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EU Policy Making and Growing Inequalities

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Wiemer Salverda

Abstract

The paper takes stock of important new developments in data sources on income inequality and wealth inequality and sketches long run changes for various inequality measures. It critically discusses limitations and gaps and extends for income inequality in two directions – by considering the distribution of income for the EU as a whole and comparing this to the USA on the one hand, and by scrutinising the effects of income redistribution as well as of equivalisation of incomes for the nature of the receiving household on the other hand. As a result of the former very high poverty rates are found in some countries, which demand a much stronger policy focus than general anti-poverty measures can offer. Increased redistribution and particularly the introduction of a European child basic income is proposed, which also can offer children protection against undue effects of policy making. The latter shows an important role for equivalisation and a potential overestimation of the effects of redistributive policies. In addition, the paper considers the important contribution made to income inequality by households depending on labour earnings.

In the light of these findings the paper discusses future trends in income inequality and evaluates the role of EU policies. These are found wanting because of their narrow focus on risk of poverty and the absence of a role for considering poverty and inequality in policy made at the European level. Instead it advocates mainstreaming inequality concerns in broad areas of policy making and suggests starting an annual Inequality Assessment of the Union. It concludes by stressing the need for improving the data situation, in particular regarding the distribution of wealth, by introducing a Billionaires Directive for obligatory reporting on top wealth and incomes.

JEL Classification: D31.

Keywords: income, wealth distribution, European Union, USA, redistribution, equivalisation, household income, inequality, market income, poverty.

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Introduction

In my view, no generally accepted corpus of analysis is available explaining levels and trends in household income inequalities or their effects. A budding literature that had been building since the OECD published its *Growing Unequal* in 2008, followed by *Divided We Stand* (2011) and *In It Together* (2015), was greatly stimulated by the publication of Thomas Piketty's *Capital in the 21st Century* (2014) and very recently Tony Atkinson's *Inequality, What can be done?* (2015). The IMF and many others have joined the flow. The body of analytical work is rapidly becoming more detailed and advances in new directions (e.g. top-income shares) in conjunction with the growing and improving provision of data on inequality. Only in July 2015, the OECD launched its entirely renovated Income Distribution Database (OECD-IDD) and the World Top Income Database (WTID) introduced important new series covering all individual US states. The ECB recently published the first outcomes of its HFCS survey. Clearly, the study of inequality is a rapidly moving target but it is also still strongly dependent on the data that are available or not. Discussing the data is still important in its own right; the figures that are there matter and so do those that are absent. This explains that I will pay quite some attention to the data and their limitations and shortcomings, and also aim to extend them to the EU as a whole on the one hand, to the role of income redistribution and household equivalisation, and to the connection with earnings from labour as the main source of household incomes.

Household incomes ultimately derive from the generation of market incomes. However, from there a long and winding road runs along important determining factors: the formation of households, their patterns of labour supply, policies and effectiveness of transfers, income taxation and social contributions, and (a priori methods of) equivalising incomes for household size and composition, before finally arriving at the distribution of disposable equivalised household incomes. The latter are the currency of social policy making as exemplified by the European measure of relative poverty. These factors have been undergoing deep-seated change, such as – for household formation – the doubling of single-person households, or – for household labour supply – the demise of the single-breadwinner model and rise of dual-earner and multiple-earner households and concomitant female employment (and often part-time employment). Amazingly, even the distribution of the major source of incomes in society, individual earnings, on the one hand and the distribution of household incomes on the other tell a tale of two literatures (Salverda and Checchi, 2015), and are only starting to get connected (RED, 2010; Salverda and Haas, 2014). If such national interdependencies are insufficiently charted, international interdependencies are terra incognita. There is not even the beginning of a stylised description let alone an understanding of a pan-EU income distribution.

For wealth the problem looms even larger. It is conceptually more complex, being a stock building on flows of income, and statistically more difficult and sensitive to observe, and at the same time plausibly more mobile internationally.

The fact that inequality is not an individual attribute but a (sub)aggregate outcome may contribute to explaining this state of affairs. That same state also makes the validity of descriptive work all the more significant. Therefore it is important to realise that the concepts and statistical definitions of income and wealth and of the receiving units vary a great deal; as a result little-known details can strongly affect findings.² In addition, available internationally comparable data on income and wealth inequalities data are highly incomplete, especially over the longer run, unduly hampering analysis. Last but not least, the common measurement of inequalities, especially by means of the Gini coefficient, shows significant shortcomings – convincingly demonstrated by the top-1% – making it essential to move 'beyond Gini'.

In the first section I will take stock of existing databases on the distributions of income and wealth, as far as possible focusing on the common currency of inequality analysis and policy making: incomes after tax and

² E.g., the Gini coefficient of the Dutch distribution of net wealth as per 1/1/2013 reaches 0.886 when debt is included but only 0.782 if not (Salverda, 2015a). Commonly and for technical reasons, Gini coefficients of incomes are estimated without including negative values; this is at odds with the fact that losses are an integrated part of any market economy. By contrast, such negatives are part and parcel of any shares of income or wealth, which therefore provide a more comprehensive account of inequality.

transfers and after equivalisation for the nature of the receiving household. Section 2 will extend this by elaborating on an EU-wide distribution of income and the new light that this can shine on the situation of individual member states and the comparison of the EU as a whole with the USA. Section 3 extends to the contributions that are made by income redistribution and equivalisation of incomes. It stresses the important of the latter and advocates integrating it better into analysis and policy making. This section also scrutinises the contribution to inequality that is made by the most important source of household income, the earnings from labour. Section 4 speculates about future developments in income inequality and revisits European policy making in that light. Section 5 concludes.

1. Styling the scene: Trends in income and wealth distributions

A proper analysis of inequality, its causes and/or its effects, cannot do without appropriate data. However, an important complication is that the data in this field are very complex and highly incomplete at the same time, and also subject to rapidly growing critical scrutiny (as we will see). This situation warrants taking good notice of the nature of what is actually available. In this section I aim to sketch the stylised facts of the income and wealth distributions, taking stock of existing data sources – all with regard to individual countries, while I will address the European Union as a whole in the next section. I will first address the income distribution, where material is more abundant, and, second, the wealth distribution as well as it's the distribution of wealth and incomes, where the data situation is challenging to say the least. This will be done for incomes after tax and equivalisation, unless these are not available, as for top incomes, and for plain wealth without such adjustments.

1.1. INEQUALITIES IN THE INCOME DISTRIBUTION

Three important stylised facts have been established in recent years, largely due to the heroic efforts of the OECD and the top-incomes literature over the last fifteen years. On the data side this has culminated in July 2015 when the OECD launched in its entirely renovated Income Distribution Database (OECD-IDD)³ and the World Top Incomes Database (WTID)⁴ very usefully extended to individual American states. From different perspectives, both point to rising inequality across the board.

First, the commonly used Gini coefficients of the full populations' net-equivalised incomes: i.e., disposable incomes after tax, social contributions and transfers, and after equivalisation for the size of the income-receiving household (more about equivalisation in Section 3), are found in Figure 1. Amidst a considerable variation, ranging from 0.21 to 0.39 it shows a slow and steady rise (Figure 1).⁵ The dashed line follows the (unweighted) average of nine EU countries which are present in the database from 1985 (or adjacent years for some countries) to 2012; they comprise 50% of the EU27 population in 2012. This average experiences a 13% increase between 1985 and 2012 from 0.261 to 0.296.⁶ For the sake of comparison the evolution of the USA is shown next to the EU member states. Though the USA seems to run away from EU levels this is because of the considerably higher starting point (0.340) whilst the rise itself occurs at roughly the same speed: plus 14% to a level of 0.389 in 2012. Availability in the database is very sparse before the year 1985, which year therefore provides the starting point here and below. This is unfortunate as it means that no comparison is possible to the previous crisis of the early 1980s. In 2010, the latest year with full country coverage, the Gini coefficients of European countries vary by 40%, over a range stretching from 0.246 for Slovenia to 0.345 for Portugal.

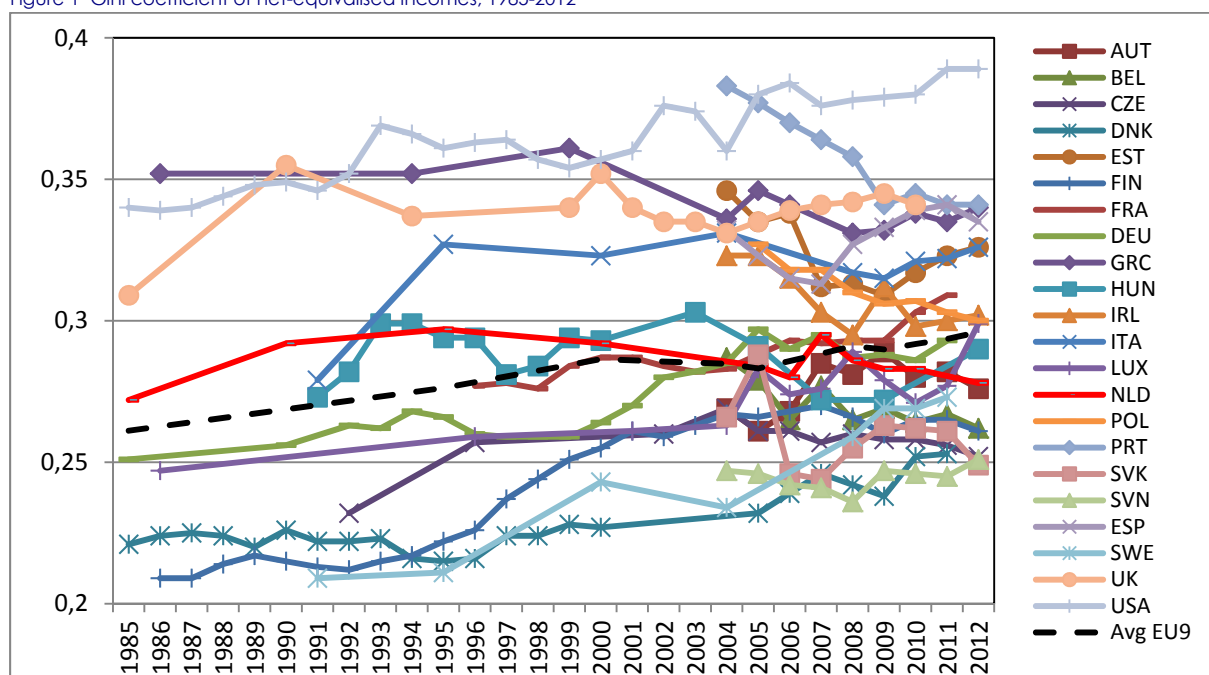
³ See <http://www.oecd.org/social/income-distribution-database.htm>. The database is based on cooperation with many national statistical offices and on the OECD's treatment of international datasets such as Eurostat's Statistics on Income and Living Conditions (SILC), which is also used below. Figures derived from SILC by the OECD, and also below, sometimes differ from those derived by Eurostat for its website (e.g. for its Distribution of income by quantiles database), plausibly due to differences in definitions and (updating) versions of SILC.

⁴ See <http://topincomes.g-mond.parisschoolofeconomics.eu/>. The database is based on the international cooperation of scholars (cf. e.g. Atkinson and Piketty, 2007).

⁵ Tóth (2014, Table 2.1) presents a more formal demonstration of the rise in inequality that takes the unbalanced nature of the panel into account by estimating a linear model with country fixed effect. This is done the help of the same Gini coefficients gathered by the international research project *Growing Inequalities' Impacts* (GINI) on the basis of work by national research teams covering 30 countries. These data are largely identical to the OECD-IDD but offer a significantly more detailed coverage of individual years, providing 541 values for 24 EU countries between 1980 and 2011, as against 247 values for 21 countries for the OECD-IDD. The *GINI Poverty and Inequality Dataset* can be accessed at http://gini-research.org/articles/data_2. It covers also Australia, Canada, Japan, South Korea and the USA. For broader results of the project see Nolan et al. (2014) and Salverda et al. (2014). In this contribution I will mainly use the OECD-IDD because the GINI dataset ends in 2010 and offers no further measures of inequality apart from the poverty rate, while the OECD-IDD now provides potentially 64 more variables in total, of which 12 relate directly to different measures of inequality.

⁶ The GINI dataset finds a 25% increase between 1985 and 2009 (same years for all countries) for the unweighted average of 15 EU countries (Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Germany (West), Italy, Latvia, Lithuania, Netherlands, Poland, Slovakia, Spain, Sweden and UK). Naturally, the increase differs between countries, and in one country (Spain) it falls slightly (on balance with considerable fluctuations in between).

Figure 1 Gini coefficient of net-equivalised incomes, 1985-2012



Note: EU9 average concerns Denmark, Finland, Germany, Greece, Italy, Luxembourg, Netherlands, Sweden and the UK.

Source: OECD IDD

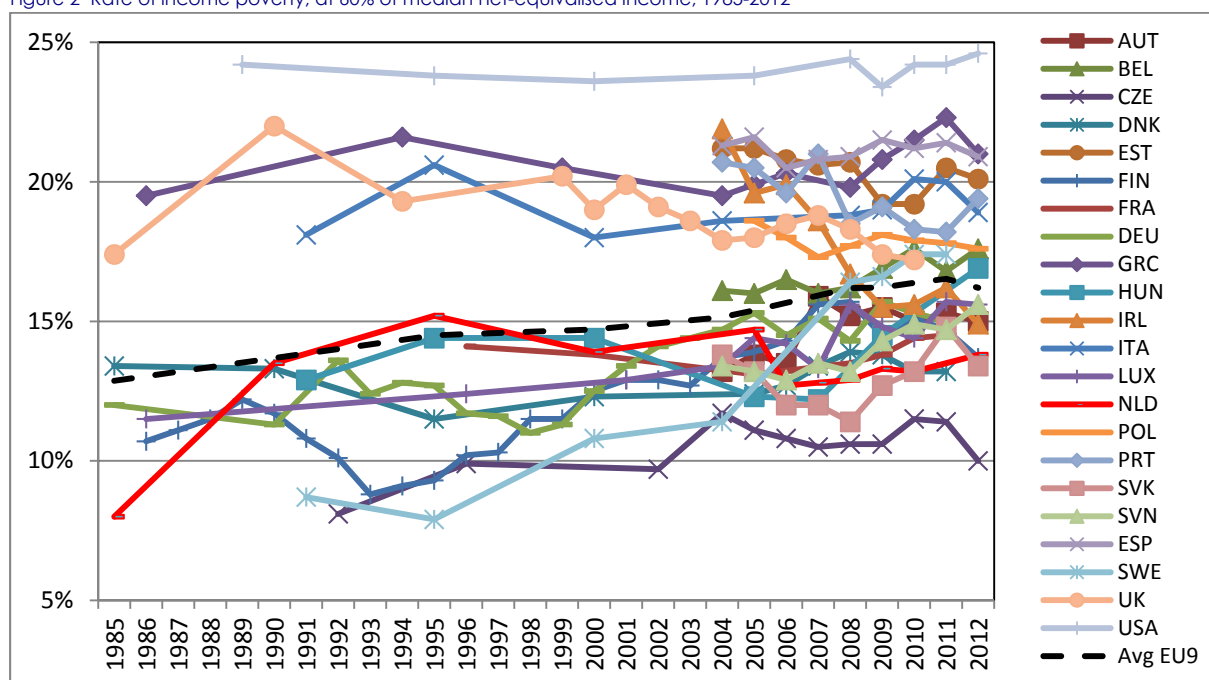
The Gini coefficient provides a summary measure of the income distribution as a whole, and doing that it lends more weight to the middle of the distribution. This contrasts with the poverty rate that is used by the European Union and also included in the OECD-IDD, to which we turn second.⁷ The rate measures (the share of the population who is a member of) households obtaining an annual net-equivalised income that remains below 60% of median household income in the country.⁸ Evidently, this puts the limelight on the lower tail of the distribution. Figure 2 shows spaghetti of national poverty trends similar to Figure 1, but again with a slowly increasing trend,⁹ as exemplified by the rising average (13% to 18%) for the same set of nine EU countries. The American poverty rate indicates a higher but essentially non-increasing level. Comparing to the evolution of the Gini coefficient the poverty rates seem to have increased less strongly in Denmark, Ireland and the UK, more strongly in Finland, Germany, Greece, Netherlands, Sweden, and – with some volatility – at about the same speed in the other countries. Thus at first sight the inequality at the lower tail of the distribution has increased less strongly than for the broad income distribution (or the middle if one wishes to interpret the Gini coefficient that way). The poverty rates for 2010 vary more widely than the Gini coefficients by 77%, over a range from 12% in the Czech Republic to 22% in Greece.

⁷ This differs from the US approach which is based on a basket of goods and services determined in the 1960s plus annual prices increases. Its level has strongly lagged the median since its introduction.

⁸ This relative poverty measure differs from the absolute one used in the USA, which is based on typical household budgets which are deflated annually.

⁹ Similar to what was said about the Gini coefficients (see footnote 6) a formal test performed on the *GINI Poverty and Inequality Dataset* for the present contribution – I gratefully acknowledge the support of Herman van de Werfhorst – also found a growing trend, but at one third of the annual speed of the Gini coefficient.

Figure 2 Rate of income poverty, at 60% of median net-equivalised income, 1985-2012



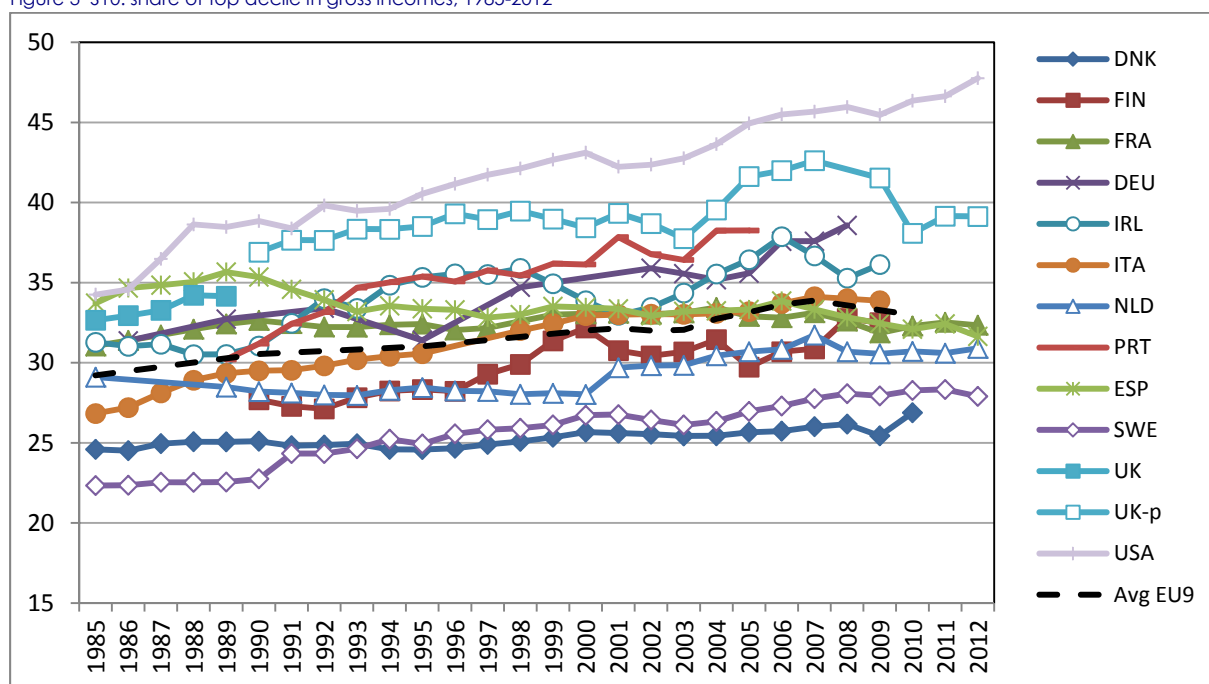
Note: EU9 average concerns Denmark, Finland, Germany, Greece, Italy, Luxembourg, Netherlands, Sweden and the UK.

Source: OECD IDD

Third, we look at the other tail of the distribution, the top. This subject is not separately covered by the OECD-IDD and therefore I turn to the World Top Incomes Database (WTID), the famous source initiated by Thomas Piketty and Tony Atkinson. It is based on the voluntary cooperation of scholars who study developments in the long run, exploiting data of the national tax administration, mostly going back to the turn of the 19th to the 20th century, for determining the shares in total income of the upper fractiles of the income distribution. Understandably, the WTID's coverage of countries is more limited and the relevant ones here, 11 EU countries with the USA for comparison, are shown in Figure 3. The most important contribution of the WTID is for the very top: the top-1% and even smaller fractions. Here, however, I focus on the top decile of the income distribution because of a better match with the other data, e.g. from a survey like SILC which would be stretched too far by smaller fractions, and also because I aim to discuss the evolution of inequalities more broadly.¹⁰ Clearly, this top-10% share in total income has been increasing in most countries but little or not in France and Spain. The average for (a different set of) nine EU countries shows a 16% rise from 29% to 34% in 2006 followed by a small decline to 33% around 2010. The USA starts high up in 1985 (34%) and runs away from European countries with a 33% increase up to 48% in 2007, twice as fast as the European increase. In contrast to Europe the American top share resumes its growth after 2009. The EU countries show a considerable divergence in 2010 from a low 27% for Denmark to a high 38% for the UK.

¹⁰ Evidently, the top-1%, which is part of the top decile, is overrepresented in the rise; nonetheless, the rising trend is found also for the 'next-9%', albeit its growth is only slight.

Figure 3 S10: share of top decile in gross incomes, 1985-2012



Note: The unit of measurement are tax units, i.e. mostly couples (depending on the tax system) and not broader households.¹¹ UK-p is a separate series reflecting that the UK tax system shifted from the household to the individual person. The other countries are household based. US data exclude capital gains. EU9-average concerns here Denmark, France, Germany, Ireland, Italy, Netherlands, Spain, Sweden and UK/UK-p (1958 and 2010 include neighbouring years if necessary).

Source: WTID

Naturally, the growing share implies a more rapid growth of incomes at the top than in the rest of the income distribution. Still the picture does not seem to be radically different from the Gini coefficients in Figure 1,¹² suggesting that the evolution of the upper tail is not very different from the overall picture over this period, which is relatively short in terms of the WTID's coverage. It should be noted, however, that the two developments cannot be compared exactly because of the difference in the type of income that is being measured. The common currency for the Gini coefficients as well as the poverty rates – and for concomitant policy making – is the income after tax, transfers and equivalisation, in contrast with all of the top-incomes literature that is based on gross income before tax but after transfers. Gross income is the broadest type of income, and this interests the tax authorities who generate the data that are made available. Unfortunately, the two datasets offer no handle to help mending this problem but we will have recourse to the SILC data later.

The OECD-IDD provides two other measures of inequality which may shed further light on the role of the two tails of the distribution. First, it presents some ratios between different income levels for its own net-equivalised currency. One of them is the often-used P90:P10 ratio, between the incomes found at the lower boundary level or cut-off point of the top decile on the one hand and the upper boundary of the bottom decile on the other.¹³ In 2010, this varies by 66%, between 2.9 for Denmark and 4.8 in Spain. However, this measure stops short of the two tails and ignores the gigantic differences that recently have become manifest within the top deciles as a

¹¹ For example, in 2012 the WTID statistic for the Netherlands counts 9.5 million tax units, as against 7.2 – 7.4 million households in SILC and Dutch income statistics respectively. The larger number adds many units with little or no income and augments the top share compared to households.

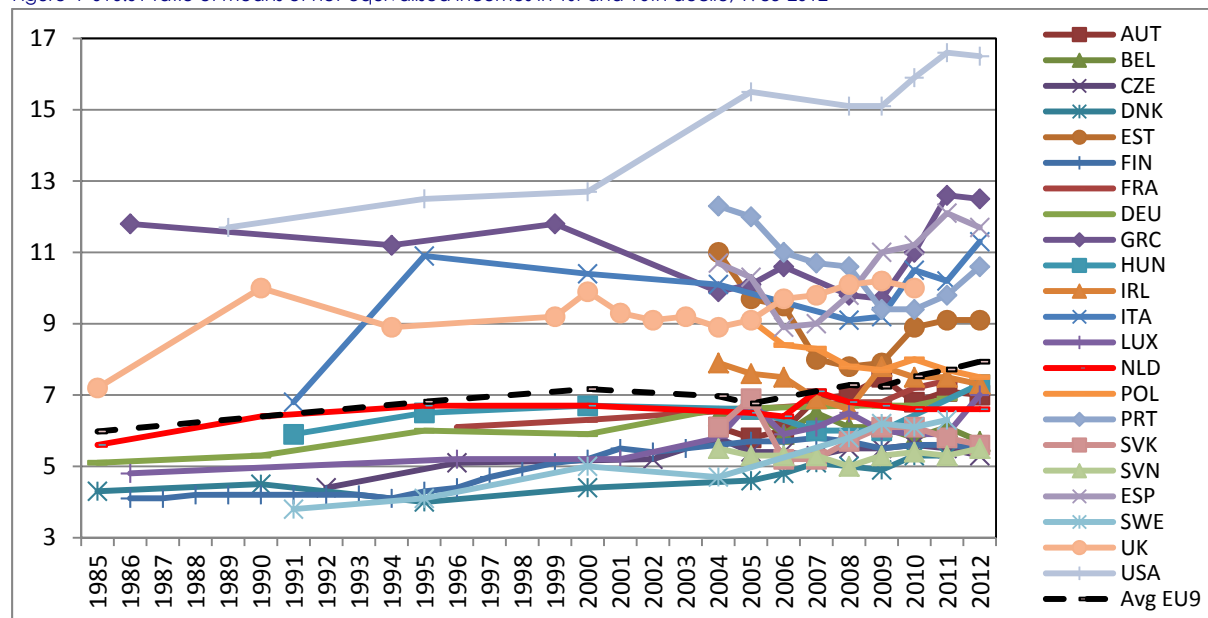
¹² Compare Leigh (2007) and Roine and Waldenström (2015) for discussions of top-income shares and parallel movement of the Gini coefficients.

¹³ It can be decomposed into the upper half (P90:P50) and the bottom half (P50:P10) of the distribution. Both seem about equally sized though the bottom half widens slightly more than the upper half.

result of the top-incomes debate. The top decile has no upper boundary and neither has the bottom decile a lower boundary, in contrast with the other 8 deciles, which are all caught between relatively narrow lower and upper boundaries. Instead of such boundaries the analysis should be based on the average income received by the two tail deciles (or their shares in total income, which amounts to the same in a decile distribution). These shares are not separately available but captured jointly in the OECD-IDD by the shares ratio S10:S1 (S9:S1 in the IDD jargon) based as everything else on net-equivalised incomes. Figure 4 supplies the details. Clearly, this ratio shows the strongest evolution so far, particularly also in recent years. The EU9-country average undergoes a 33% increase from 6.0 to 7.9, considerably larger than for the Gini coefficients, poverty rates or top-income shares. In spite of this more rapid growth the European rise lags even more behind the American experience of a 53% growth from 10.8 in 1984 up to a level of 16.5 in 2012. In addition, this measure also shows the widest intra-EU variation in 2010, by 111% from 5.3 in Denmark to 11.2 in Spain.

If we accept the suggestion from the gross figures for S10 alone in Figure 3 that the evolution of the top-income shares might be insufficient to explain this increase in the shares ratio, a decline in the bottom decile must be playing a role too. The mean poverty gap in the OECD-IDD may throw some light on this (Figure 5). This gap is the second other measure to consider. It shows how far the mean income of the poor is below the poverty threshold – a higher figure implies a larger distance and therefore a relatively lower mean income. The mean poverty gap appears to be substantially larger than the median gap (30% on average), suggesting that most incomes are relatively close below the poverty threshold (and weigh more heavily in the average) but combine with households living in deep poverty. Mean and median poverty incomes are 6 and 14 percent respectively below the highest income level of the bottom decile. Again there is a lot of action, especially also in recent years. Overall, the gap does show a clear rise, which seems larger in Europe than in the USA as the average for the nine EU countries grows by 34%. This corroborates the conjecture that while the top is increasing according to what has now become the common view, the bottom is lagging behind at the same time. In 2010, poverty gaps stretch over a 64% range, from 21% in Finland to 34% in Italy.

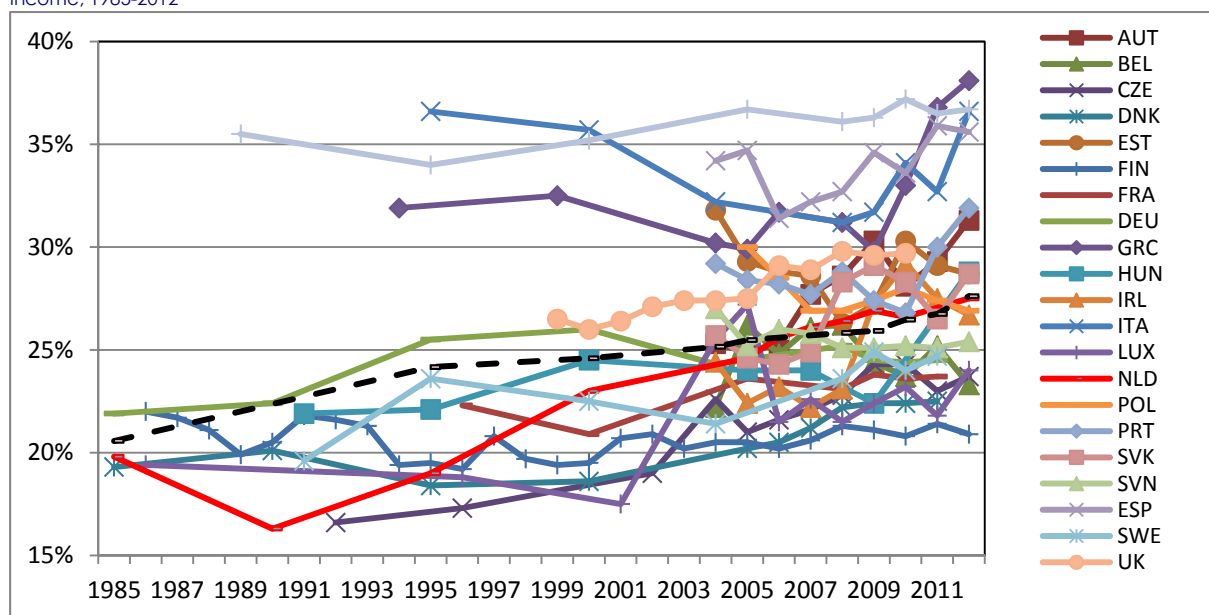
Figure 4 S10:S1-ratio of means of net-equivalised incomes in 1st and 10th decile, 1985-2012



Note: EU9 average concerns Denmark, Finland, Germany, Greece, Italy, Luxembourg, Netherlands, Sweden and the UK.

Source: OECD IDD

Figure 5 Poverty gap: per cent distance of mean income of the poor below poverty threshold of 60% of median net-equivalised income, 1985-2012



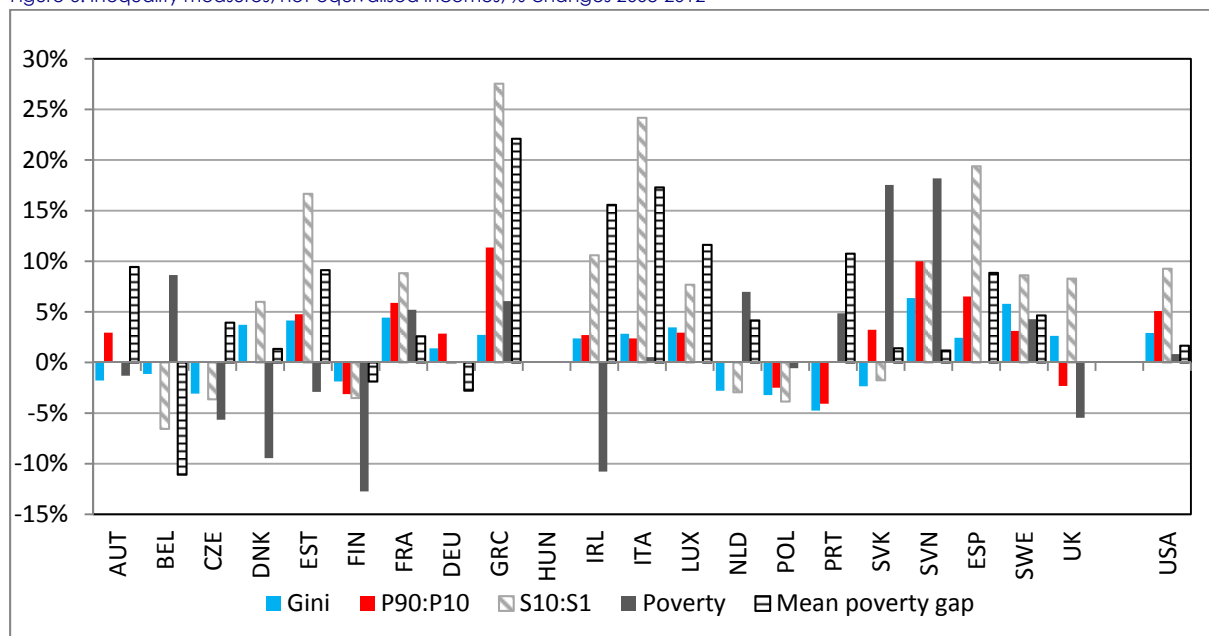
Note: EU9 average concerns Denmark, Finland, Germany, Greece, Italy, Luxembourg, Netherlands, Sweden and the UK (1989 for 1985).

Source: OECD IDD

Apparently, the picture drawn by the Gini coefficients misses important diverging trends that affect the tails of the distribution. Those seem to be better captured at the bottom of the distribution by the lowest decile than by the poverty rate, which after all casts its net over the distribution much wider, up to more than two deciles in various countries. The bottom decile seems to act then as a pocket of deep poverty.

So far, we have considered the longer-run development over the last 30 years since 1985 of five different indicators of income inequality, followed by a brief indication of cross-country differences for 2010. It is worthwhile to consider the recent changes since the onset of the financial crisis in 2007/2008 in some detail. Figure 6 shows that different countries and different inequality measures show diverging pictures which sometimes even go in opposite directions. American developments seem modest by comparison and all indicators tend in the same direction there. Apparently, the Gini coefficients present a rather subdued picture of changing inequality in the wake of the financial crisis. Its largest increase is 6% in Slovenia and Sweden. In important cases – Greece, Italy, Spain, and Estonia – the S10:S1 ratios show much more dramatic changes, up to an 28% increase for Greece. This often occurs in conjunction with a rise in the poverty gap, which underlines its importance in addition to the poverty rate.

Figure 6. Inequality measures, net-equivalised incomes, %-changes 2008-2012



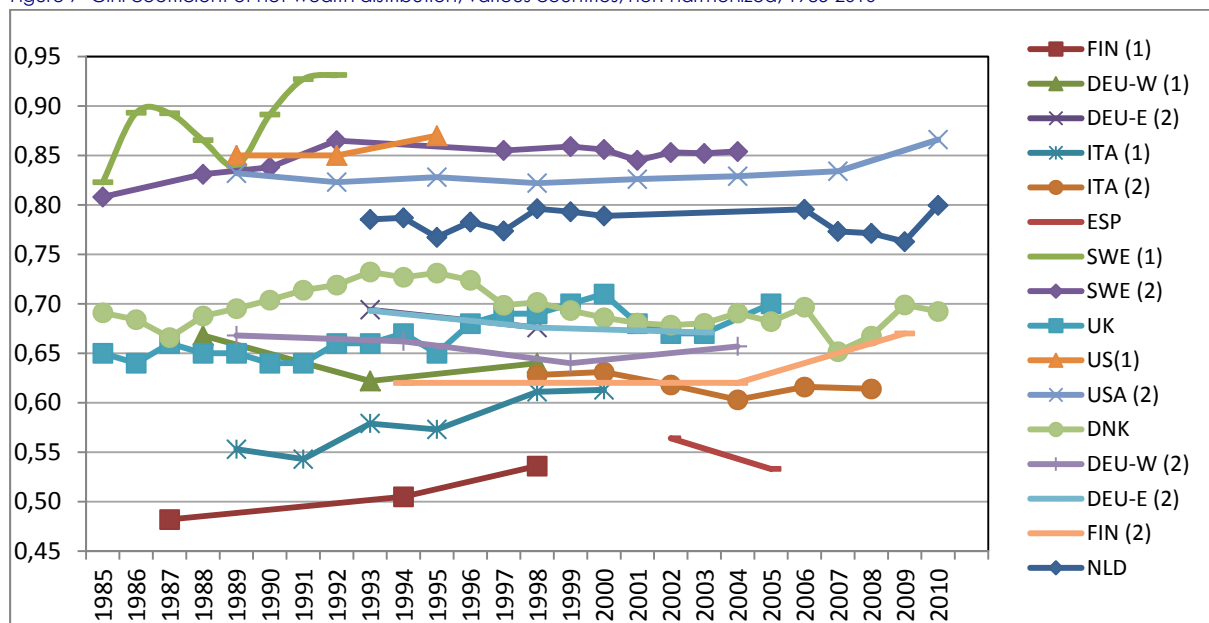
Note: Using the old income definition, for a few countries extrapolated to 2012 with the help of the new definition. Poverty gap for Denmark, France, Germany and Sweden up to 2011.

Source: OECD-IDD

1.2. INEQUALITIES OF WEALTH AND OF WEALTH AND INCOME

In spite of the many lacunae, the income data discussed above are paradise compared to what is available on the distribution of wealth, let alone the joint distribution of wealth over income. Data are really thinly dispersed over countries and time, disregarding problems of comparability for the moment. However, what we know about the very strong concentration of wealth (Maestri et al., 2014) makes this a pressing problem for analysis and policy making (Figure 7). The authors evaluate different sources such as WIDER and the Global Wealth Report by Credit Suisse, and discuss the many problems that are attached to making wealth measurement conceptually consistent and comparable over time and across countries. Maestri c.s. present the results for the wealth distribution derived by the GINI international research project from its country reports. Clearly, large international differences exist which range from a minimum level that roughly equals the maximum level found before for income inequality (Figure 1) up to a maximum of around 0.9 in some countries – fearfully close to a Gini coefficient of 1 when all wealth would be in one hand. Apparently, the wealth distribution can be extremely uneven and is usually much more uneven than the income distribution. At the same time, changes over time seem surprisingly modest. At the lower end Italy and Finland show some growth which brings them closer to the other countries which show trends that are pretty flat.

Figure 7 Gini coefficient of net-wealth distribution, various countries, non-harmonized, 1985-2010



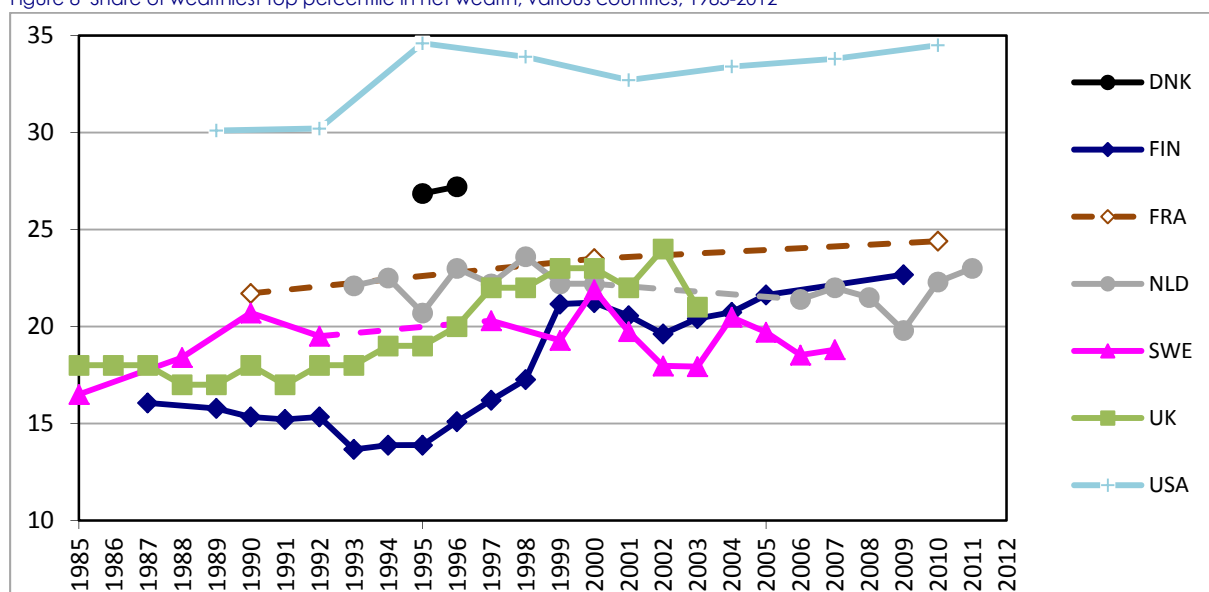
Notes: Data for the Netherlands added by the author. Numbers in the legend indicate the use of different national data sources.

Source: Maestri et al. (2014, Figure 4.3), Salverda (2015a)

Roine and Waldenström (2015) present the share of the wealthiest 1% (Figure 8) but also there the trends look rather moderate. For example, even though the USA now stands out more clearly from the rest compared to the previous graph the increase seems subdued: the top-1% wealth share increases by 15% from 30.1% in 1989 to 34.5% in 2010, while at the same time the top-1% share in the income distribution grows by 38%, from 12.6% to 17.5%.¹⁴ At this same time it should be stressed that top wealth is so large that it acquires a macroeconomic significance that should interest any policy maker. Interestingly, Tony Atkinson (2015, Figure 6.1B) expresses top wealth as a fraction of the national income showing that for the UK top-1% wealth is as large as the NI, up from half the NI in 1975 (after previous declines).

¹⁴ Roine and Waldenström (2011) argue that the notorious Anglo-Saxon increase in top shares can also be found elsewhere, e.g. in the Nordic countries.

Figure 8 Share of wealthiest top percentile in net wealth, various countries, 1985-2012



Source: Roine and Waldenström (2015), derived from www.uueconomics.se/danielw/Handbook.htm

This goes together with an important socio-economic distinction advocated by Atkinson (2015) between wealth as capital in the classical sense of wielding power of economic decision making. This type of wealth concentrates in the large fortunes of the top shares. It contrasts with much of the other wealth that can be qualified as beneficial. It relates either to the own residence – where decision power simply stops at the front door – or to capital-funded pension entitlements¹⁵ – which boil down to financial investments that leave the economic decision making to other actors than the beneficiaries. Naturally, self-owned housing is virtually universal at the top but its portion of top wealth is very small. The sheer importance of wealth holdings and the sorry state of information about this justify discussing this here in more detail.

Only recently has the ECB started the *Household Finance and Consumption Survey* (HFCS) which aims, inter alia, to produce internationally comparable data on the size and composition of the wealth holdings of households in EU countries, generating a rather limited, Eurozone-focused country coverage (15) from the point of view of the EU as a whole.¹⁶ However late in coming, it is still a laudable initiative but, unfortunately, the survey seems severely flawed for measuring top wealth and sometimes also more broadly.¹⁷ Various recent studies have critically examined the top wealth shares found by the survey (Figure 9). Vermeulen (2014, 2015) tries to get a handle on the underestimation of top-1% shares using information from the Forbes 400 Billionaires list for the ten EU countries where that information is available, adding the UK and USA to that sample. Note that such rich lists will have difficulty locating cash wealth as well as debt, and attributing shared (family) ownership to individual households. Vermeulen finds a significant underestimation of the top shares for several countries. Bach et al. (2015) adopt his approach but make use of more detailed national rich lists in addition to the Forbes 400 for Germany, France, Greece and Spain. Their estimation of the German top-1% share, amounting to 33% instead of 24% as in the HFCS, confirms Vermeulen's findings; the differences found for France, Greece and Spain are limited. Eckerstorfer et al. (2015) follows a different strategy, using an improved method for dealing with non-observation bias. Their approach estimates the size of the Austrian top-1% at 38%,

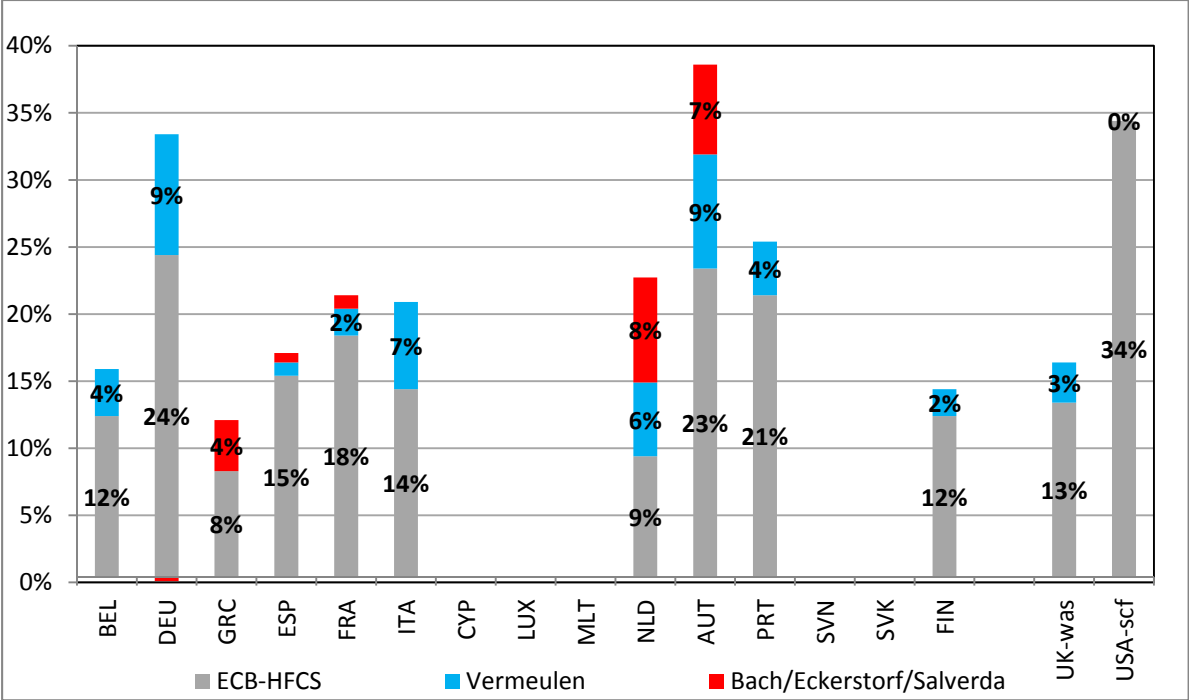
¹⁵ These are often not counted in the wealth distribution for reasons of observation in relation to individuals.

¹⁶ see Sierminska and Medgyesi (2013) for an extensive presentation of results based on HFCS.

¹⁷ The survey seems to have major technical shortcomings for cross-section comparison, such as diverging procedures for sampling the wealthiest households. Tiefensee and Grabka (2015) discuss the methodology and signal problems of comparability due to major international differences in survey set up and technique such as for the imputation of missing values. For the Netherlands total household debt seems underestimated by about one quarter.

far above the HFCS result (23%) and also well above Vermeulen’s estimation (32%). Salverda (2015a) compares to the existing wealth statistics of Statistics Netherlands, which since 2011 present a comprehensive picture of wealth holding as far as declared to the tax authorities.¹⁸ He finds a much higher share (22%) than Vermeulen which seems to underline the superiority of administrative data over those of even the most competent journalists and adapters for survey bias.

Figure 9 Share of wealthiest top percentile, ECB-HFCS and adjustments, around 2009/2010



Source: HFCS, Vermeulen (2014 and 2015), Bach et al. (2015), Eckerstorff et al. (2015), Salverda (2015a)

The larger shares uncovered for the top percentiles naturally imply a resizing of other fractiles but the different distribution is an effect that ultimately stems from additions to the total wealth as found by the HFCS. This fact of missing wealth in the aggregate is as important as the underestimation of top fractile shares. Bach adds no less than €1,012 billion to German total wealth.¹⁹ Evidently, that missing wealth concentrates in other components of wealth than own housing. For these reasons, reliance on the data of HFCS to provide a basis for European and national policy making harbours important risks.

Unfortunately, available wealth data are unable to systematically picture the trends since the start of the financial crisis.²⁰ However Figures 7 and 8 give little reason to think that top wealth has structurally declined.

The Forbes 400 and the other rich lists such as Bloomberg’s daily ranking of 200 billionaires is testimony to the economic significance of top wealth. Such lists have important shortcomings which were already touched upon. Also voluntary surveys are a notoriously weak instrument for uncovering top wealth and even if the HFCS were successful it will take years for results to become available and then it will still be well short of covering all of

¹⁸ Note that the OECD’s Wealth Dataset – sister to the OECD-IDD – presents HFCS findings uncritically with the notable exception of the Netherlands where also the existing wealth statistics are used instead.

¹⁹ Further underestimations are Euro billions 264, 113, and 26 for France, Spain and Greece respectively (Bach et al., 2015), 278 for Austria (Eckerstorfer et al, 2015) and 264 for the Netherlands (author’s estimate).

²⁰ The Netherlands is an exception with reliable annual wealth data up to 2013.

EU. Surveys are especially weak for detecting top wealth as this is the internationally most mobile part of wealth as Gabriel Zucman (2015) has convincingly shown with the help of national accounts statistics. For Europe an estimated 10% of all financial wealth is transferred to tax havens (Zucman, 2014, Table 1), a share considerably larger than for the USA (4%), and \$ 75 billion lost in European tax revenue. This situation underlines the clear collective interest at the European level in obtaining better and more comprehensive information. It is imperative that the EU develops a precise, targeted statistic of large fortunes.

Table 1 Shares in wealth (%) of the top-income-decile and the top-wealth-decile, 1987–2011

	Finland		Netherlands		UK		Sweden		United States	
	Income	wealth	income	wealth	income	wealth	income	wealth	income	wealth
1987	23.0	35.9						51.2		
1988								55.0		
1989								56.1	53.0	67.0
1990								53.6		
1991							32.9	56.2		
1992							33.7	57.7	51.2	67.0
1993			33.3	60.6			35.3	58.6		
1994	25.3	38.7	31.0	60.2						
1995			30.7	57.9	26.7	49.1			51.3	67.9
1996			30.1	59.2						
1997			29.0	58.2				61.0		
1998	32.1	42.8	29.1	60.0					55.4	68.6
1999			27.9	58.7						
2000			27.5	58.1	24.9	45.2		62.0		
2001									58.0	69.6
2002										
2003										
2004	29.9	41.8							57.3	69.4
2005					20.4	39.1				
2006			34.7	57.8						
2007			33.8	57.2					60.5	71.4
2008			36.5	56.7						
2009	30.8	43.9	33.1	56.0						
2010			33.6	59.6					59.6	74.4
2011			34.4	60.2						

Note: national data sources: HWLI, IPO, BPS, SCF, Swedish tax data

Sources: Maestri et al. (2014, Table 4.5), and Roine and Waldenström (2015), Figure 7.22

Wealth and income

It is important to realise that the inequality of the wealth distribution over households when ranked by their income instead of their wealth may look much less extreme than when ranked by their wealth as pictured in the Figures 7 to 9.²¹ Effectively, top wealth is found across the entire income distribution (see Maestri, 2014, Table 4.4). This may raise eyebrows about the reliability of income data in relation to wealth, but it can, to some unknown extent, also be explained from an important purpose that is attributed to wealth accumulation as a source of income, e.g. after retirement, when the wealth is not necessarily used only for generating a (taxable) flow of income but also progressively depleted for the purpose of consumption. The wealth-over-income distribution is radically less unequal and its level of inequality ends up somewhere between that of the wealth distribution on the one hand and of the income distribution on the other hand. Table 1 compares the few countries for which such data are available. The implication is that divisions in society between the poor, the

²¹ Compare Kontbay-Busun and Peichl (2014) for an examination of the relationship between wealth and income in 15 countries based on HFCS.

middle class and the top differ significantly depending on whether one considers the distribution of wealth over incomes or over wealth itself.²² The former is important when incomes provide the basis for analysis and policy making as for top incomes and poverty.

However, there is still good reason to scrutinise the income data, particularly for incomes derived from wealth. This is for practical but also for principal reasons. As to the latter, the much used Canberra Group (2011) definitions of income appear to treat income from wealth differently and thus seem to reflect the privileged position occupied by financial markets, read the role of debt which has grown exponentially in recent decades.²³ On the Canberra definition, the costs made for acquiring capital income – all interest paid on debt – shall be deducted from market incomes. By contrast, the costs attached to obtaining income from labour are not removed. As a result the part of income that is paid on interest appears neither in gross, not in net and net-equivalised incomes, in spite of the fact that households receive their loans on the condition that they are actually capable to pay the interest and repay the debt from their expected flow of gross incomes. The immense load mortgage interest payments in the Netherlands can demonstrate the absurdity of the Canberra arrangement. The Dutch interest payments are fully tax deductible at the marginal rate, optimised over partners in a household. Effectively, households pay net only 50% to 60% of the gross interest that is due; however, the full amount of gross interest is deducted from market incomes in accordance with the Canberra Group. This has greatly contributed to the implausible outcome that Dutch aggregate household income from wealth has been negative in the aggregate ever since the early 2000s. The available data for wealth would leave some room for scrutinising debt in various countries and other compositional aspects of wealth but that would lead us beyond the purpose of the present contribution (cf. Maestri et al., 2014).

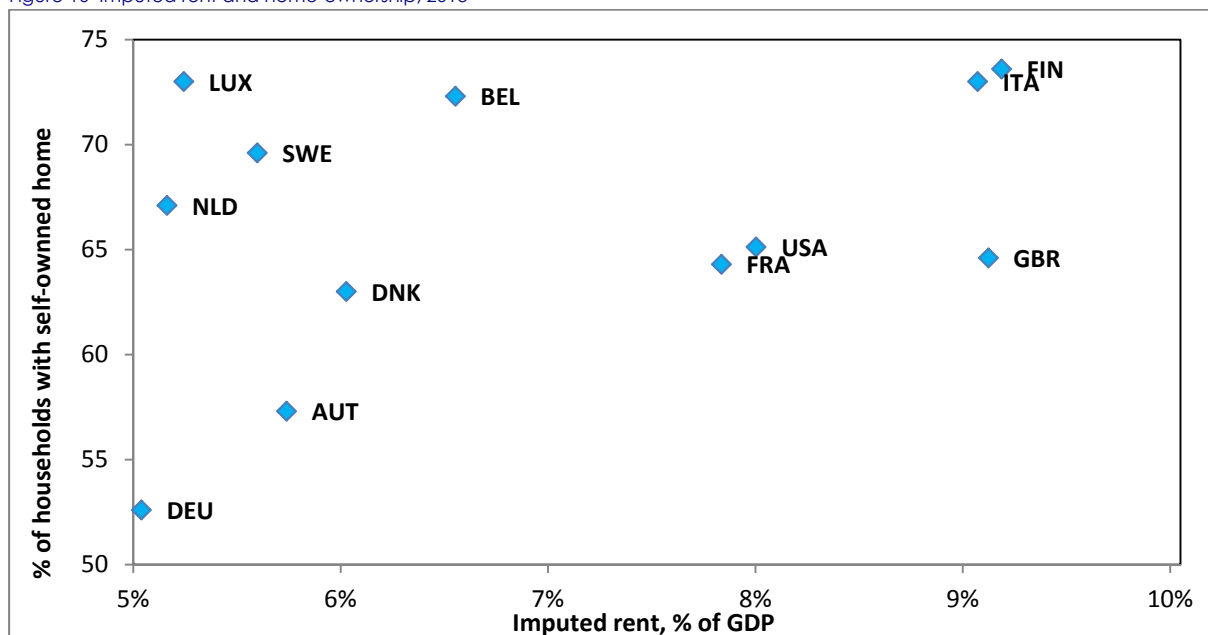
In addition to the issue of interest reduction, a large part of income from wealth in any country is imputed rent from self-owned housing. This imputation shows important international variation, in a way that seems hard to understand. Figure 10 is suggestive. It compares the homeownership rate and the share of imputed rent in GDP across countries. This occurs in spite of all attention that is paid internationally to the reliability of for the national accounts as well as the SILC survey (Eurostat, 2013). It shows not only the uncertainty of outcomes but also the relevance of improving the linking between the income distribution and the national accounts.

Unfortunately, for lack of data I have to leave aside the issues of wealth in the rest of this contribution and focus on incomes, apart from a brief rejoinder in the concluding section.

²² ESDE 2011, 77, seems at risk of confounding this class categorisation.

²³ OECD (2013) endorses the Canberra group handbook.

Figure 10 Imputed rent and home-ownership, 2013



Source: OECD, National Accounts statistics and Eurostat, Distribution of population by tenure status

Summing up what has been said in this section, we can conclude that over recent decades the inequality of income has increased significantly in most countries. The increase is even more impressive than the evolution of the Gini coefficient would suggest as developments at the two tails of the distribution directions – the bottom and top deciles – have been stronger, mutually reinforcing each other by going in opposite directions. This is clearly visible again over the last few years since 2008, with strong country differences – with the strongest negative trends being found for Greece. At the same time, wealth inequality though very large has increased significantly less, at least when looking at the top.

2. Extending the scene: The Union and its member countries

All the above concerns individual countries on the European side while the USA as a whole was mentioned for the sake of comparison. However an exclusive focus on national levels of inequality ignores the relative income levels between the European countries, which differ considerably and may also have changed significantly in recent years. In addition, it seems insufficient for analysing the nature of governance and policy making regarding inequality at the European level. It begs the double question what inequality in the European Union looks like if considered as a single entity in comparison to the USA, and how the American states as composing parts of the USA compare to the EU's member states. Just to be clear, a distribution for Europe as a whole must be based on a single ranking of all individual households following the same metric across all countries in the Union, and it does not equate to the (weighted) average of the member countries as is often presented by, e.g., Eurostat. Constructing a single income distribution for the Union as a whole is an important thought experiment that can serve to focus attention in a longer-run perspective.

2.1 HOW UNEQUAL IS THE EU AS A WHOLE?

A growing literature addresses the level of inequality for the EU as a whole for reasons such as a proper comparison to the USA as an entity but also to study the (social) coherence of European integration.²⁴ Table 2 summarises the findings with regard to the Gini coefficients of the EU-wide income distribution which are found in the contributions that offer the widest coverage of the Union.²⁵ All papers focus on net-equivalised incomes – after all the common currency of most inequality studies and policy making, and, unsurprisingly, also the concept of income that is present for all countries in SILC since 2004, whereas information based on gross incomes became universally available only very recently.

Andrea Brandolini discusses four main methodological aspects of importance when considering the EU as a single entity in this field: the conversion of national data into a common currency, the within-country variation in prices and costs of living, the relationship to the national accounts, and the choice of income equivalisation. Evidently, the first question to ask for Europe is how to make incomes comparable, as currencies differ between countries, contrary to US states which all share the US dollar. From the perspective of the household the use of purchasing power parities (ppp) suggests itself as it matters most what they are able to do with their income. This contrasts with the plain exchange rate, ²⁶ which seems more useful from the point of view of market forces. Plausibly, ppp conversion brings the countries' incomes closer to each other and leads to lower levels of EU-level inequality compared to exchange-rate conversion.²⁷

Empirically, Brandolini undertakes the most intensive scrutiny of the EU-wide income distribution and poverty aiming to show the effects of the different methodological choices that need to be made. Using microdata of the ECHP for EU15 and LIS for 6 new member states for the year 2000,²⁸ he finds lower inequality (Gini of 0.33), if considered on a ppp basis, than for the USA (0.37) while on an exchange rate basis without further adjustments the two coefficients look very similar. Importantly, he also finds that EU-level inequality is always higher than the population-weighted average of the member countries, throwing doubt on Eurostat usage. The other contributions mentioned in Table 2 conclude also to a lower level of inequality in the EU even after the inclusion of the new members states. Consistent with this, decompositions undertaken in some of the contributions find a

²⁴ Compare also Fahey (2007) who makes the case for an EU-wide poverty measure – alongside existing poverty measures – as a means to link anti-poverty policy with European convergence and the ultimate aim of establishing a single labour market.

²⁵ See Bonnesmo Frederiksen (2012) for a further review of the literature. Beblo and Knaus (2001) and xxx offer only a limited coverage of countries.

²⁶ Note that the SILC user database provides all country data, where applicable after converting the national currency into the euro using the exchange rate.

²⁷ Brandolini (2007a/b) estimates also a Gini coefficient for the USA using state differences in cost-of-living (which diverge by up to one third) but finds basically the same outcome.

²⁸ Czech Republic, Estonia, Hungary, Poland, Slovakia and Slovenia.

strikingly larger contribution of inequalities within EU countries than between them.²⁹ Brandolini puts this in perspective by comparing the 3 percentage points contribution made by enlargement with the 7 percentage points rise in UK inequality in the second half of the 1980s.

Table 2 EU-level income equality levels found in the literature

Author	Datatype and source	Countries	Period	Conversion	Gini*
Brandolini (2007)	micro ECHP/LIS	EU21	2000	ppp euro	0.334 0.378
Heidenreich & Härpfer (2011)	micro SILC	EU26	2008	ppp	0.347
Bonesmo Frederiksen (2012)	meso OECD-IDPD (decile means)	EU20	2008	ppp euro	0.328 0.354
Goedemé et al. (2014)	micro SILC	EU24	2005-2011	ppp	0.333
Bönke & Schröder (2015)	micro SILC	EU22	2004-2011	ppp	0.311

*) Gini coefficient for net-equivalised income; year closest to 2010 for Goedemé et al. and Bönke & Schröder.

In a long-run perspective Kaja Bonesmo Frederiksen confirms the rise in inequality attributing it to both between and within growth. Tim Goedemé et al. and Timm Bönke and Carsten Schröder discuss the evolution of inequality in recent years. The latter cover all years from 2008 tot 2011 and find a moderate rise in inequality (the Gini coefficient rising from 0.309 in 2008 to 0.317 in 2011). They attribute this primarily to increasing disparities between countries, in particular for Greece and Spain on the one hand and Germany, Austria and Luxembourg on the other hand. Goedemé et al. cover every other year and find a stable Gini coefficient for the EU-wide distribution between 2009 and 2011 (their Figure 2).

In an exercise using the SILC microdata for the present contribution I expand to other measures of inequality for the year 2010 (Table 3). The net-equivalised Gini coefficient appears to be lower at 0.303 and is certainly well below the US level of 0.380 found in the OECD database. Similarly, the American S10:S1 shares ratio in 2010 exceeds the European one too, and so does the P90:P10 percentiles ratio albeit with a modest gap. In both the EU and the USA the shares ratio is drastically higher than the percentiles ratio, demonstrating again the importance of including the tails of the distribution in the examination of inequality. The breakdown of the percentiles ratio into its two halves finds very similar outcomes for the lower half of the distribution (P50:P10) but a higher disparity in the American upper half. Last but not least the household incidence of poverty is much higher in the USA. The share of the top-10% (S10) in Europe, which we now know separately, in combination with the S10:S1 ratio implies that the bottom decile receives less than 2% of total income. The S10 can be compared to the USA only for gross incomes and shows a significantly higher level for that country. In spite of the much higher incidence of poverty in the USA the share of the poor in total income is about the same, but this seems to rest on the much larger American top-income share while the poverty gaps also differ little. Finally, the table indicates that for the Gini coefficient the effect of conversion by ppp's in comparison with exchange rates is negligible while it is considerable for the measures at the tails – S10:S1, P90:P10, and poverty rate.

²⁹ See also Beckfield (2009), who argues that regionalization in Western Europe has decreased between-country inequality and increased within-country inequality, turning the latter into a larger proportion of total income inequality.

Table 3 Aggregate income* inequalities EU and USA, 2010

	EU27		USA
	ppp	Exchange rate	\$
Gini coefficient	0.303	0.305	0.380
S10:S1 ratio of income shares	13.8	22.8	15.9
S10 income share	25.9%	26.8%	
<i>gross incomes</i>	31.0%	32.2%	46.4%
P90:P10 ratio of decile cut-offs	5.5	8.3	6.1
Poverty			
household share	23.2%	26.9%	32.9%
income share	7.5%	7.5%	7.9%
mean poverty gap	37%	46%	37%

*) Net-equivalised incomes unless otherwise mentioned.

Source: Author's calculations on SILC for EU, ppp's from Eurostat; USA from OECD-IDD and WTID.

The EU27 trends over recent years are listed in Table 4. The general picture for the Gini coefficient, shares ratio and percentiles ratio is one of a limited decline between 2008 and 2010 followed by stability to 2012. This contrasts with an increase in the bottom-decile share S1, which goes together with a stronger growth in the P10 cut-off and contributes to keep the two tail measures down. Note that the D1 increase is slight in percentage point terms but large in relative terms.

Table 4 Aggregate EU27 inequality measures, net-equivalised income, 2008-2012

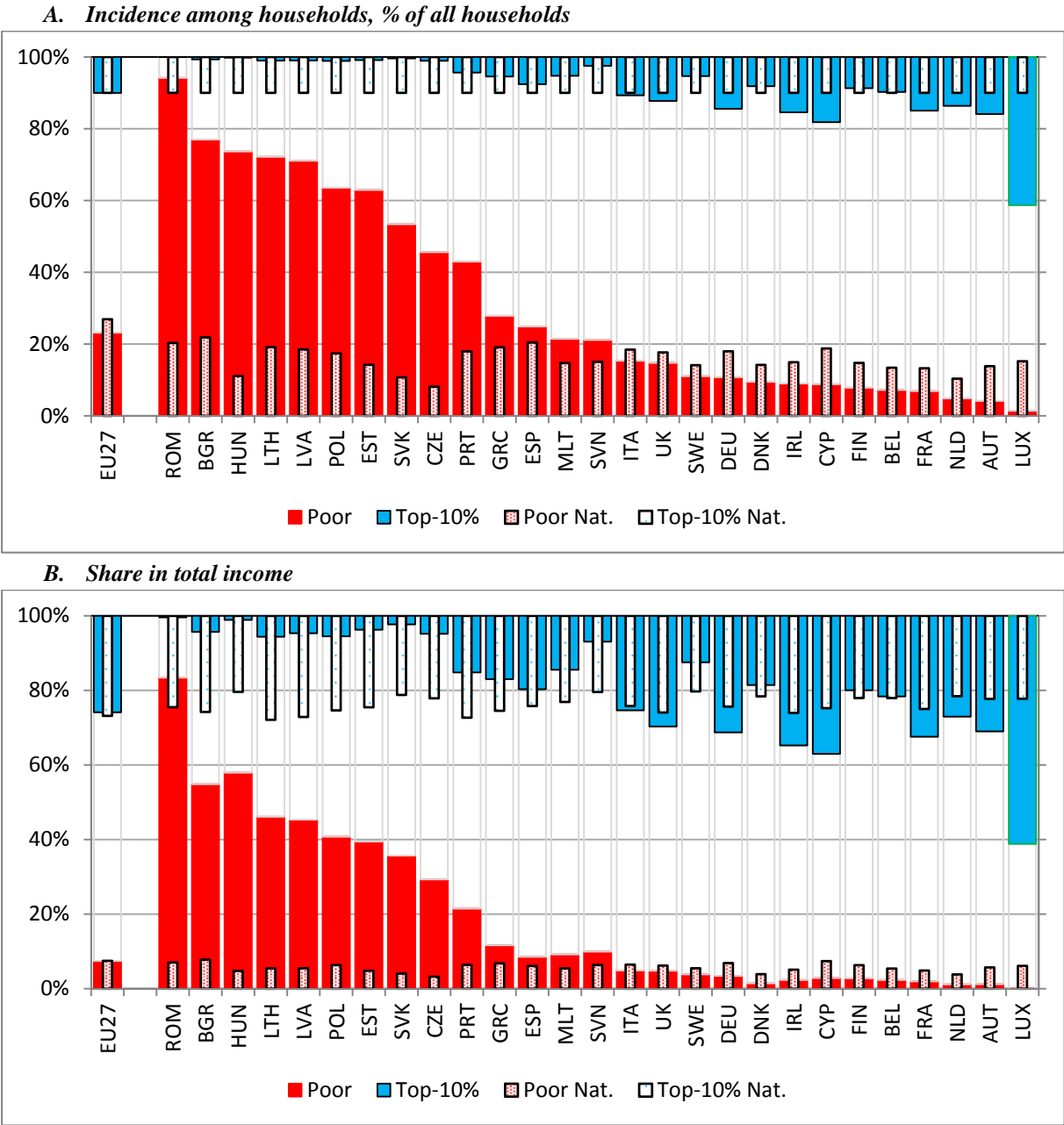
	2008	2009	2010	2011	2012
Gini coefficient	0.310	0.306	0.303	0.308	0.306
S10:S1 ratio of decile income shares	16.3		13.8		13.5
S10 income share	26.9%		25.9%		25.8%
S1 income share	1.65%		1.87%		1.91%
P90:P10 ratio of percentile cut-offs	6.1		5.5		5.3
Means/Median	1.17		1.17		1.17

Source: SILC (author's calculation)

2.2 HOW DO THE COUNTRIES FIT THE EU?

Adopting the EU perspective generates a Gini coefficient for EU27 as a whole but it does not lead to different Gini coefficients for individual countries, as ppp and exchange-rate conversions are both linear transformations which leave the within-country rankings unchanged. However, the change of perspective does affect the other measures of inequality strongly.

Figure 11 Poverty* and top-10% incomes**: EU-wide*** versus national measurement****, 2010



Notes: EU-wide distribution after ppp conversion. Due to the small number of relevant observations in SILC top-10% outcomes for Bulgaria and Romania are not reliable. *) Relative poverty below 60% of median income; **) Net-equivalised incomes; ***) Conversion by ppp's for household final consumption. ****) Ranked by household incidence of poverty.

Source: Author's calculations on SILC, using Eurostat ppp's.

Figure 11 shows in two panels for poverty as well as top incomes the differences that the EU-wide and national approaches make to their incidence among households and their shares in total income respectively. Poverty is shown as the stalagmites building on the bottom of the two graphs and top incomes as the stalactites hanging from the upper end, while the middle of the distribution between them is left transparent. Panel A shows the

effects for the shares among households in a country, Panel B among incomes. For poverty in the EU as a whole the number of poor households is somewhat reduced due to the EU-wide measure, from 56 million to 48 million or 27% to 23% of all households in the Union. Aggregate numbers appear not to change for top incomes, and by implication a small rise occurs for the middle. However, for 14 out of 27 countries the EU-wide approach increases the incidence of poverty while for the remaining 13 countries it is reduced. Immense increases are found for the poorest countries; for example, in Romania a massive 90% of all households are poor on the EU-wide measure while the rate is 20% according to the nationally defined threshold. Absolute reductions for the richer countries are modest or small but relative reductions can be very large; for example, Luxembourg's poverty rate is reduced from 15% to only 1%.³⁰ Behind this is a strong decline in the poverty threshold when its level is determined internationally instead of nationally. The mean poverty gaps of the EU member states vary between 19% and 57%, certainly different, but not radically, from the nationally defined gaps.

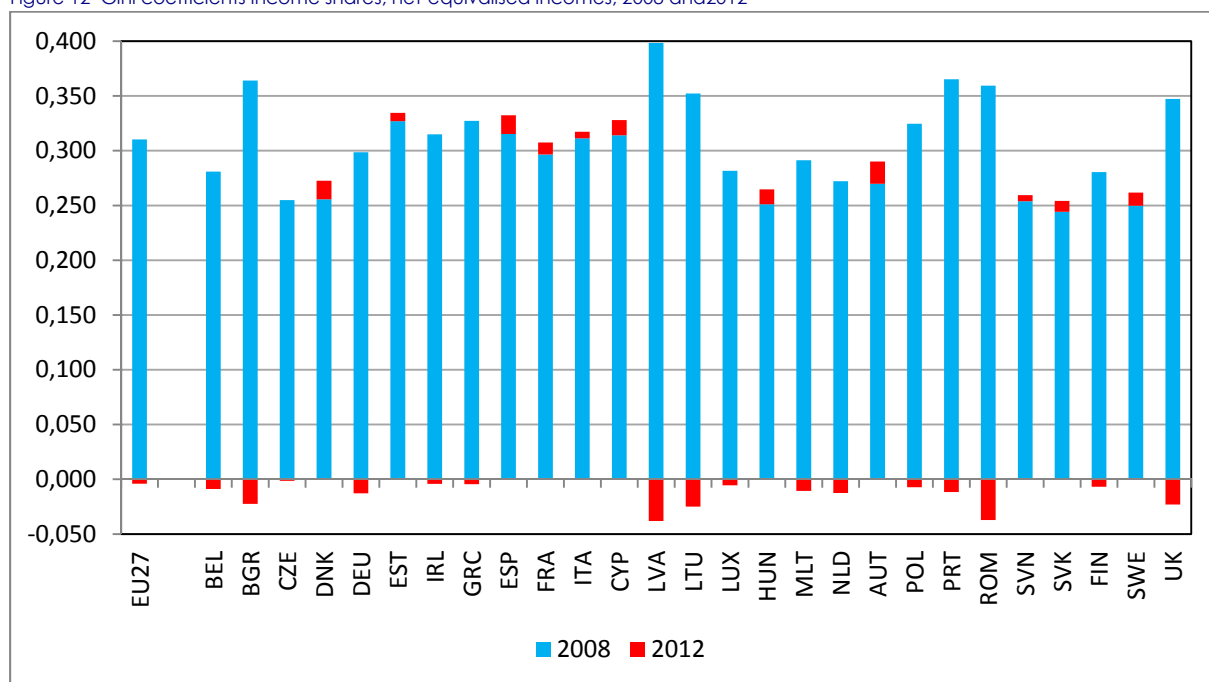
For top incomes similar but opposite effects are found, but they are less pronounced. The poorest countries undergo absolutely modest but relatively very strong effects on their top-income shares, which form the mirror image of Luxembourg's experience with poverty. Only a few countries have a household share for the top that is clearly higher when looking at it from the EU perspective; again Luxembourg stands out from the rest. For the top the effects appear to be more clear-cut though when we explore income shares in Panel B.

It is here that an EU-wide approach is most useful as a thought experiment for the longer run perspective of the Union. It is hard to imagine a general European anti-poverty policy being put in place to lift such a mass of the population out of poverty in the poorer countries, neither is it desirable that richer countries would reduce or stop their own anti-poverty policies on the argument of the much lower poverty rate in the European perspective. However, at the same time it is clear that something needs to be done to take away the incentive for the great majority of e.g. the Romanian people to migrate to other parts of the union. The finding makes the case for policy making with a strong long-term focus on individual countries – construing them effectively as European regions – instead of or in addition to general policies.

Between 2008 and 2012 the Gini coefficients for the EU as a whole changes imperceptibly but for individual countries substantial changes can occur (Figure 12). The most important concern Bulgaria, Latvia, Lithuania and Romania – surprisingly, all declining – which were not present in the OECD-IDD (see Figure 6).

³⁰ Cf. Brandolini (2007a, 20) for similar effects due to the lowering of the EU-wide median income as a poverty threshold on the occasion of enlargement.

Figure 12 Gini coefficients income shares, net-equivalised incomes, 2008 and 2012



Source: Author's calculations on SILC, using Eurostat ppp's.

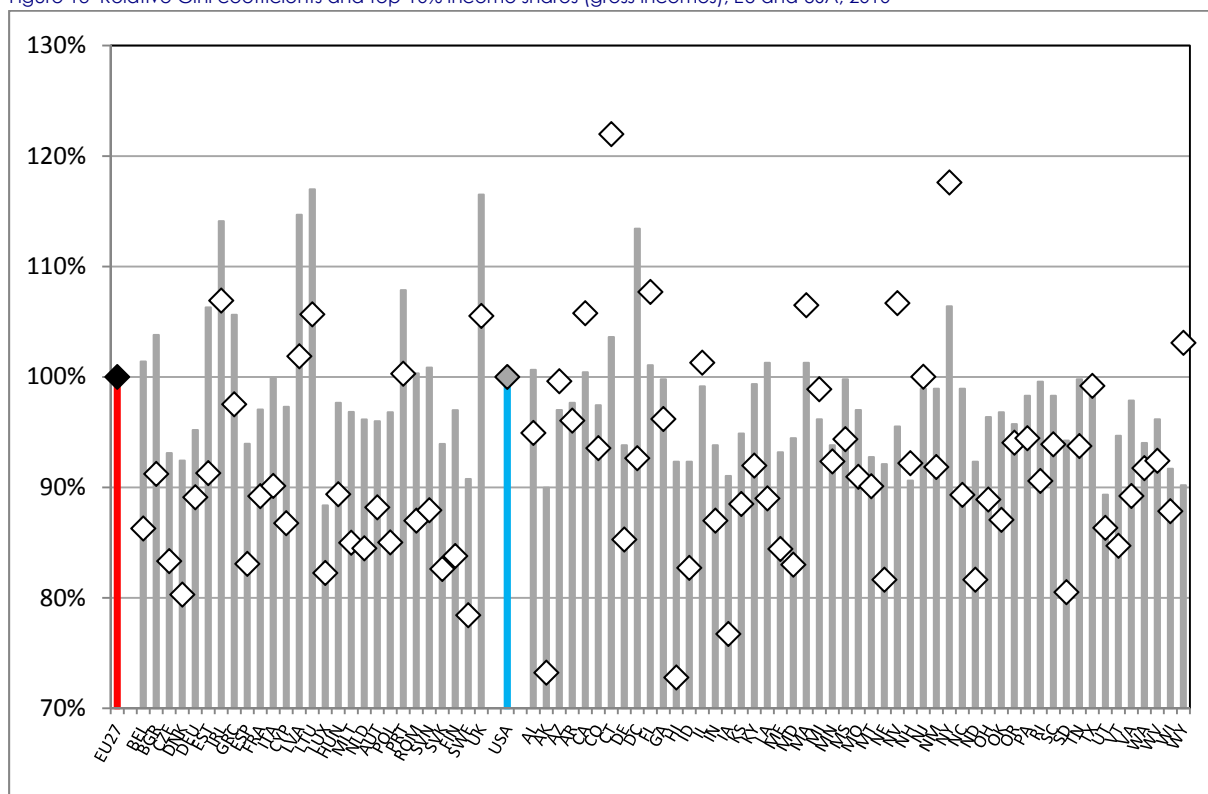
US and EU member states

The EU-wide approach can also help improve the comparison to the USA by putting the spotlight on the two aggregates as well as the variation within the two entities.³¹ This is shown in Figure 13 for both the Gini coefficients and the top-10% income shares, using gross incomes and exchange rates for the EU as no ppp's are used within the USA. For Europe SILC is used for both variables, while for the USA the Gini coefficients are based on the American Community Survey ACS and the top-income shares on the WTID, which has very recently added top-income shares for individual states. Compared to the WTID, which derives its information from comprehensive administrative data, the SILC is a small-scale survey that likely underestimates the top-income shares; the comparability of SILC and the ACS may be better though.

The figure presents relative levels, which compare countries' and states' inner levels of inequality to the overall level of inequality of the EU and USA respectively. Naturally, the absolute levels of American inequality generally exceed the European ones; however, relative levels picture the diversity of the two entities across their composing parts. Similarly, the European variation in absolute income levels is incomparably wider than within the USA. Nonetheless, both cases compare reasonably well in terms of the overall width of the range within which inequalities are moving. European top-income shares and Gini coefficients stretch over a range of 30 percentage points, and so do the American top-income shares, except for the lower ones of Alaska and Hawaii – two isolated states – and the higher levels of Connecticut and New York – neighbouring states under the smoke of NYC and Wall Street. Surprisingly, the American Gini coefficients extend over a somewhat narrower range of around 25 percentage points. In the EU there is a strong correlation between the top-income shares and the Gini coefficient (0.90), while in the USA this is considerably less (0.35) – as one might expect from a more integrated economy.

³¹ Compare McNichol et al. (2012) for inequality trends in US states since the late 1970s.

Figure 13 Relative Gini coefficients and top-10% income shares (gross incomes), EU and USA, 2010



Note: US data include capital gains. EU27 and USA are full-population ranked aggregates (or weighted averages). See Frank et al. (2015) for methodological note on states' top incomes and their adaptation to the WTID.

Sources: Author's calculations on SILC, ACS and WTID

On the one hand, one may conclude that the USA shows as much within-variation in inequality as Europe; on the other hand, there is no reason to expect that the variation within Europe will wither automatically as integration advances.

3. Behind the scene: Effects of redistribution and equalisation, and the role of earnings as a source of household income

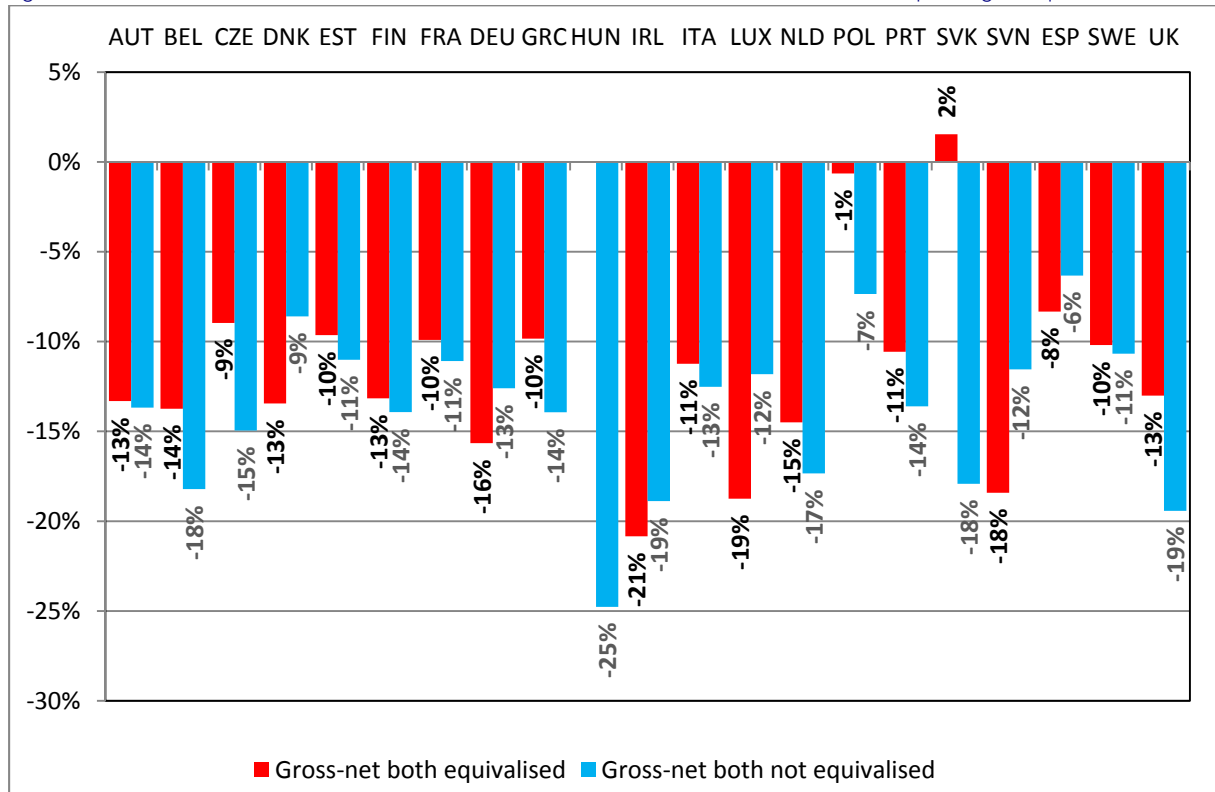
The scene of country inequalities in Section 1 and its extension to the Union as a whole in Section 2, however impressive they may be, present only the façade of incomes after tax and equalisation and do not tell us about the role of income redistribution – and concomitant policy making – and that of equalisation – and corresponding household formation – which are behind it, nor about the sources of (market) income that provide support. I will address these issues in this section arguing the importance of equalisation which seems a factor that is often overlooked, and focusing on earnings from labour as the most important source of household incomes.

3.1 REDISTRIBUTION AND EQUALISATION OF INCOMES

With the help of this EU-wide approach to measuring inequality in the member states we can compare the countries more directly for the contributions made by the two effects of redistribution and equalisation. It is important to distinguish between the two. Unfortunately this is not possible with the OECD-IDD, which presents all data – be it for market, gross or net incomes – on an equalised basis.³² This presentation leaves room only for evaluating the redistribution but not for considering the effects of equalisation. Evidently, the hidden assumption is that the effect of equalisation is neutral between the different types of income otherwise it would mix with the effect of redistribution, unduly enhancing or diminishing the latter. However, this neutrality is a questionable proposition once the households are ranked separately – and differently – for each type of income. Consequently, the households become differently sorted also by their size, which is the determinant of equalisation after all. To be more concrete, it may be expected that younger, working-age households play a larger role higher up the market-income distribution than the gross-income distribution, which incorporates in pensions and other transfers. Salverda (2014) demonstrates the differences with the help of Canadian data over the period 1976-2011. He finds an increasing overestimation of the redistributive effect from 14% in the mid-1990s to 22% at the end of the 2000s. Here I add a cross-section comparison for the 21 EU countries that are covered by the OECD-IDD, by comparing the extent of the redistribution found by between the gross and net Gini coefficients when gross and net distributions are either both equalised or not (Figure 14). Clear differences occur between the countries, some reducing and others enhancing the redistributive effect. In a similar vein, Figure 15 pictures for the Netherlands a strong gradient with respect to the number of persons who are found in the deciles of the household-income distributions of market and net incomes respectively. It implies a much stronger effect of equalisation for low market incomes than for low net incomes, while at the top the effects will be very similar for both distributions.

³² In addition, equalised levels such as of mean earnings are hard to relate to actual observations.

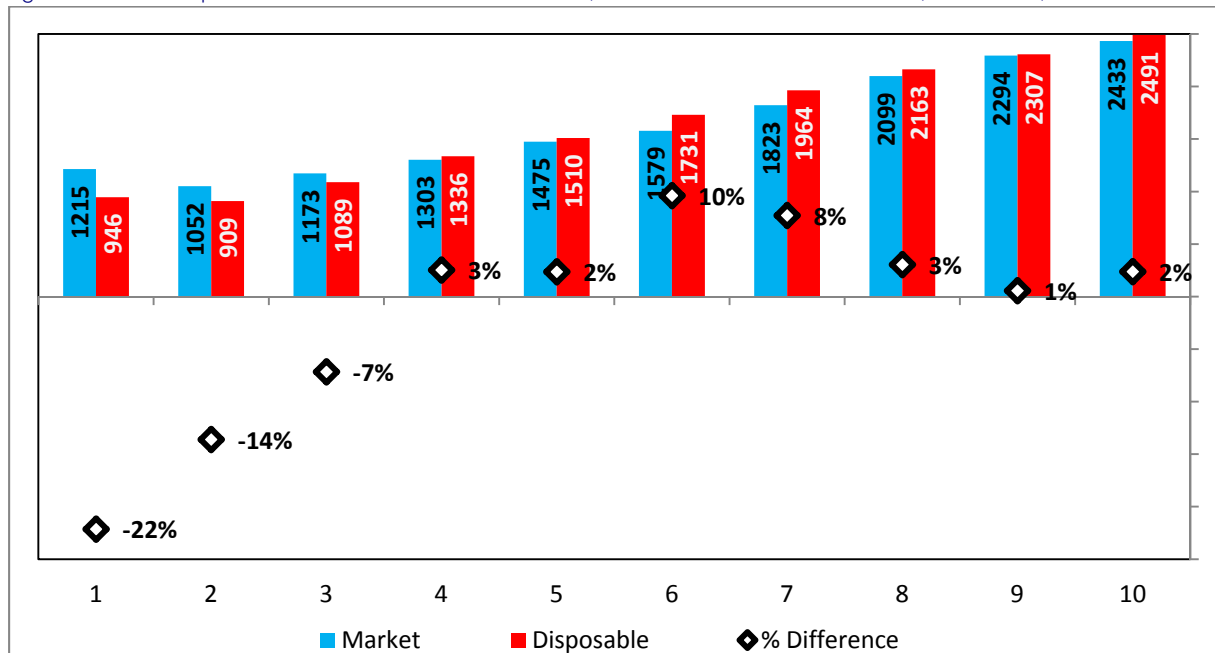
Figure 14 Reduction of Gini coefficient between distributions of market incomes and net income, depending on equivalisation, 2010



Note: Selection of EU countries which are present in the OECD-IDD. SILC: EU-wide distribution after ppp conversion.

Source: OECD-IDD and SILC – author's calculations

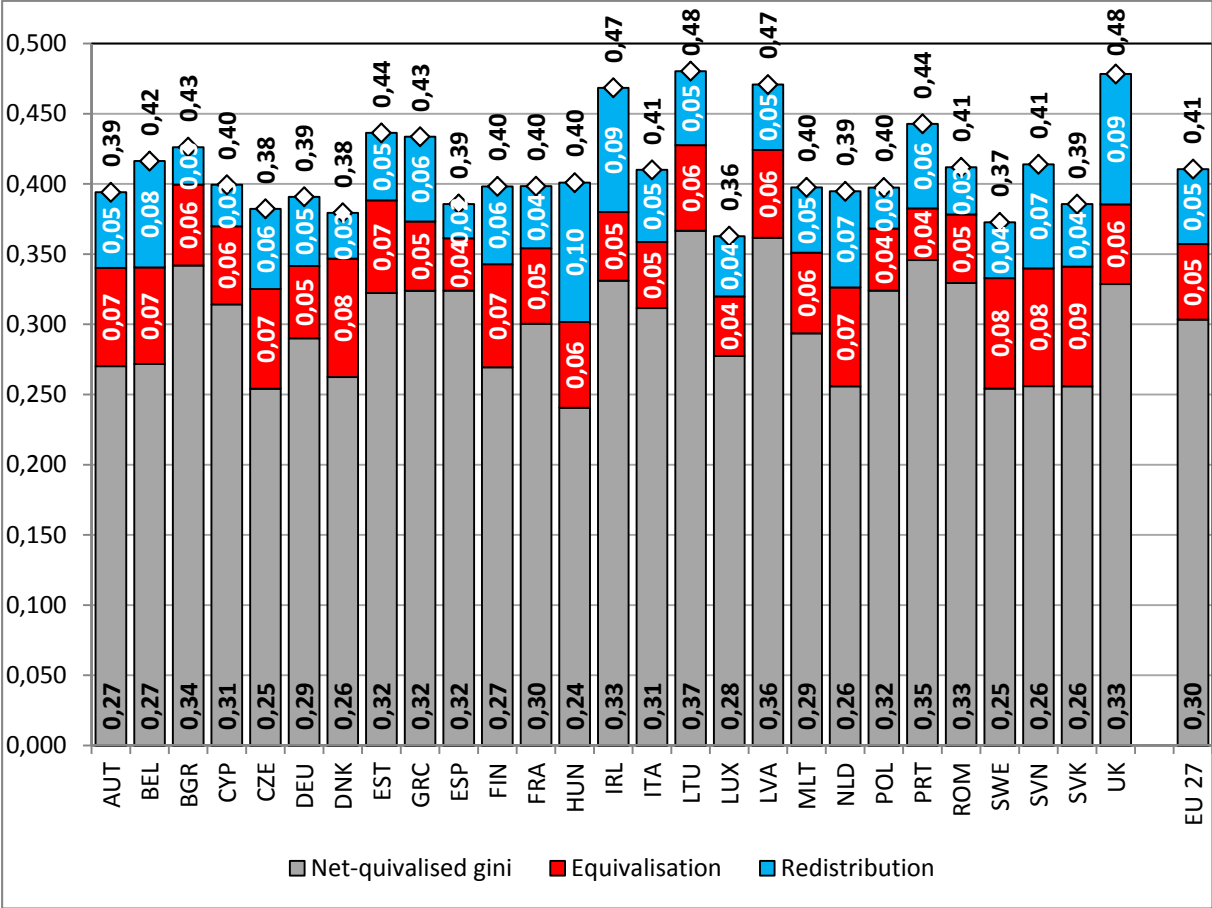
Figure 15 Number of persons x1000 in household-income deciles, market incomes versus net incomes, Netherlands, 2013



Source: Statistics Netherlands, Household income statistics - author's calculations.

Figure 16 makes it equally clear that the effects of equivalisation itself are not negligible. In the majority of countries the reduction in the Gini coefficient due to equivalisation exceeds the one due to redistribution.

Figure 16 Differences between Gini coefficients of gross, net and net-equivalised household incomes, 2010



Note: EU-wide distribution after ppp conversion.

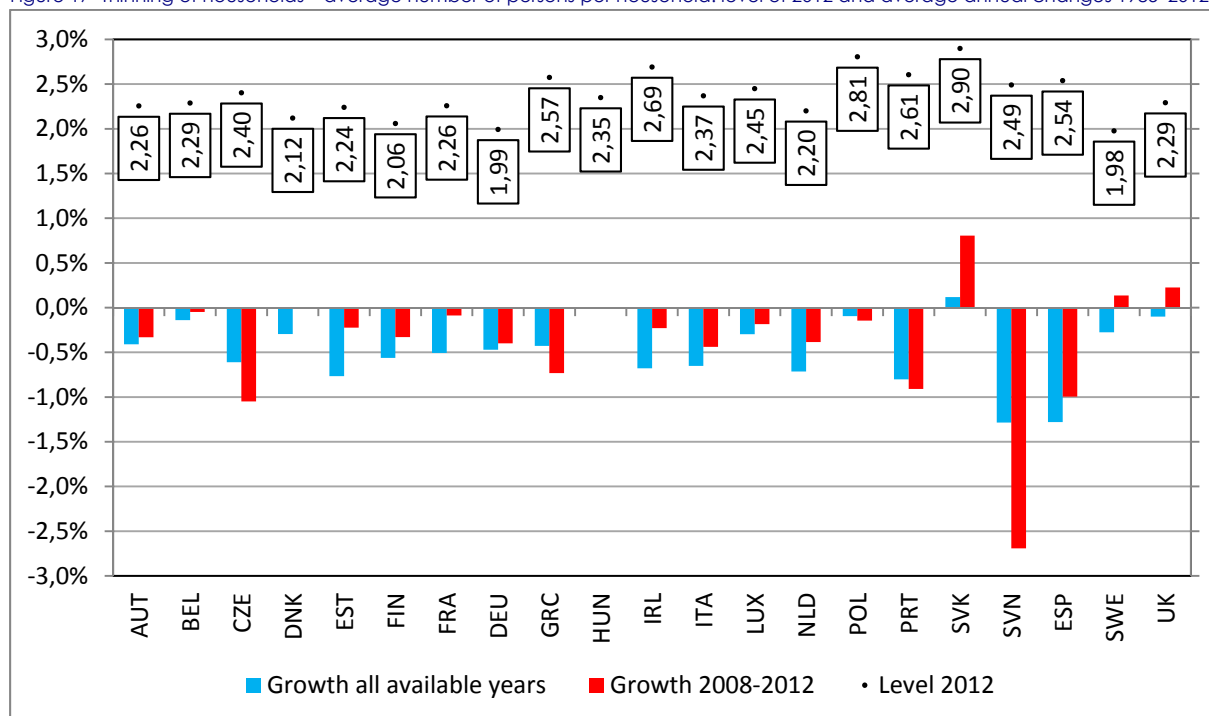
Source: SILC (author's calculation)

We may expect these effects only to differ in cross-section but also to change over time and at a different pace for different countries and different types of income distribution. Figure 17 shows the considerable variation in the current levels of household size and also a diverging speed of the thinning of households between countries over the years for which country observations are available since the mid-1980s. The speed and the differences appear to be substantial even over the few years that have passed since 2008. Indicated here are country averages which will work out differently over the income distribution as suggested by Figure 15. In principle, the effect of equivalisation depends on the demographics of the household. However, its salience for the income distribution is significantly enhanced by the growing number of earners in the household which promotes the presence of larger households at higher levels of income and increasingly confines the single-breadwinner households to the lower ranks of the distribution.

Evidently, separating the effects of equivalisation from those of redistribution is important in its own right and not only as a means for technically improving the determination of the effects of income redistribution. Peichl et al. (2012) demonstrate the importance of changing household formation for income inequality in the German case. It is beyond the purpose of this contribution to further elaborate on the issue. It seems advisable though that

the OECD-IDD as well as SILC presentations by Eurostat were extended to include inequality measures also for non-equivalised income distributions.

Figure 17 Thinning of households – average number of persons per household: level of 2012 and average annual changes 1985–2012



Source: OECD-IDD (author's calculation)

From Figure 16 we can also infer that in a cross-country comparison the distribution of gross incomes largely drives those of net incomes and net-equivalised incomes. Redistribution and equivalisation do indeed lower the levels of inequality but they hardly change the international differences. This suggests that the extent of the reductions is largely independent of the initial level of inequality. Actually, the differences seem slightly reinforced as the max/min ratio of the range of Gini coefficients over the countries increases from 132% for gross incomes via 142% for net incomes to 152% for net-equivalised incomes.

Table 5 Effects of redistribution and equivalisation for different measures of inequality, EU27, 2010

	Gini	S10:S1	S10	S1	P90:P10	Poverty rate (60%) household share	income share	mean gap
Gross	0.411	33.9	31.0%	0.9%	11.21	30.7%	7.4%	46%
Net	0.357	17.3	27.8%	1.6%	6.84	25.8%	7.6%	38%
Net-equivalised	0.303	13.8	25.9%	1.9%	5.49	23.2%	7.5%	37%
Redistribution	-13%	-49%	-10%	76%	-39%	-16%	3%	-16%
Equivalisation	-15%	-20%	-7%	16%	-20%	-10%	-2%	-3%
Total	-26%	-59%	-16%	105%	-51%	-25%	0%	-19%

Note: EU-wide distribution after ppp conversion.

Source: SILC (author's calculation).

Table 5 elaborates on this by comparing for the same two effects to other measures of inequality for EU27 as a whole. Again, the Gini coefficient draws a considerably more modest picture than the shares ratio S10:S1 which focuses on the two tails of the distribution: the Gini coefficient decreases by 26%, the shares ratio by 59% as a result of redistribution and equalisation. For the shares ratio the redistribution effect is much larger (49%) and far exceeds the equalisation effect. This is largely due to redistribution towards the bottom decile (cf. +76% for S1). However, the absolute effect on that bottom share is very limited as we have seen before – it is lifted from 0.9% of all incomes to 1.9% only. A comparison with the poverty rate indicates again that the bottom decile is a pocket of deep poverty within the broader set of poor households and adds that it stays that way throughout the process of redistribution and equalisation. Interestingly, the decrease in the mean poverty gap (19%) is hardly different from that of the S10 top-income share (16%).

Table 6 depicts the flows of households between the different states that are brought about by the two processes of redistribution and equalisation. This serves to demonstrate how the stock outcomes of poor, middle and top hang together across the two effects. Throughout this exercise the households maintain the same ranking, always by their gross incomes. This enables determining the flows that leave and join, following the arrow in the table. On balance the incidence of poverty declines by 8 percentage points from 31% to 23%; this is the result from 12 percentage points of outgoing flows, when households move up the ladder toward the middle, and 4 percentage points of ingoing flows, when they leave the middle to join the poor. The top-10% is kept at 10% by definition, but this appears to be the result of equal-sized (2 percentage points) flows in and out.

Table 6 Households shifts* due to redistribution and equalisation, % of all households, 2010

	Poor (<60%)	Middle	Top 10%	Poor (<60%)	Middle	Top 10%
	<i>Gross incomes</i>			<i>Net-equivalised incomes</i>		
Poor (<60%)	31%			23%		
Middle		59%			67%	
Top 10%			10%			10%
	<i>Redistribution</i>			<i>Equalisation</i>		
Poor (<60%)	-7%	7%		-5%	5%	
Middle	2%	-4%	2%	2%	-4%	2%
Top 10%		0%	-2%		3%	-2%

Note: EU27-wide ppp converted. *) Always ranked by their gross income; minus sign indicates outgoing flows, plus sign incoming to the category depicted in the columns.

Source: SILC (author's calculation)

Table 7 shows the evolution of different inequality measures for gross incomes during the financial crisis. Some show a clear decline between 2008 and 2009 but they veer back quickly to the initial level in 2010 and remain there in 2011 and 2012: the Gini coefficient, the three poverty indices, and the mean/median ratio. The S10:S1 shares ratio and the percentiles ratio decline in 2009 but veer back only partly; nevertheless the top-10% share grows back gradually towards the level of 2008. However, the income share of the bottom decile follows a different path, doing better in 2009 compared to 2008 and worse after that though it is still at the initial level of 2008. Apparently, the generation of gross incomes has worsened for this category in the later years which are characterised by austerity measures in many countries.

Table 7 Aggregate EU27 inequality measures, gross income, 2008-2012

	2008	2009	2010	2011	2012
Gini coefficient	0.413	0.407	0.411	0.413	0.413
S10:S1 shares ratio	35.2	30.2	33.9	34.0	33.9
S10 decile income share	31.6%	30.2%	31.0%	31.1%	31.2%
S1 decile income share	0.90%	1.00%	0.91%	0.92%	0.92%
P90:P10 percentiles ratio	11.6	10.4	11.2	11.3	11.1
Poverty – household share	30.8%	30.3%	30.7%	30.6%	30.5%
Poverty – income share	7.3%	7.6%	7.4%	7.4%	7.4%
Poverty - mean gap	46%	45%	46%	46%	45%
Means/Median	1.36	1.31	1.34	1.35	1.35

Note: EU27-wide, ppp converted

Source: SILC (author's calculation)

Table 8 compares this evolution to similar outcomes for net-equivalised incomes (Table 4) and spells out the effects of redistribution on the one hand and equalisation on the other. Substantial differences appear. For the Gini coefficient both are of equal importance and their combined effect is modest compared to the two tail measures where redistribution is significantly more important than equalisation, and has also become slightly more important over time. The S10:S1 shares ratio declines by 60% as a result of these two actions. However, the effects concentrate largely on the bottom decile and change very little at the top.³³ The effect at the bottom may reflect the very low level of the bottom decile more than its substantial improvement as a result of income redistribution. In any case, inequality works from both ends.

Table 8 Aggregate EU27 inequality: effects* of redistribution and equalisation, 2008-2012

		2008	2010	2012
Gini coefficient	Redistribution	-12%	-13%	-13%
	Equalisation	-13%	-13%	-12%
S10:S1	Redistribution	-43%	-49%	-51%
	Equalisation	-11%	-10%	-9%
S10	Redistribution	-9%	-10%	-11%
	Equalisation	-6%	-6%	-6%
S1	Redistribution	60%	76%	82%
	Equalisation	24%	29%	26%
P90:P10	Redistribution	-36%	-39%	-40%
	Equalisation	-11%	-12%	-12%

*) As percentage of the level for gross incomes also for equalisation.

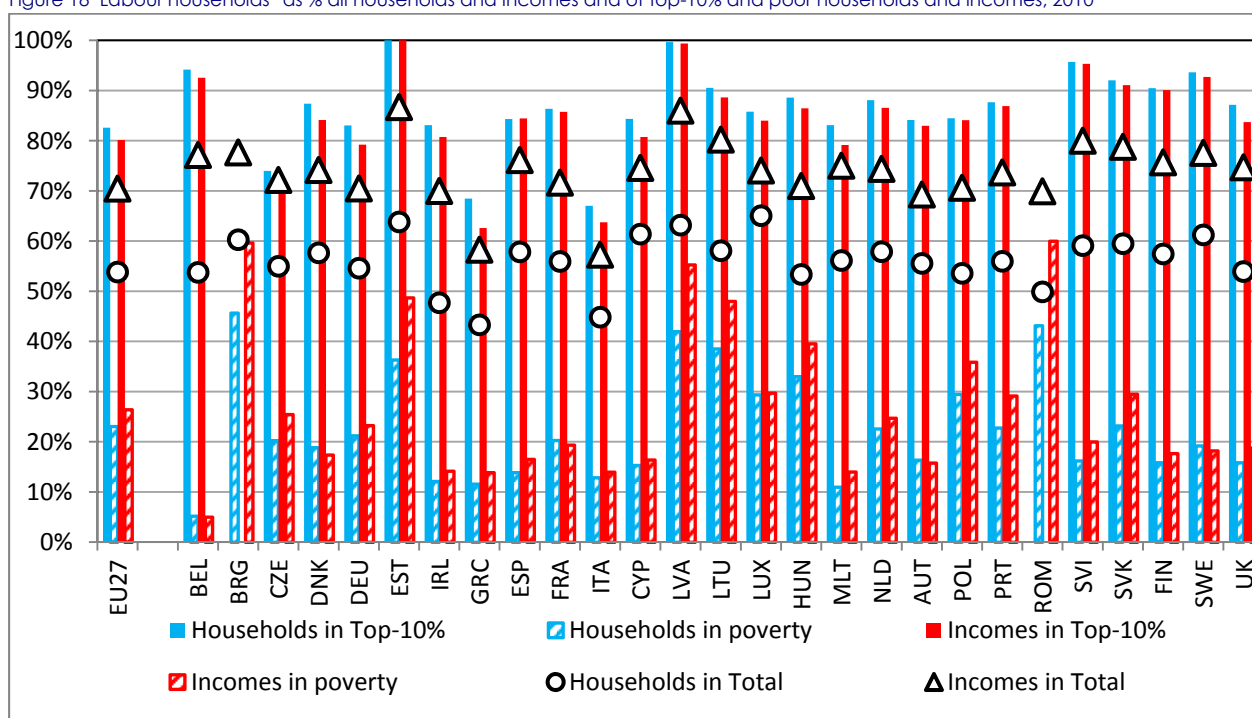
Source: SILC (author's calculation)

³³ See Matsaganis and Leventi (2014) for strong negative effects on the bottom decile between 2009 and 2013 after accounting for re-ranking in Greece, Spain, Italy, and Lithuania.

3.2 EARNINGS: THE MAIN SOURCE OF HOUSEHOLD INCOMES

A puzzling aspect of inequality analysis is the disconnect between individual earnings inequality on the one hand and the inequality of households incomes on the other hand, although earnings are by far the most important source of income in present-day society. It is a tale of two separate literatures waiting to be brought together (cf. Salverda and Checchi, 2015). This is all the more pressing as the number of wage earners per household has been growing rapidly in recent decades, substituting for the world of the single breadwinner which was founded on a direct link between the distribution of household incomes and of individual earnings.

Figure 18 Labour households* as % all households and incomes and of top-10% and poor households and incomes, 2010



Note: *) Households receiving their main income from earnings. EU27-wide distribution with ppp conversion. top-10% not reliable for Bulgaria and Romania.

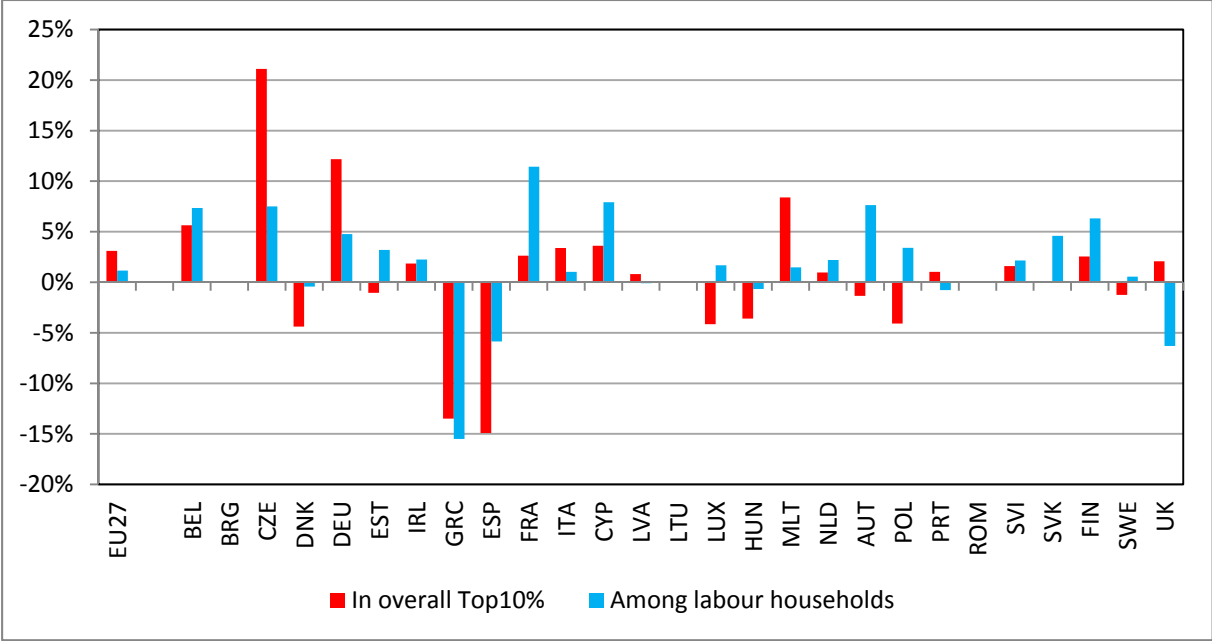
Source: SILC (author's calculation).

Figure 18 underlines the importance of earnings for incomes, showing the role in EU countries of households that depend on earnings for their main income – ‘labour households’ for short. They make up slightly more than half all households at EU level, while the other half makes its living from enterprise ownership, self-employment, pensions or transfers. There is interesting but relatively modest international variation in the national importance of labour households, from a minimum around 45% of the total in Ireland, Greece and Italy, to a maximum of two thirds in Luxembourg. Their share in incomes is even more important. Earnings are the major kind of income across households in general, comprising 70% of total gross income EU-wide, ranging from less than 60% in Italy and Greece to close to 90% in Estonia and Latvia. It is essential to add that these labour household are not evenly distributed over the income distribution. Their role is highly significantly among the top-10%, which is also shown. In Estonia and Latvia the entire top-10% is made up of labour households. Only in the Czech Republic, Greece, Italy and Malta are they not clearly overrepresented at the top. Their presence among the poor is more varied and rather high in countries with a high incidence of poverty. Taking a different perspective, of all households in Luxembourg 47% belong to the EU-wide top-10% of all households,

and in Belgium, the Netherlands, Austria, the UK and Ireland between 30% and 40%. The shares among all labour households in these countries are even larger – between 50% and 66%.

Over the financial crisis their importance among household numbers at the top has grown (Figure 19), or at least not declined, in most European countries. The exceptions showing strong declines are Greece and Spain and to a much lesser extent also the UK and Denmark. Growth has been particularly strong in France, extending from 9 to 15%.

Figure 19 Income shares of labour households among overall top-10% and all labour households in the country, percentage points change 2008-2012

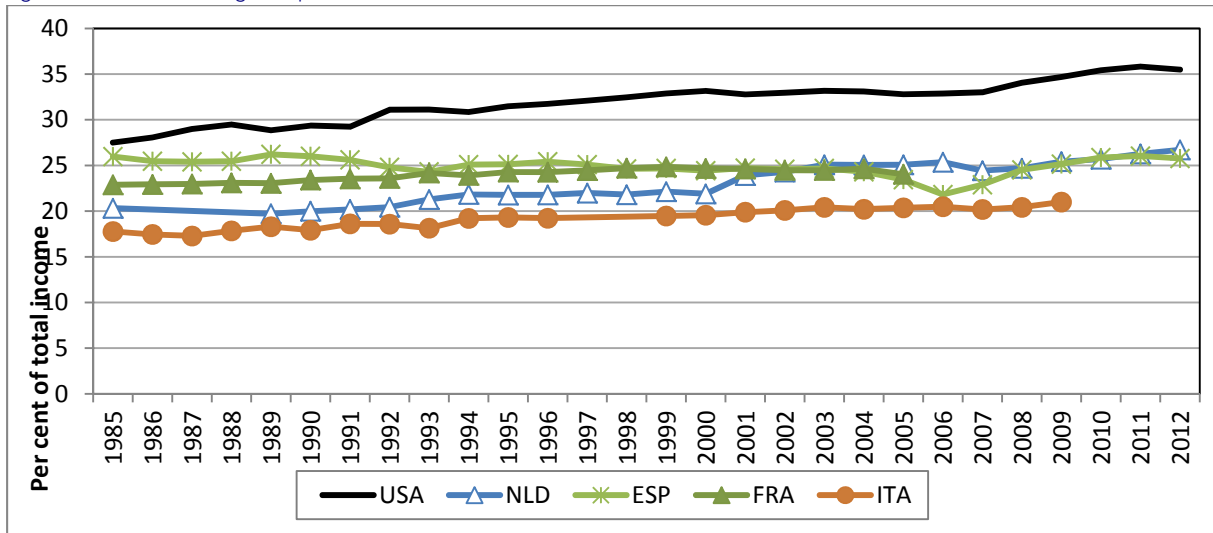


Note: Households receiving their main income from earnings. EU27-wide distribution with ppp conversion. top-10% not reliable for Bulgaria, Lithuania, and Romania. These are households belonging to EU-wide top-10% of all incomes; they have a larger share (15% in 2008, 16% in 2012) than the top-10% of labour households alone.

Source: SILC (author's calculation).

The WTID provides a decomposition by sources of income that allows us to look at the evolution preceding this cross-section comparison though regrettably for a few countries only (Figure 20). Expressed as a percentage of total income the shares of earnings can be directly compared to the total top-income shares of Figure 3. It indicates that the role of earnings at the top has increased over recent decades, except in Spain. Labour top fractiles increase by 8 percentage points in the USA, followed by 6 percentage points in the Netherlands and 3 percentage points in Italy. French growth amounts to 1 percentage point while Spain remained unchanged. Plausibly, the presence of labour households at the top will have increased in various other countries too, but not necessarily in all.

Figure 20 Share of earnings in top-10%, % of total income, fiscal units, 1985–2012

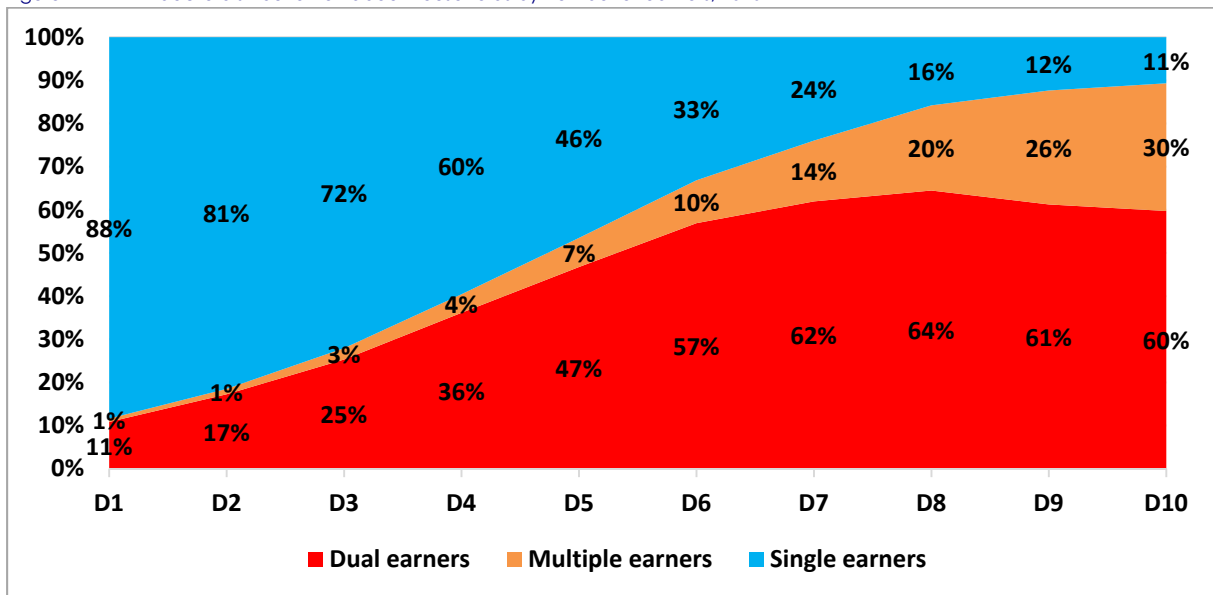


Note: This concerns fiscal units, not households.

Source: WTID (author's calculation)

It is important to realise the significance of the growing average number of earners in labour households (Figure 21), which is a corollary of the growth in the personal employment rate while the household employment rate lags behind or even declines (Corluij and Vandenbroucke, 2013 for a deeper analysis). Single-earner households are a minority and they concentrate at the bottom of these households' income distribution, while dual earners and households with three or more earners have a strong presence at the top. This goes together with a divergence between the incidence of low-wage work on the one hand and of in-work poverty on the other hand. It implies that a significant share of low-wage earners are actually a member of a dual-earner or more-earner household, and, conversely, that labour households high up the income distribution have earnings lower down the individual earnings distribution.

Figure 21 Within-decile distribution of labour households by number of earners, 2010



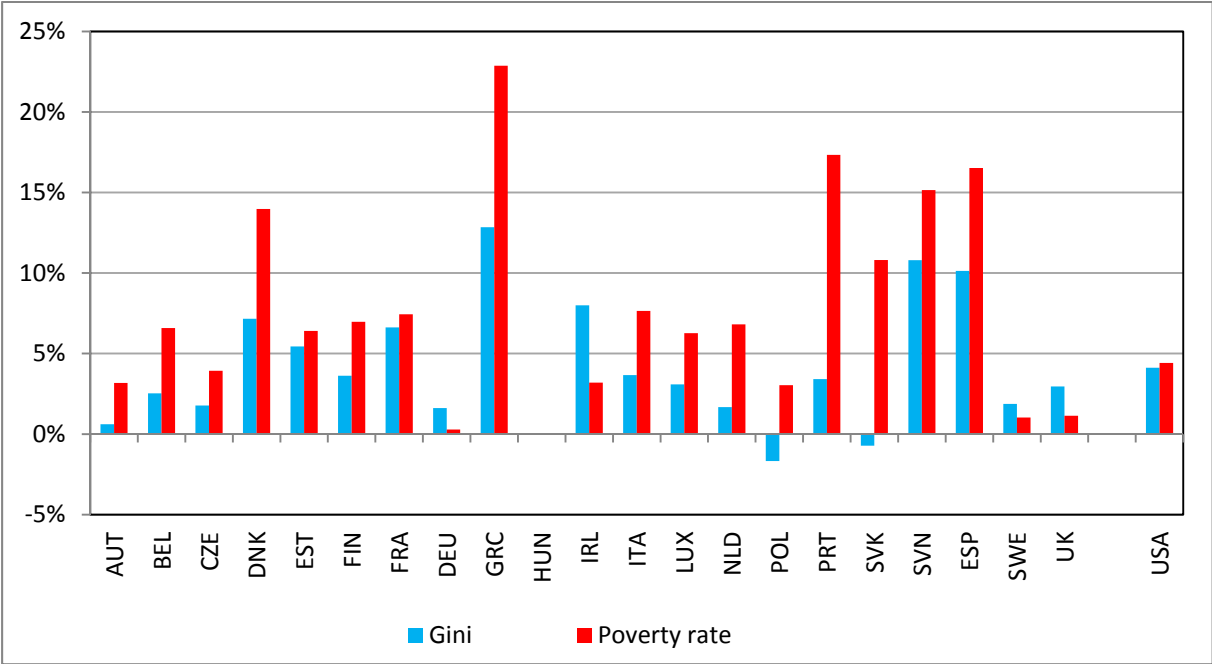
Note: Labour households receive their main income from earnings.

Source: Salverda and Haas (2014).

4. Future inequality and European policies

Income inequality has been growing secularly, often more at the tails of the distribution than in the middle. This upward trend will not easily go away and quite likely it will not by itself. Over the recent crisis it has continued to grow for market incomes virtually universally with small declines in the Gini coefficients for Poland and Slovakia as the only exceptions among the group of 21 European countries which are covered by the OECD’s income distribution database (Figure 22). Poverty before transfers and taxes grew in all countries, at a striking pace in the three countries that recently have suffered most – Greece (+23%), Portugal (+17%) and Spain (+17%). Looking at the future against this background and the trends in inequality that were discussed earlier, one may surmise as a stylised fact that market-income inequalities are growing and that that growth is increasingly difficult to neutralise by redistribution, even if the latter would grow. This puts both the reduction of market-income inequality and the improvement of income redistribution on the table. In this section I will consider possible future developments, focusing first on top incomes, which link directly to market incomes, and second on poverty, which ultimately concerns net-equivalised incomes. Poverty in that latter sense is central to European policy making regarding inequalities while the inequality of market incomes, let alone the role of top incomes, is conspicuously absent – as it is in most member states.

Figure 22 Gini coefficient and poverty rate of market incomes, % changes 2008–2012



Note: incomes are equivalised, and follow old income definition; Gini coefficients for Denmark, France and Germany are extrapolated to 2012 with the help of the new income definition data; UK Gini coefficient concerns 2008 to 2010.

Source: OECD-IDD

Inequality of market incomes

Market incomes bear prime responsibility for the evolution of the share of top incomes, with strong country differences in the EU-wide distribution. Labour earnings are the major source of income for market incomes and they play a very important and steadily growing role among top incomes, which has continued in force over the financial crisis. In terms of EU-wide ppp-converted gross incomes, their share among all top-10% households has increased from 82% in 2008 to 84% in 2012, and their share among all top-10% incomes from 79% to 82%.

Simultaneously their share in the overall total of incomes grew from 25% to 26%, in spite of a light fall (-0.4%) for the share of the top-10% as a whole. Finally, their share among the income of all labour households increased from 35 to 36%. This growth has accelerated since 2010.

Important drivers of growing income inequalities such as the rise of more-earner households and the thinning of households, which we discussed earlier, will expectedly continue in force (Salverda and Haas, 2014; Salverda and Checchi, 2015). These drivers sort work and earnings differently over households and therefore they may increase income inequality even if there is no growth in wage inequality. This different sorting has turned the hours of work into an important new dimension of labour market inequality in addition to the traditional level of pay, though the two intertwine significantly as shorter working hours and lower pay often hang together. These developments reflect the growing educational attainment and employment participation of women, and there is no good reason – and certainly no public support – for policy making to change this. There are important implications, however, which need to be addressed by policy makers. The increasing concentration of work over households is due not only to the fact that the growth in labour supply adds additional employment to some households and not to others, however important that may be. This addition in turn affects the employment chances of other labour supply, especially at lower levels of pay and corresponding occupations. The discrepancy between the much higher rate of (hourly) low pay among employees on the one hand and the rate of employees' in-work poverty (Figure 23) suggests that many low-wage workers – a clear majority in various countries – must actually be members of non-poor households. This seems especially likely because of the large role of part-time workers among the low paid in various countries: substantially more than half of all low-wage employees work part-time in Austria, Belgium, Germany, Netherlands, Sweden and the UK – in contrast with Eastern European countries where there is little part-time employment to begin with.³⁴ Part-time low-paid jobs generally provide insufficient income for maintaining an own household but they make it easier for households to supplement additional labour supply in combination with other (household or educational) activities.

One important instrument to consider is increasing the progressivity of income taxes as its decline in many countries may have increased income inequalities.³⁵ Particularly, higher (effective) tax rates at the top may help mitigating the future growth of top market incomes (Atkinson, 2015, Chapter 7).³⁶ Manning (2015) discusses the literature and concludes that the individuals affected by a higher tax rate will not lower their efforts. He suggests that they may increase their tax avoidance, which thus becomes the main problem to cope with when viewing higher rates as an instrument for raising the government's tax receipts. Evidently, that also applies when viewing this from the point of view of pay – businesses and people who bank on tax avoidance will leave their deals unaltered.

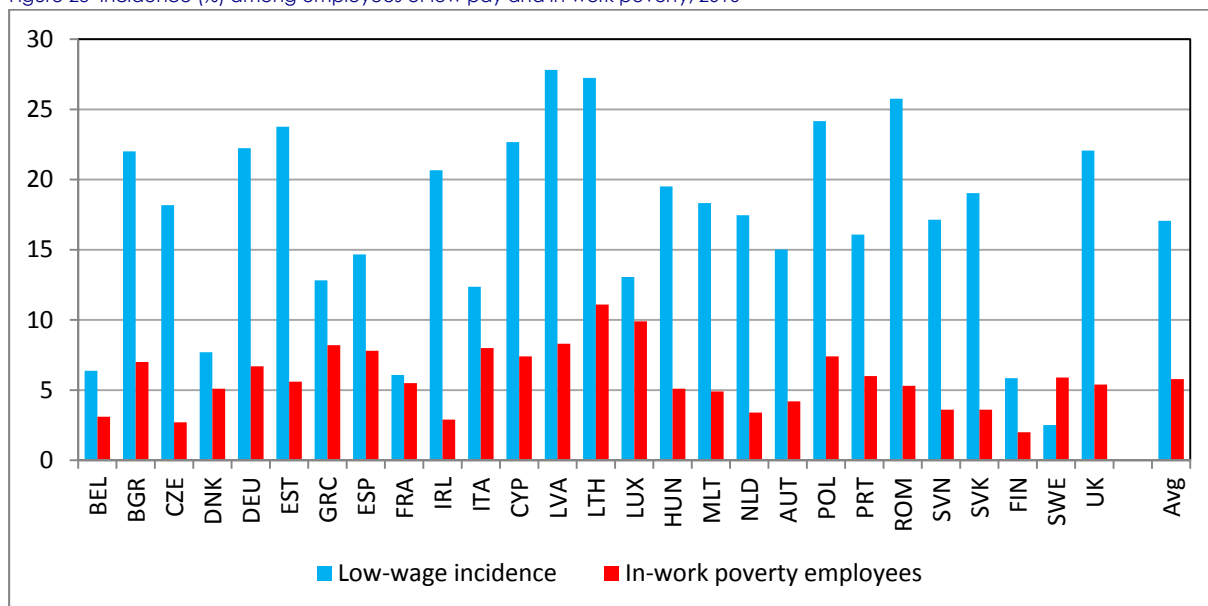
However, given the mechanism behind the growing role of labour households at the top, taxation policy will be insufficient and labour market policy will also be needed to mitigate the effects that tend to enhance inequality. Measures such as the recent agreement concluded between the social partners in France that instigated a new law which stipulates 24 as the minimum number of hours for offering a part-time job (and also introducing the obligation to pay an overtime premium for any additional hour) come to mind.

³⁴ Salverda and Haas (2014, Figure 3.10) indicate that of all top-10% labour households with more than one earner about one fifth contain a part-time worker for the EU on average, and that of all individual employees in this household bracket 8% work part-time.

³⁵ For example, Bargain et al. (2015) show for the USA that tax policy changes have increased income inequality by pushing up the share of Top-20% incomes.

³⁶ Atkinson (2015, proposal 8) advocates introducing a 65% top rate for the UK. Jacobs (2015) supports the adequacy of that level for the UK.

Figure 23 Incidence (%) among employees of low pay and in-work poverty, 2010



Note: Low pay is below two thirds of median gross hourly earnings; poverty is below the 60% threshold.

Source: Eurostat, Structure of earnings survey 2010 and At-risk-of-poverty [ilc_li04]

In addition, people from low(er) rungs of the individual earnings distribution are now found in higher-income households and, conversely, high-income households may less often contain high individual earnings – which is the common association with high incomes – but instead combine individual earnings from lower levels. Salverda and Haas (2014, Figure 3.11) show that among top-10% labour households the main earner in more-earner households earns between one third and one half less than a single earner at that income level. This has several important implications.³⁷ First, the solidarity of high-income households with single-breadwinner households may wane when those persons are actually equals in the individual earnings distribution. However, the need for such solidarity may persist in spite of the demise of the single-breadwinner model that is implied by the rise of the dual earner, as not all single earners have disappeared and not all more-adult households may be able to field another worker; also their number may be growing in a new direction - as single earners in the rapidly rising number of single-person households, who are at a disadvantage with regard to household economies of scale and in addition may have trouble finding another person to join the household, let alone act as another earner. Second, tax alleviations for low-earning individuals that aim to reduce income inequality may miss the target or might go wrong and even increase income inequality.³⁸ This calls for more than simply raising the top tax rate. A thorough evaluation of the household effects of individual-oriented tax measures and a reconsideration of redistributive mechanisms in that light are needed. One might speak of a new social contract if it would also solve the persistent tendency to lower taxes and the societal and political pressures behind that. For the latter EU-wide agreement about introducing an Earned-income-tax-credit type of approach³⁹ towards redistribution, which puts more focus on the household, seems advisable. This would impede the wrong effect of individual tax measures. It would also reduce the deadweight loss involved in reductions inadvertently going to higher incomes, and thus improve the cost-efficiency of redistribution. Naturally, costs can be further contained

³⁷ This applies to the case of individual income/earnings taxation and social contributions. Effects may be less or absent for tax systems that are family based.

³⁸ In addition, tax receipts from high-income households may fall short of expectations (Salverda, 2013a, 14).

³⁹ It may be amended to a Participation income as advocated by Atkinson (2015, proposal 13).

by putting in place an adequate minimum wage determining the market incomes which provide the starting point for the EITC.

Naturally, apart from these effects on market-income inequality founded in household behaviour and taxation there are other good reasons for expecting a continuing push towards growing inequality in market incomes such as technological innovation (Bogliacino, 2014) but we have to leave those aside here.

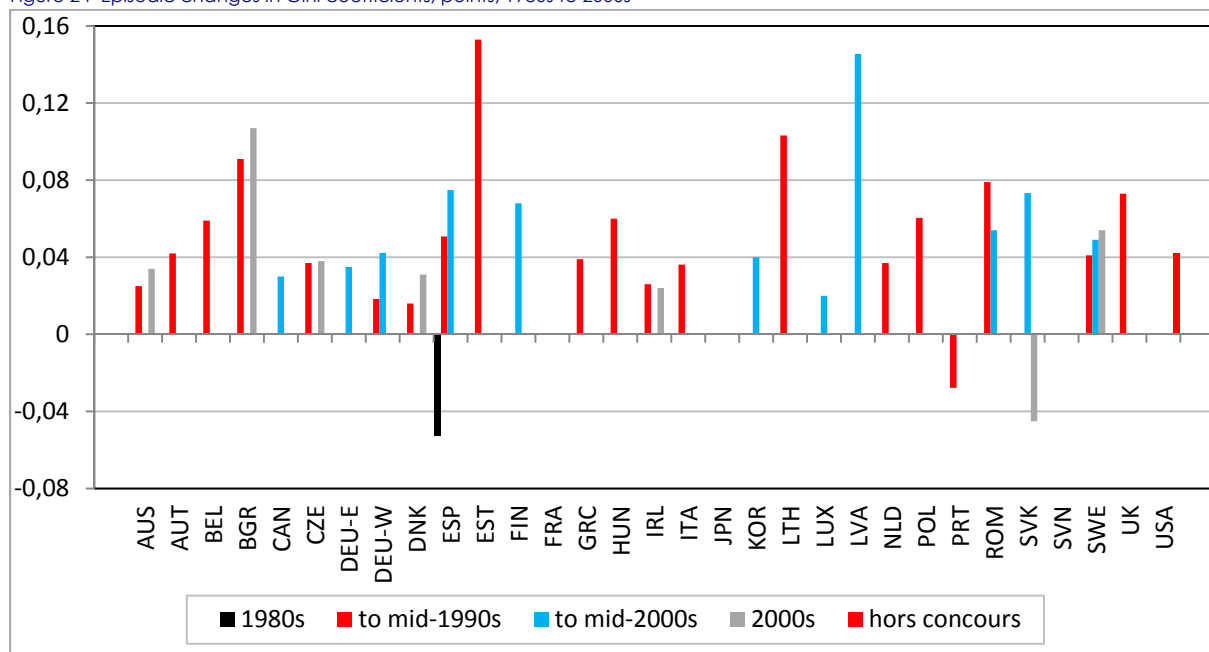
Poverty and European policy making for reducing inequalities

However, market incomes are not the only driver of increasing inequality. At the lower end of the distribution, opposite to top incomes, labour households provide around one quarter of poor households and incomes for gross incomes, 28-29% for net incomes and 37-38% for net-equivalised incomes. Conversely, those poor labour households make up 13% of all labour households and 3% of their incomes, and this changes only little under the influence of taxation and equivalisation.⁴⁰

At the bottom insufficient and diminished redistributive policies are also contributing. Marchal et al. (2014, 247) talk about two decades of ‘relative neglect’ of minimum income protection in Europe while governments banked on the idea that ‘work, work, work’ was the best solution for poverty. In the authors’ view, during the first years of the financial crisis – before, as they say, ‘fiscal considerations took centre stage’ – improvements in benefit levels occurred which prevented further deterioration but were also insufficient for a marked break with the preceding retrenchment. Such policy effects on inequality are consistent with episodic changes in the level of inequality (Figure 24), which are difficult to explain from trends in economic development which are common to many countries. Inequality changes in Eastern European countries after the generally shared transition from communism provide a good example of the influence of policy making (cf. Tóth, 2014, 27). The most striking example is given by the three Baltic states (Masso et al., 2013, 2014): in Estonia inequality shot up enormously in almost a single year and gradually declined later, while Lithuania witnessed a considerable increase which was later followed by a gradual further increase and Latvia experienced a slow, steady growth ever since transition. Currently, Estonian inequality is at a lower level than the two other countries.

⁴⁰ Note that the numbers in poverty are reduced by taxation and equivalisation from 64 to 54 to 48 million.

Figure 24 Episodic changes in Gini coefficients, points, 1980s to 2000s



Note: net-equivalised incomes; sudden and protracted changes are shown.

Source: GINI income and poverty database (author's calculation)

The general rise of the pre-tax-and-transfer rate of poverty is reflected in the rising level of the Union's main inequality indicator in arrangements for EU2020, which is the percentage of persons 'at risk of poverty and social exclusion'. At the time of the indicator's introduction the number of persons involved was intended to fall by 20 million, from 116 million to 96 million in 2020.⁴¹ However, since the start of the crisis it has risen for EU27 by more than 5 million to 121 million (Eurostat, 2014).⁴² The indicator counts the numbers who are in at least one of three conditions: monetary poverty, material deprivation, or low work-intensity of their household. Among those three the number in monetary poverty – which is central in this contribution – grew by 2.3 million or 3%; however, the materially deprived witnessed an increase by 6.4 million or 15%, which strikingly hit the former EU15 very strongly as the number in these countries grew by 8.4 million or 41% and the share in the total number rose from 50 to 60%. Apparently, the Union's anti-poverty policy is weak in the face of recent economic developments even in the countries most able to endorse the policy.

EU2020 targets are generally weak by comparison as they are politically determined and do not provide a legally binding framework for the member states similar to the Macroeconomic Imbalance Procedure and all this implies. However, within this framework the poverty target is a particularly weak instrument. Two observations can be made about this. First, it has been left to the individual member states to operationalise their own poverty targets (Salverda, 2014). For example, Sweden has not set a numerical target, Germany aims at a different metric (long-term employment) and the reduction target set by the Netherlands falls well short of its pro rata share of the Union's aggregate aim. Consequently, national target setting does not add up to the aggregate European target. Second, everything is left to the national actions of member states and poverty is given no role in policy making at the European level. The very strong growth found in the Mediterranean countries' market-income

⁴¹ Very optimistically, the Commission (2014, 14) expects reaching a level of 100 million by 2020.

⁴² Note that 2013 improved by 1 million on 2012 – the year most used in this contribution.

poverty (Figure 22) is a reflection of this situation.⁴³ Effects on poverty, or inequality more general, are not taken into account seriously in actual policy making at EU level as exemplified by troika prescriptions.

In addition to the national level, Tony Fahey (2007) has advocated introducing a measure of relative poverty based on the distribution of incomes for the EU as a single entity, using 60% of the corresponding EU-wide median income as the threshold below which households are deemed poor.⁴⁴ The measure should be additional and not replace the existing one based on the national distributions. Fahey argues that this new measure will link anti-poverty policy directly to the European target of convergence of the member states, including the aim of establishing a single labour market. An EU-wide measurement is important exactly because the divergence within the EU has become so large since enlargement. Currently (2010), SILC data indicate that the lowest average net-equivalised household income, measured in EU27-ppp Euros, is 4,200 for Romania and 30,600 for Luxembourg – a 7.3-fold disparity. However, within-country inequalities reach a higher level than this international divergence: the S10:S1 ratios of the national distributions are equal to or larger than this 7.3 level in 17 countries out of our set of 27.

Above I have mentioned two important findings based on such a EU-wide approach: the extremely high levels of poverty in countries such as Romania and Bulgaria, and the large poverty gaps which imply pockets of deep poverty in many countries. Youths in countries with such elevated rates of poverty will have much more difficulty to obtain the best education possible in the Union, which may negatively affect their countries' future economic growth relative to other member states, in line with the mechanism discussed by Federico Cingano (2014). Poverty at such a massive scale asks for much more focused measures at EU level than a general anti-poverty policy can offer. Apart from the fact that even small-scale migration involving the best and brightest would diminish local perspectives and contribute little to reducing poverty who are left behind, massive poverty cannot possibly be digested through mass migration as the EU shall be careful not to instil a fear that in the long-run a country be emptied. Policy action is needed and can be sought in different directions: shall anti-poverty actions be reinforced by means of enhanced transfers to the poorest countries? Bridging the mean poverty gap for net-equivalised incomes for the 48 million poor households in all EU countries taken together may require an amount of €150 to 160 billion in EU27-ppp.⁴⁵ The amount may seem large but it is modest compared to the redistribution occurring through the hands of the federal government in the USA: 23 states with 100 million inhabitants receive \$ 400 billion more in federal spending than they pay in taxes (€3700 per person), whilst the other 200 million inhabitants receive €700 billion less than they contribute (\$ 3400 per person).⁴⁶ Any more focused approach – e.g. requiring the richer countries to fill it themselves – would reduce those requirements. Alternatively, the focus can be on children first, extending to other ages later.⁴⁷ Levy et al. (2012) have provided a forceful and detailed plea for a child basic income, which has only gained relevance given the sharp negative effects of troika policies on Greek children (Kaplanoglou and Rapanos, 2015, Figure 3). Children seem the most natural concern for the future of the Union, more even than unemployed youths who are already addressed now. Not only will this give children all over Europe an equal chance and provide a helpful remedy for Milanovic's (2015) strong reminder about how much depends on the place that you are born, it may also protect the children from becoming collateral damage of policy making by establishing a firewall. In this context, proposals for social investment (Vandenbroucke et al, 2011) can be prioritised to countries where they are most urgently needed – read Romania and similar countries. Note that Vandenbroucke (2014) mentions education as a pan-European priority.

As we have seen that income inequality is an issue of both economy, via market incomes, and policy, via changing income distribution, a European policy addressing inequality as such beyond the present focus on poverty seems highly advisable (cf. e.g. Franzini, 2009). It implies 'mainstreaming' inequality concerns in many

⁴³ It is partly made visible also by the EU2020 indicator, which concerns the situation after taxation and equivalisation. Material deprivation in Greece and Spain increased by around 80%, income poverty in Greece grew by 16%; in contrast, Portugal shows little change.

⁴⁴ See Goedemé et al. (2014) for an extensive consideration of EU-wide defined poverty rates from 2005 to 2011 in two-year steps. They conclude that at the end of the period EU-wide poverty has become a problem also for EU15 countries.

⁴⁵ Atkinson et al. (2002, 116) caution against an easy determination of the 'costs' of abolishing poverty as a neat targeting of the poor may not be possible and behavioural responses and change in before-transfer incomes may occur.

⁴⁶ <http://politicsthatwork.com/graphs/net-contribution-to-deficit-by-state> (figures for 2014). \$ 300 billion of federal spending is not attributed to states. See also <http://blufftonmacro2009.blogspot.nl/2012/09/currency-union-and-welfare.html>.

⁴⁷ For example by means of Atkinson's (2015) proposal (#6) of a capital endowment paid to all at adulthood.

other fields, including especially balancing the macroeconomy, undertaking structural reform, changing fiscal policy, influencing technology, etc. Endorsing reforms under the aegis of budgetary pressure may not only undermine the support for reform for lack compensation that can be made available to the losers from the reform (cf. Grüner, 2013), but can also lead to making the wrong choices for the reform itself by setting undue budgetary targets.⁴⁸ It is an issue for the Union as a whole on the one hand to prevent leap frogging – one country after the other reforming and playing the economic miracle – while going downhill, which can only end in disaster even before the bottom of the hill is reached, and on the other hand to account for intercountry dependencies and issues that can only be effectively addressed collectively such as tax evasion and concomitant undesirable mobility of wealth. Methods of nowcasting are already available to evaluate inequality effects of proposed measures (e.g. Leventi et al., 2013) and used at ECFIN, and they can be further improved.

⁴⁸ Salverda (2013, Case study 1) describes a deep reform of teachers pay in the Netherlands undertaken during the 1980s crisis which created great problems that have taken literally decades to mend.

5. Conclusions

First I have taken stock of existing data sources on income and wealth. The admirable new OECD Income distribution database IDD enables us to see the limitations of the Gini coefficient as the main measure of income inequality by incorporating important other measures. It has essentially one shortcoming that should and can be surmounted, which is that all data are based exclusively on net-equivalised incomes. This instigates an underestimation of the significance of household formation – the strong rise of single-person households and the thinning of other households – for the level and evolution of income inequality and it bears the risk of mistaken estimation of the contributions made by the redistribution of incomes. As regards data on the wealth distribution I find the new Household Finance and Consumption Survey HFCS of the ECB to be flawed, especially with regard to the observation of top wealth – a problem for any survey for that matter.

Existing data are restricted to the national level, which is fair enough. However, extending the scrutiny of income inequality to the EU as a whole is important to enable accounting for the convergence/divergence of the significantly different income levels of the member states in the long-run perspective of moving towards social and economic union and a single labour market. It is also important for a proper comparison of Europe to the USA as single entities. An extension towards EU inequality in recent years, which I undertake with the help of SILC microdata, shows dramatic differences in poverty between countries, which seem impossible to reduce by means of general anti-poverty measures. It makes clear that the Union is facing a vast problem of inequality as a stumbling block on its path towards social and economic integration.

Data situation The OECD's Income distribution database goes far beyond anything made available by the European Commission and should be copied, reinforced and extended urgently. The data situation regarding the wealth distribution is disastrous and it should be acknowledged that reliable and complete information about top wealth and top incomes can be gathered only by administrative means. The EU shall lead the way as the wealth flows to tax havens and the corresponding losses in tax receipts are the largest (Zucman, 2014 and 2015). Introducing a *Billionaires Directive* obliging the reporting of individual wealth and incomes above a threshold will enable this. The European Banking Authority shows the legal and material feasibility.¹ An *Annual Inequality Assessment* by the Commission President can show the outcomes and the progress of analysis and policy making – the Swiss lead the way here.⁵⁰

Taken together this supports the importance of looking at the two tails of the distribution where top incomes and poverty are found. Inequality appears to work from both ends, the top and the bottom, at the same time. It also underlines the importance of the poverty gap and its implication of deep poverty, often well below the poverty threshold and the cut-off income of the bottom decile. Third, it shows the important and increasing role of labour households for growing inequality as they supplement particularly the top incomes. The household distribution of working hours has added a new dimension of inequality to the traditional one of individual pay. Note, finally, that the focus is entirely on monetary incomes and disregards the income effects of indirect taxes and of the provision of and access to public services, such as for health and education. Plausibly, adding these will often lead to higher levels of inequality and inequality growth over recent decades.⁴⁹

The expectations for future trends are a continued increase in the inequality of market incomes, as is also found over the most recent years since the start of the financial crisis. To prevent this from happening and attempt a reduction in inequality the concern with economic inequality shall take centre stage in European policy making. Current EU policy in the framework of EU2020 concerns poverty only, is legally weak, and leaves it to the member states to operationalise the approach. Unsurprisingly, the incidence of poverty has increased, moving in the wrong way just when a stronger effect was needed because of the crisis. Very unfortunately, it also does not apply to policy making at the European level itself. The very sharp growth in poverty – particularly among

⁴⁹ An example is given by Salverda et al. (2013, Tables 2.3 and 5.2).

children –, and in inequality more broadly, in Greece demonstrates the necessity of accounting for inequality effects from the start. The technique of nowcasting such effects is developing quickly.

This squares well with current Commission President Juncker's words about a fairer union and the promise made before his election that *'any support and reform programme goes not only through a fiscal sustainability assessment; but through a social impact assessment as well'* (Juncker, 2014a, 8).

Such assessments shall acknowledge the existence of losers from reform and seek means for involving them in the change (Beckfield, 2013; Grüner, 2013). Such assessments shall also apply to all areas addressed by EU2020 and include current economic policy making. An overriding concern with inequality is entirely missing in the 5-presidents report on completing the Union. For any future governance of the Union changing the trend of growing inequality into a declining one the mechanism behind the growth need to be addressed. A focus on poverty and redistribution alone can only try to match growing market inequalities with enhanced redistribution and will quickly run into the constraints of available means. The distribution of market incomes needs to be addressed systematically. The recent introduction of a statutory minimum wage in Germany and the strong increase in the minimum wage proposed by the British government are encouraging examples, as is the new French law on the minimum size of jobs, but they are only partial. EU-wide agreement on a minimum wage – or effective equivalent – at a significant level is needed and shall go together with a revision of tax systems that accounts for the growing divergence between individual earnings in the labour market and incomes of household based on their combination. In the single-breadwinner world earnings and incomes coincided, enabling the labour market to care more for the household than is possible now after this world has largely vanished.

Let us build on the optimistic note of Atkinson (2015) that something can be done on inequality and contemplate his and other proposals. To counteract Milanovic's (2013) pessimistic proposition that inequality is here to stay, we only need to connect to the very last line of his contribution saying that *'it is not the ideas that are wanting but willingness to try them'*.

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