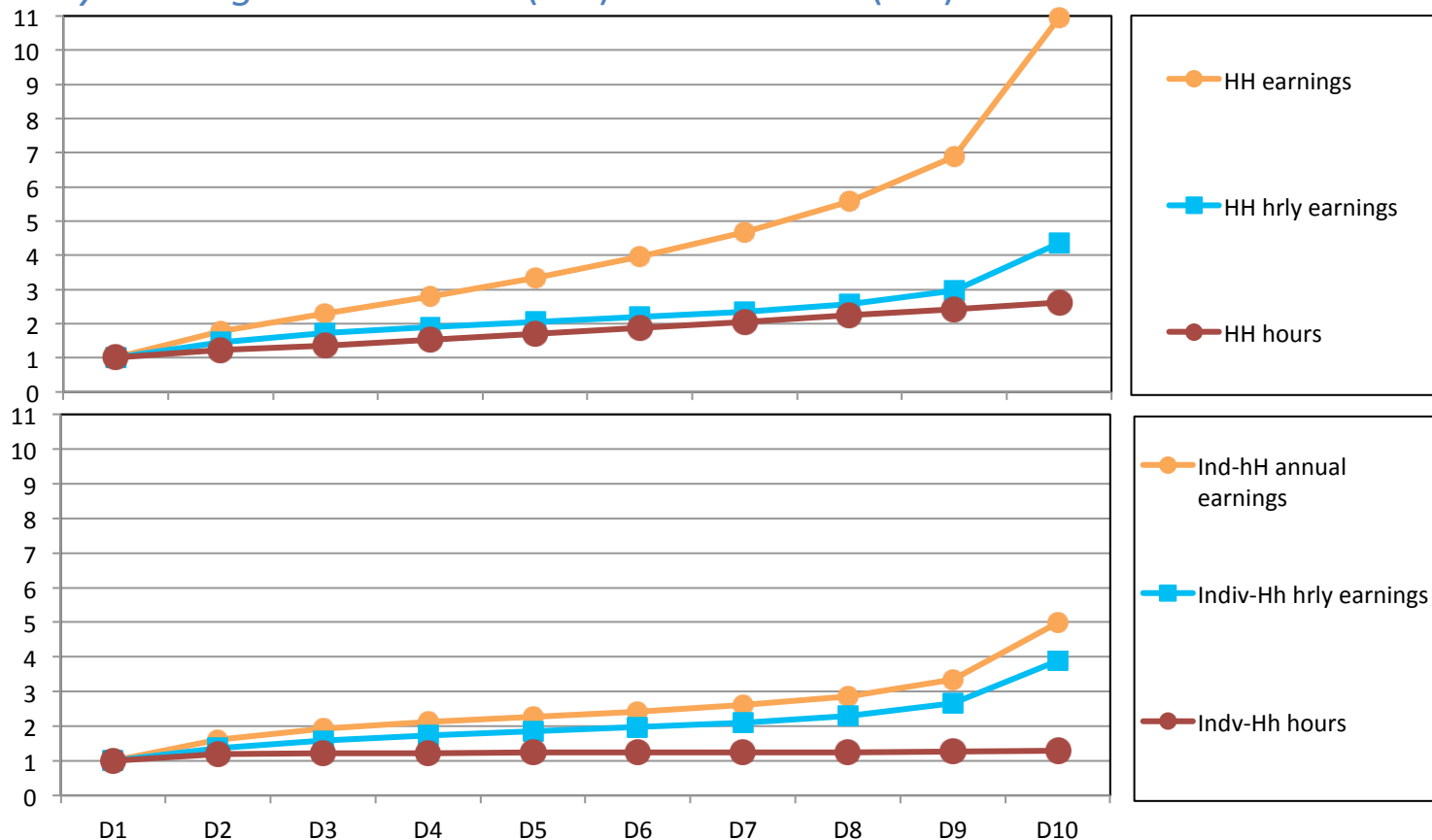
# 3.A Earnings & households

*Household earnings and hours by decile of household annual earnings, D1=1, 2009*

*25-country average: households vs corresponding individuals*

*Hours: household top = x2.6 bottom, individual top = bottom x 1.3*

*Hourly earnings: households (4.4) > individuals (3.9) = correlation*



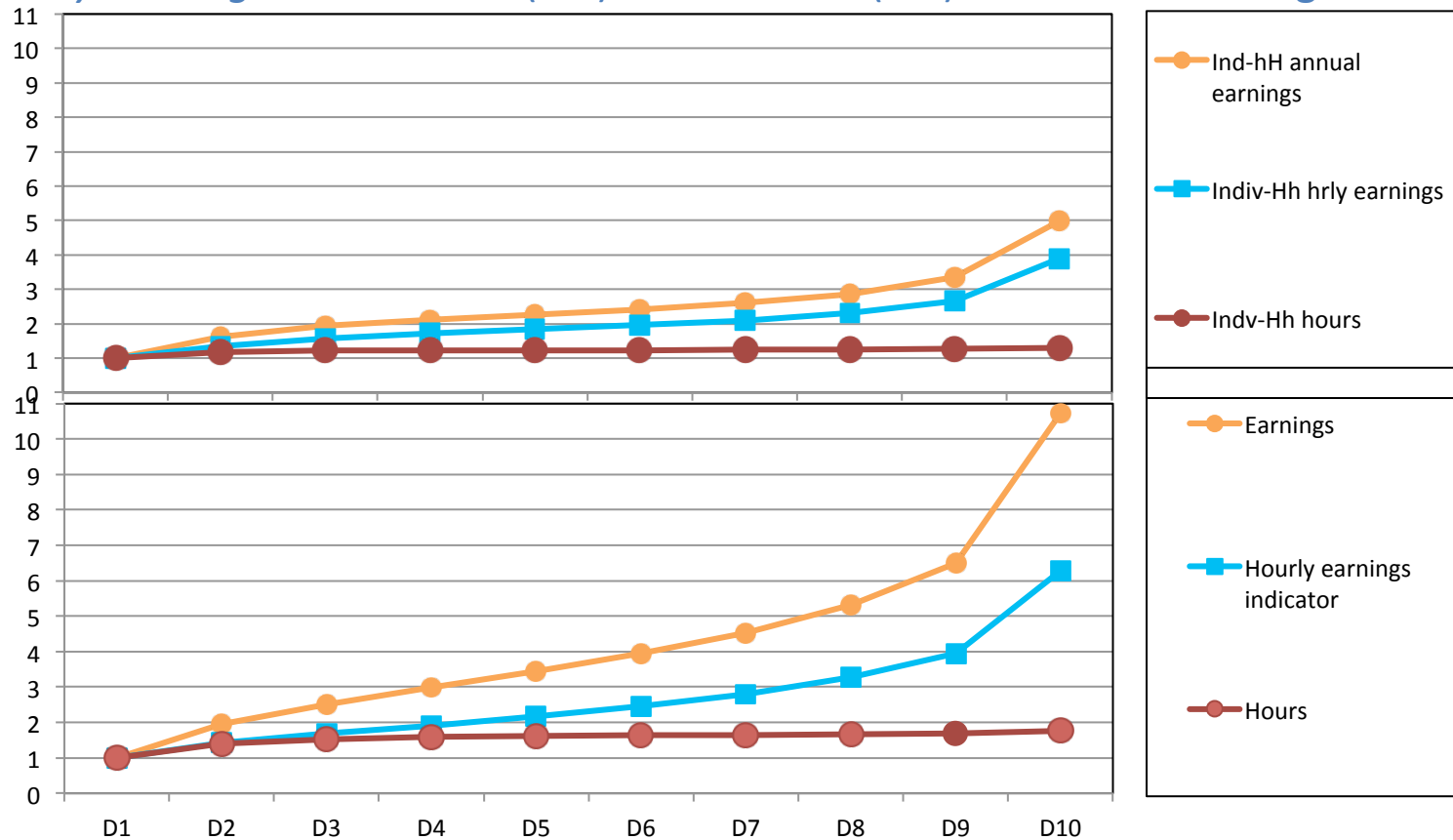


# 3.A Earnings & households

**Household earnings and hours by decile of household annual earnings, D1=1, 2009**  
**25-country average: individuals ranked by household and individually**

*Hours: individuals-household top = x1.3 bottom, individual top = bottom x 1.8*

*Hourly earnings: households (3.9) < individuals (6.3) = correlation mitigated*





# 3.A Earnings & households

*Important country differences (7.1-24.1) Not in hh hours (2.0-3.3) In hourly earnings (2.7-11.1) In hourly wages (3.1-18.3)*

	A. Ranked by households annual earnings						A. Ranked by individual annual earnings		
	1. Annual earnings		2. Annual hours		3. Hourly earnings		Annual earnings	Annual hours	Hourly earnings
	Households	Individuals	Households	Individuals	Households	Individuals			
	1	2	3	4	5	6	7	8	9
AUT	10.2	4.7	3.2	1.5	3.2	3.1	12.7	2.1	6.2
BEL	8.3	3.9	3.3	1.7	2.5	2.4	7.4	2.4	3.1
BGR	11.5	4.8	2.9	1.3	4.0	3.8	9.2	1.5	6.1
CZE	7.5	3.1	2.8	1.2	2.7	2.6	6.8	1.7	3.9
DEU	11.1	5.2	2.6	1.3	4.3	4.0	20.1	2.6	7.9
DNK	7.1	3.6	2.2	1.2	3.2	2.9	6.4	1.5	4.3
EST	11.6	5.6	2.4	1.4	4.9	4.1	10.0	1.9	5.3
ESP	9.9	5.0	2.5	1.3	4.0	3.8	10.0	1.9	5.4
FIN	8.7	4.4	2.3	1.2	3.8	3.6	7.1	1.3	5.4
FRA	11.3	5.3	3.2	1.7	3.6	3.0	11.4	2.2	5.1
GRC	10.4	4.8	2.8	1.4	3.7	3.4	9.9	1.9	5.1
HUN	11.2	5.1	2.5	1.3	4.4	3.9	9.8	1.8	5.5
IRL									
ITA	10.0	5.0	2.3	1.2	4.4	4.1	9.5	1.5	6.2
LTU	24.1	9.9	2.2	1.0	11.1	9.4	20.3	1.1	18.3
LUX	9.9	4.9	2.4	1.2	4.2	3.9	12.2	2.2	5.6
LVA	17.5	7.2	2.5	1.3	7.0	5.8	15.5	1.7	9.3
NLD	10.5	4.5	2.4	1.2	4.5	3.6	10.8	2.3	4.8
POL	10.0	5.0	2.0	1.2	4.9	4.3	11.4	1.7	6.6
PRT	12.7	5.6	2.2	1.1	5.7	5.0	10.7	1.5	7.0
ROM	7.8	3.2	2.4	1.0	3.3	3.2	5.2	1.1	4.9
SWE	8.8	4.6	2.3	1.3	3.9	3.7	10.7	1.3	8.1
SVN	9.7	4.1	2.4	1.1	4.0	3.6	7.7	1.4	5.7
SVK	8.5	3.0	3.0	1.1	2.8	2.7	6.7	1.5	4.5
UK	14.5	6.9	3.3	1.7	4.4	4.2	16.1	2.4	6.8
<b>Avg</b>	<b>11.0</b>	<b>5.0</b>	<b>2.6</b>	<b>1.3</b>	<b>4.4</b>	<b>3.9</b>	<b>10.7</b>	<b>1.8</b>	<b>6.3</b>



## 3.A Earnings & households

- Wage inequality is high(er) and diverges
- Households combine individuals into a flatter working time & earnings profile
- Nevertheless they do combine and add to household earnings inequality, but this is roughly similarly across countries  $\Rightarrow$  national wage inequality is decisive
- *Individuals in the top decile of earnings in Lithuania (Denmark) earn 18 (4) times more than those in the bottom decile, their grouping into households decreases this inequality ratio to 9 (3) and their relatively modest inequality in household hours of 2 (2) boosts annual earnings inequality to a ratio of 24 (7)*



## GINI 3.B Individual - household employment

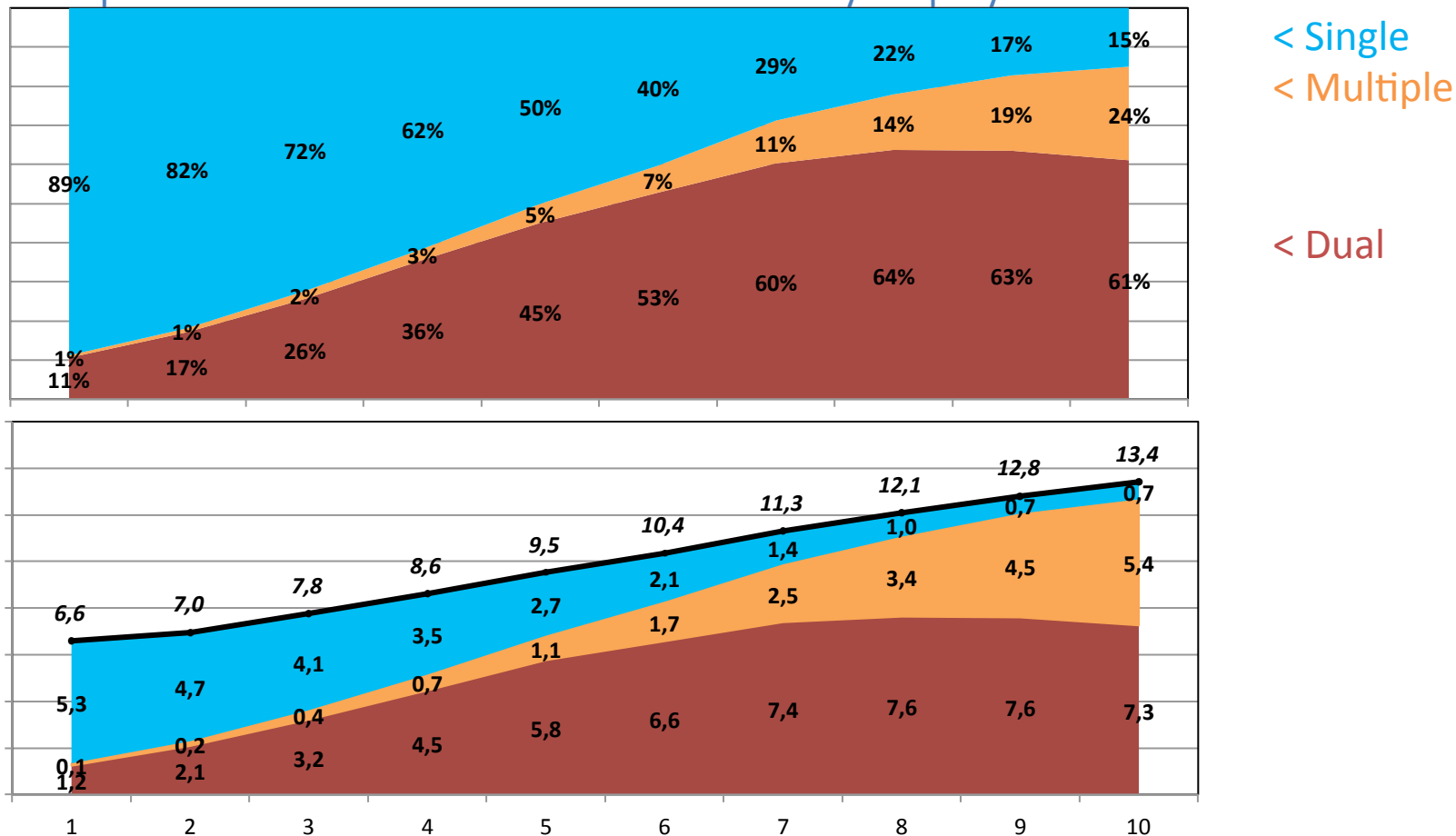
- Distinguishing household types by number of earners:  
single / dual / multiple



# GINI 3.B Individual - household employment

**Household earners types by decile of household annual earnings, 2008**  
**25-country average: individuals ranked by household**

Household composition of deciles shifts from 1-earner to multiple earners  
 Multiple earners have few households but many employees



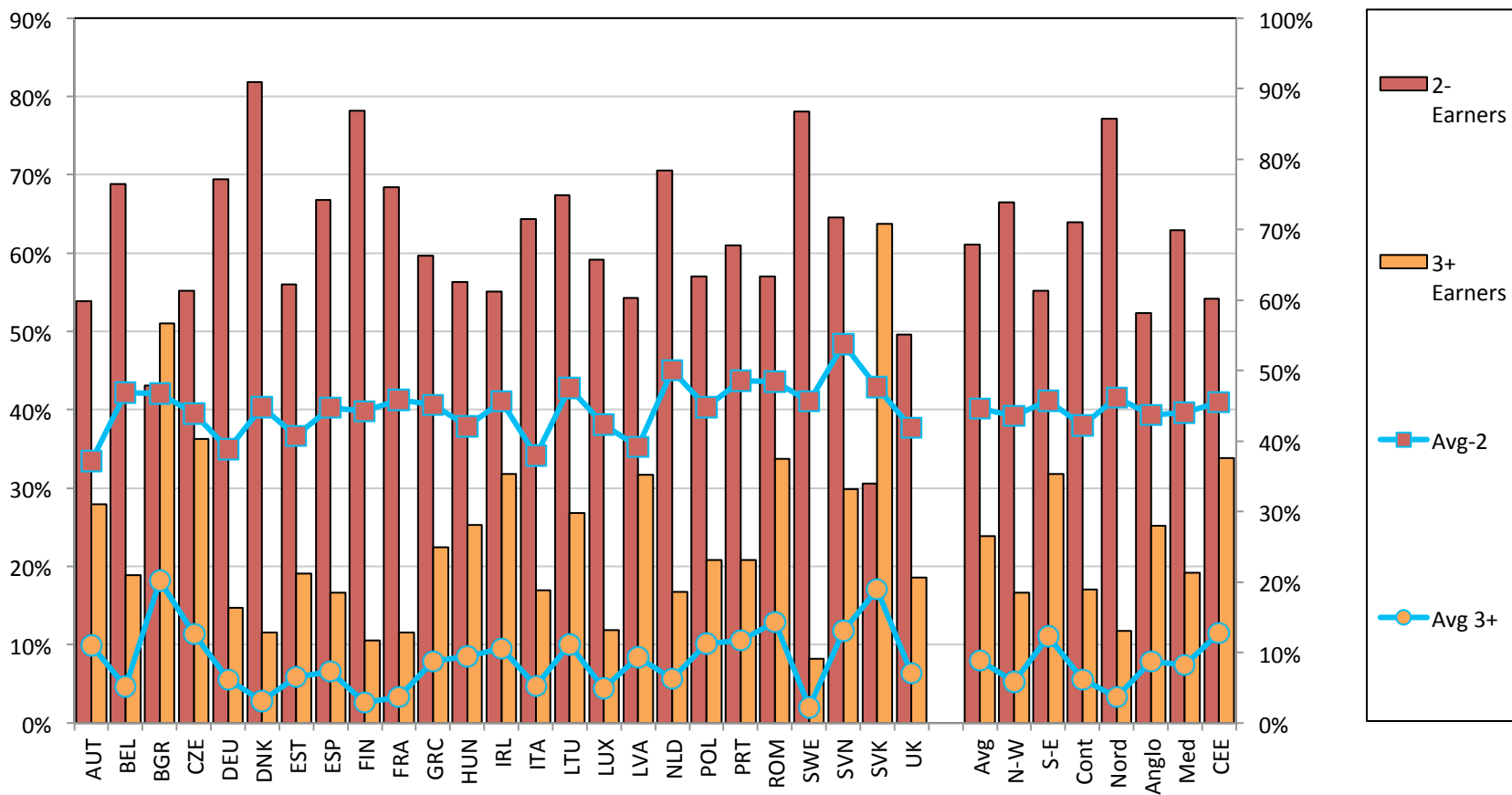


# GINI 3.B Individual - household employment

**Shares of earner types among labour households in top decile and average, 2008**

Majority of multiple-earner employees, working full-time, contrasts with small fractions

Dual and multiple earner complementarity

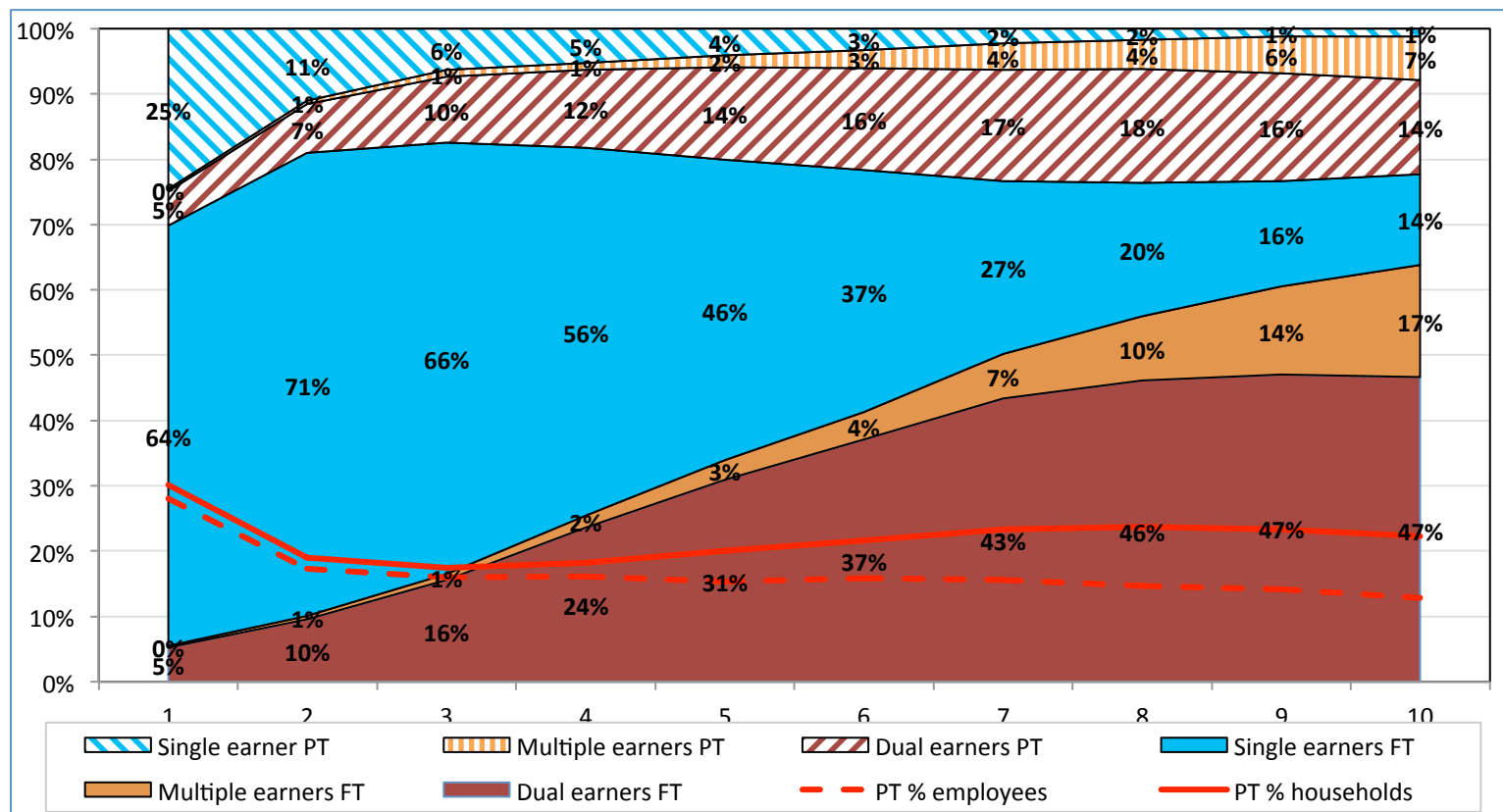




# GINI 3.B Individual - household employment

**Full-time and part-time shares of household types within household earnings deciles, 2008**

Part-time is found across the household earnings distribution

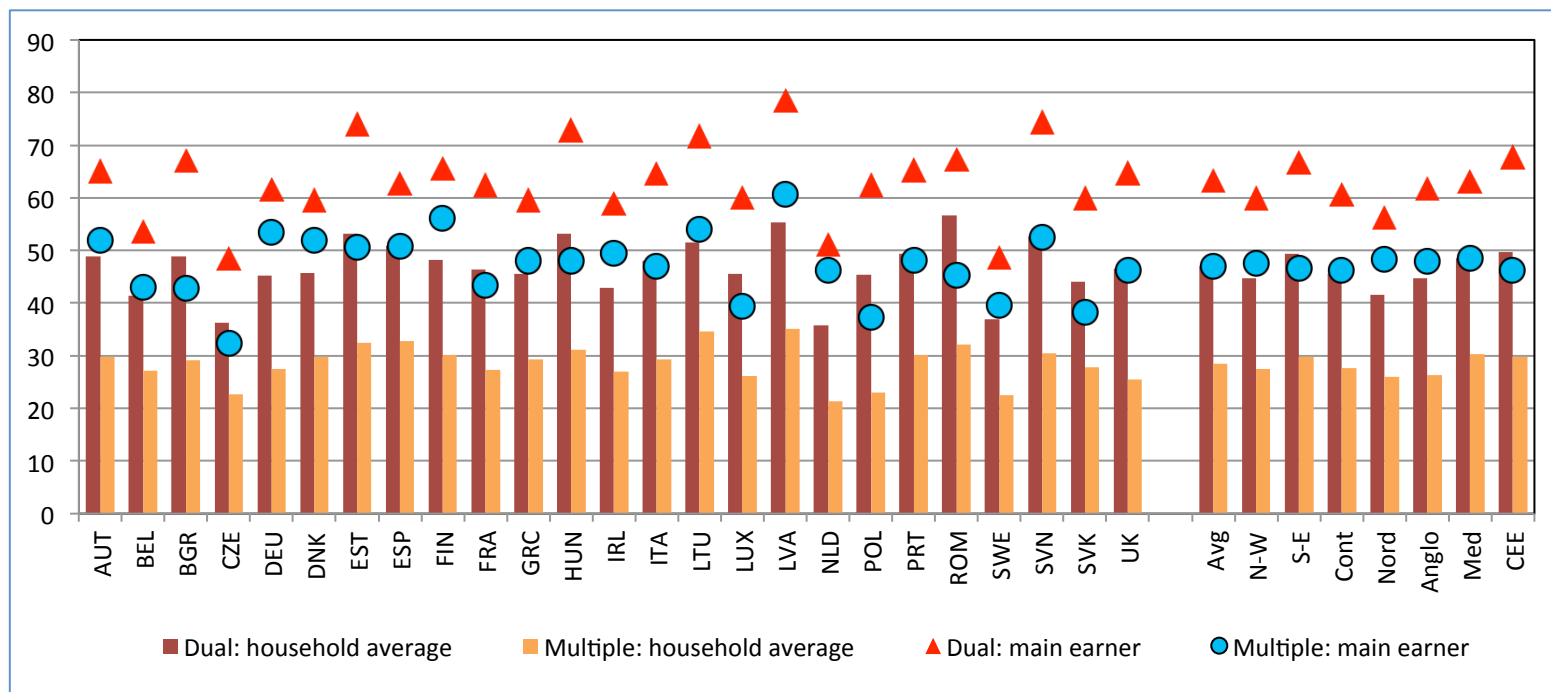




# 4. Coping strategy?

**Household average and main earnings: dual and multiple-earner earnings as a fraction of single earners, top decile, by country, 2008**

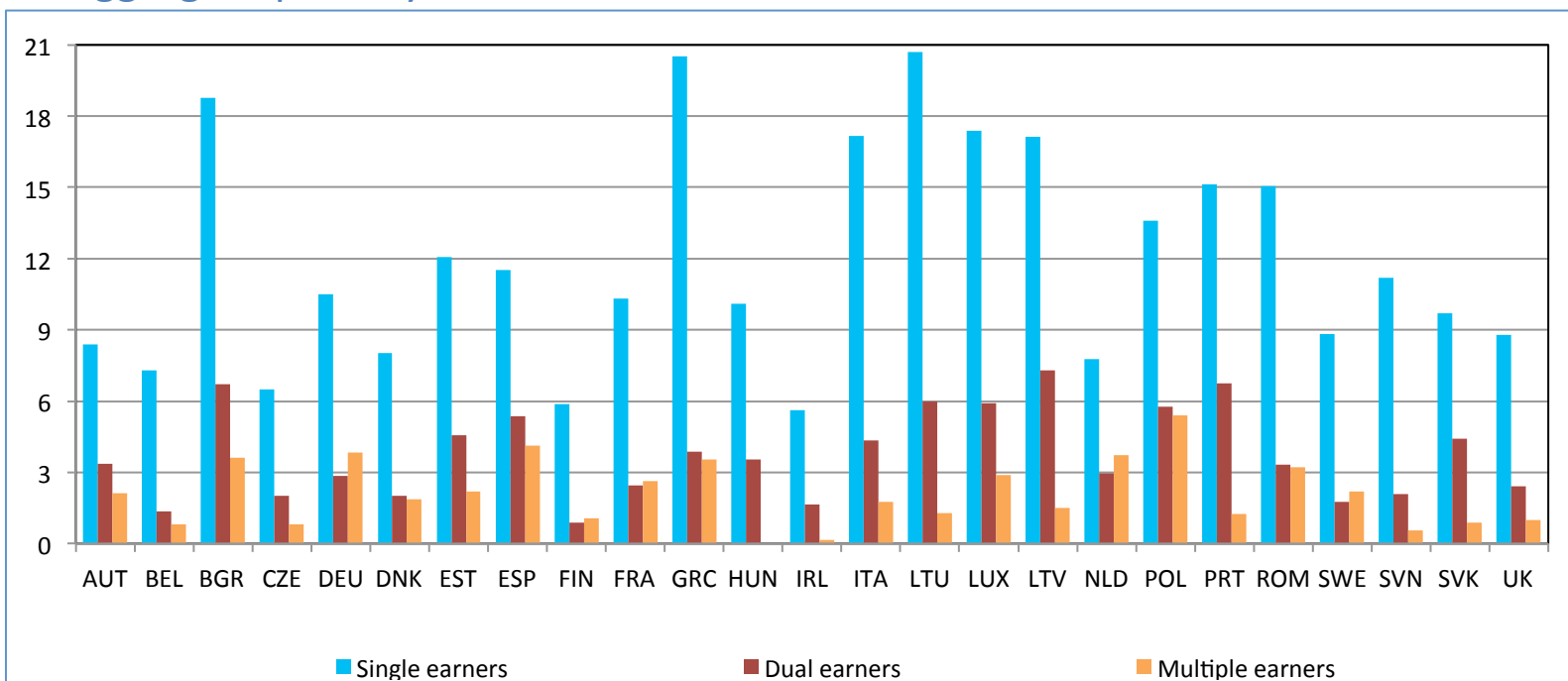
Even at top multiple earners come from far below in the wage distribution compared to single earners, and not just averaged out



# 4. Coping strategy?

## *Poverty rates by earners-type of household, by country, 2008*

Equally low poverty rates for multiple earners; large shares of multiple earners lower the aggregate poverty rate





## 5. Country groupings

- Distinct levels only for : inequality of household annual earnings (8.8 for Nordic/Netherlands group to 11.9 for CEE), inequality of unranked individual annual earnings (8.7 for Nordic/Netherlands group to 12.8 for the Continental category), and poverty among households with earnings (4.8% for Nordic/Netherlands group to 10.2% for Mediterranean group)
- Important but no equally clear distinctions in underlying variables
- For all other variables closely comparable levels, in varying combinations.
- Remaining differences can still be substantial as for, e.g., share of multiple-earner households among households: 13 % CEE and 4 to 8% for the rest.
- The sharpest differences between CEE and the Nordic/Netherlands group
- CEE different from the rest with more unequal outcomes, a much more important role for multiple earner households and a much lower incidence of part-time employment.
- However, at the same time these countries attain same low level of poverty among these households as the Nordic/Netherlands group (2.2%).



## 6. Conclusions

- Within countries household joint labour supply drives household earnings inequality, much more than within-households earnings correlation between individuals
- Different working hours even out though within households and part-time is found up to the top
- Cross-country individual wage inequality largely drives income inequality as joint supply is similar
- Individual wage inequality  $\Rightarrow$  reduced by compensatory combination in households  $\Rightarrow$  increased by joint supply
- Need to standardise for household formation
- Connect to household characteristics
- Joint labour supply differs significantly, with many more multiple-earner households in Eastern Europe; this may be a coping strategy for poverty > further research
- Endogeneity in both directions ?