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Does The Income Concept Matter When Assessing Inequality and Redistribution?

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Abstract

We assess the extent to which countries reduce income inequality through redistributive actions by the State, focusing on the role played by different income concepts and assumptions. We highlight two decisions: what constitutes redistribution and what data sources are being used. The former decision depends on our definition of pre-distribution income while the latter explores recent topics in the economic inequality literature dealing with top-income adjustments and distributional national accounts (DINA). We find that these choices play a substantial role in the level of redistribution and cross-country rankings. Using household surveys for Europe, we find that social insurance contributory pensions and taxes are the two most relevant components when assessing redistribution. The inclusion of indirect taxes and individual government spending makes little difference, and so does the use of top-income adjustments. When going beyond the household sector we find that the way government spending is allocated, particularly health spending, plays a big role in shaping redistribution. Our findings suggest that the extent of redistribution is sensitive to these choices, showing high heterogeneity across countries.

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1   Introduction

The degree of inequality in the distribution of income varies widely across rich countries, and the factors underlying this divergence have been extensively studied. None the less, different studies arrive at very different conclusions about a fundamental question: does income inequality vary across these countries principally because they differ in the extent to which income is redistributed by State action, or because of inequality in income before that redistributive action? The conventional view in welfare state research has long been that differing appetites for redistribution are central, with much attention paid to why countries differ in that respect, but Thomas Piketty and co-authors recently argue forcefully that it is differences in the extent of inequality pre-distribution that account for the higher level of inequality in the US versus western Europe (Blanchet, Chancel, and Amory 2021; Bozio et al. 2020). There is also on-going debate about the related and also key question about the nature of redistribution and how it is brought about: is this mostly a result of the operation of cash transfers, which has long been the dominant view in the literature (see for example Caminada et al. 2019; Causa and Hermansen 2020; OECD 2011), or are taxes and other components of redistribution as or more important as some studies have suggested (for example, Atkinson 2004; Fuest, Niehues, and Peichl 2010; Gornick and Smeeding 2018; Guillaud, Olckers, and Zemmour 2020)?

This paper presents an in-depth empirical investigation of what gives rise to such contrasting findings in the literature about these central questions. This allows us to identify the most important analytical choices that underly them, and distinguish these from others that are involved but have much less impact. On that basis we bring out the implications both for how welfare state researchers and policymakers should see the role of redistribution and for how research on this topic can best move forward.

2   Understanding the Analytical Choices Involved

A host of analytical choices need to be made – explicitly or implicitly - in assessing income inequality and redistribution, and the first task is to identify and distinguish these in a helpful taxonomy. A number of high-level dimensions, all impacting on the picture one will see, are worth distinguishing:

1) How is income before redistribution to be defined?

2) How is income after redistribution to be defined, with redistribution then the difference between this and 1)?

3) What source of data is to be employed, and (how) is this data to be 'treated' prior to implementing the comparison between income before and after redistribution?

4) Is redistribution across the entire population to be the focus, or only among those of working age?

5) What method is used to measure redistribution and the contribution of different components to its impact on inequality?

Within each of these, various choices are then involved, as we now seek to elaborate.

Focusing first on 1), income before redistribution is often referred to in the literature as 'market income' or 'factor income', but sometimes also as 'pre-fisc income' or 'original income'. This variation in terminology/labelling reflects to some extent differences in the exact definition employed, but not in a consistent fashion across studies. The core income types or sources included here are income from labour, both from paid employment and self-employment, and income from capital, such as interest, dividends, and rent received. Income from labour includes the Social Insurance (SI) contributions of those earning it, as well as their contributions to occupational and voluntary private pension schemes, and (in principle though not always in practice) includes in-kind benefits such as a company car as well as cash income. Income from voluntary private pensions is also generally included. Where studies differ is then with respect to whether one should also include as 'factor' or 'market' income:

1a. Occupational pensions from employment-based schemes;

1b. pensions based on SI contributions;

1c. other cash transfers from SI schemes;

1d. contributions made by employers to SI schemes;

1e. cash transfers received from other households;

1f. imputed rents and the undistributed profits of companies.

How best to think of and treat pensions of different types is a central question for studies of redistribution. Pensions from individual personal schemes is conventionally included in market income, as are occupational pensions in for example the guidelines of the Canberra Group for survey-based income concepts (Canberra Group 2011). Social insurance pensions are conventionally treated as state redistribution, but drawing a sharp line between these and occupational pensions – often facilitated and regulated by the state - has long been seen as somewhat problematic. More recently, Piketty and colleagues argue strongly in the context of DINA that they should be categorised as in essence earned by participation in the labour force and thus not counted as redistribution, an argument they extent to working-age social insurance benefits such as for unemployment and illness. The treatment of transfers from other households is much less important in terms of size, but a decision also has to be made as to whether these constitute redistribution. Finally, the argument for attributing the undistributed profits of companies to households and including them as pre-distribution income arises in the broader context of Distributional National Accounts, as discussed further below.

Turning to 2), the measure of post-redistribution income to be compared with re-redistribution income is most often the standard and very widely-used measure of disposable income, after direct taxes are deducted and cash social transfers are included. The choices made under 1) then of course affect the measured extent of redistribution and – mostly –

what is counted as redistribution. Most importantly, where SI-based pensions or other benefits are included in pre-distribution income they will of course not be counted as redistribution. The treatment of transfers from other households also affects whether these are counted as redistribution but these are mostly not substantial enough to significantly affect measured redistribution. The way employers' SI contributions are treated will also affect not only measured inequality in pre-redistribution income but also what counts as redistribution, since in that case both employers and employees contributions will be deducted along with income tax and other direct taxes in arriving at disposable income and will be measured as redistribution.

Including imputed rents and undistributed profits in pre-redistribution income also means moving away from disposable income as point of comparison, as the same logic would also speak for their inclusion in post-redistribution income. The more usual, and fundamental, argument for going beyond disposable income is to seek a broader coverage by including an estimate of the value to households of state expenditure on services such as health care and education and perhaps also other forms of state spending. Where this is done, the counterpart is generally to also attribute indirect taxes paid to households to broader the coverage of taxes paid as well. A more encompassing variant is to allocate all of national income to households, the core purpose of Distributional National Accounts or DINA (WIL 2021). This allocates not only undistributed company profits and imputed rents, but also individual government spending which includes the value of state health, housing, or education spending, and collective government spending that cannot be directly allocated to households, including spending in infrastructure, armed forces, among others.

Turning to 3), household surveys provide the bedrock for studies of inequality and redistribution based on micro-data. These allow disposable household income to be compared with various measures of pre-redistribution income, some more readily than others. If employers SI contributions are to be included they may need to be estimated, for example (see, e.g., Fuest, Niehues, and Peichl, 2010). Even if the focus is on disposable income, however, the question arises as to whether the survey in question can be relied on or whether some 'correction' should be made to consider either or both of a) the 'missing top' of the income distribution and b) the under-representation of income from certain sources (notably various types of income from capital) elsewhere in the distribution. Such a 'correction' may involve drawing on external sources of information such as administrative data from the tax system or National Accounts aggregates for income from different sources (Carranza, Morgan, and Nolan 2022; Lustig 2019).

Where the post-redistribution income concept goes beyond disposable income, information external to the household survey in question on state spending and additional components of income will be required, but these can either be allocated across the distribution that is measured in the survey or combined with 'correction' for missing incomes. Such a correction is an essential element in the broader Distributional National Accounts-type exercises as the core objective is to allocate all income aggregates from the National Accounts to households (WIL 2021).

The selection of the population of interest, noted as 4) above, also needs to be discussed. Many studies of redistribution concentrate on working-age households only rather than the entire population. This reflects for the most part the uncertainty already highlighted about how best to regard and treat pensions of various kinds, notably those based on SI contributions. Finessing this issue is the main motive for concentrating on those of working age, with variation across studies in exactly how this is operationalised and associated uncertainty about how much difference that can makes to the findings.

Finally, the method employed to summarise the impact of redistribution on inequality and the contribution of its different components also a matter of choice. The most common approach is to assess the influence of each income component on the Gini coefficient in a piecewise manner, starting with factor income and adding one component at a time, recalculating the Gini at each step. This approach differs from decomposition approaches such as the Shorrocks decomposition, and it has become clear in the recent literature that such different methods may give different results – not least because they are actually answering subtly different questions, in ways that it is important to tease out.

3 Investigating Predistribution/Redistribution Via Alternative Income concepts

3.1 Outline of the analysis

With the range of analytical choices outlined in Section 2 there is ample scope for diverging results, depending on both the precise question being addressed and how this is done. In what follows we investigate the implications of different analytical choices for the answers one will find across European countries to the two overarching questions identified at the outset:

- How much do differences in pre-redistribution income versus in redistribution contribute to variation across rich countries in income inequality, and
- How much do the different components of redistribution contribute to its overall impact?

Through this analysis we also contribute to bridging the gap between different approaches to studying income inequality and redistribution. While conventional survey-based studies have focused on market/gross/disposable household income equivalised and attributed to each household member, recent studies of top incomes and Distributional National Accounts have focused on individual or per-adult income and distinctive income concepts. As Carranza, Morgan, and Nolan (2022) discuss, this is partly explained by the reliance of top income studies on tax data, while DINA estimates do not use equivalence scales as that would produce aggregates that differ from national income totals. All the measures presented in this article are aggregated at the household level and equivalised, aligning them with conventional survey-based studies of redistribution.

To assess inequality and redistribution one needs to define the income concepts over which inequality is to be measured. We focus first on cash incomes as measured in household surveys, going from pre-redistribution to disposable incomes. Microdata from surveys

provide the flexibility to investigate multiple income components as well as different units of observation. In this stage we employ various pre-distribution concepts involving different categorisations of components of/contributors to disposable income.

We then go beyond disposable income to include both in-kind transfers and indirect taxes in the analysis, attributing these to households in the surveys, which gives a more comprehensive picture of the role of the state in shaping the distribution of income across households.

We then focus on what Lustig (2019) calls the problem of the 'missing rich' in surveys and the implications this may have for the measurement of inequality and redistribution. Household surveys tend to suffer from non-response and under-response bias, particularly at the top of the income distribution. The very rich are less likely to be selected in the sampling frame and, if selected, less likely to respond. Increasing awareness of this issue of late has served to call into question the reliability of household surveys in measuring inequality and redistribution. To assess whether this affects conclusions about the extent of and contributors to redistribution, we adjust the survey data at the top and redo our analysis with those adjusted data. For this purpose we adapt the top income adjustment method developed and applied in the construction of WID DINA (WIL 2021), which in essence aligns with top income share derived from tax data (see Carranza et al. (2022) for details such an application to EU-SILC data).

Finally, we broaden the scope of our analysis to allocate the entirety of National Income, following DINA in going beyond the household sector to include undistributed profits as well as other elements of government spending, both individual and collective. In the course of this analysis we assess the incidence of government spending when two different allocation 'rules' are adopted: allocating proportionally to disposable income versus in equal amounts per head. These two rules, together with a piecewise analysis for different components of government spending, gives us a range of possible measures of post-redistribution income, and thus of the overall extent of redistribution.

Having outlined the way our analysis is to be structured, we now discuss the individual elements in more detail.

3.2   Income concepts in household surveys

Household surveys typically look at three income concepts, market, gross and disposable income. Gross income adds transfers and benefits to market income, while disposable income deducts direct taxes and social insurance contributions from gross income. These measures are commonly aggregated across individuals to the household level and then divided by an equivalence scale to take economies of scale in consumption into account. By contrasting income inequality under these concepts we can assess the role that cash transfers and direct taxes play in reducing inequality.

While gross and disposable income are relatively standard in their definition, market income can differ based on what we consider redistribution. One definition of market income is what the DINA frameworks calls factor income, which only includes income flows stemming from the ownership of labour or capital. Because of its nature, factor income inequality is

particularly high for countries with a large older population, as they have zero income.[2] If we consider private pensions to be deferred income we can add them to factor income, representing our first definition of market income. A second market income concept adds public social insurance-based contributory pensions. A third concept of market income adds other contributory benefits. Once we then add non-contributory benefits we arrive at the standard definition of gross income.

This means we have five different potential 'pre-redistribution' income concepts going from income accrued from the ownership of factors of production all the way to gross income, which includes all cash transfers from the State. At each step, whatever is not included in pre-distribution income will count as redistribution. For example, our second definition of market income is consistent with treating public contributory pensions as deferred income rather than a social transfer, excluding it from redistribution. We assess the extent of redistribution by comparing income inequality under each of these concepts to inequality in disposable income.

3.3   Including Non-Cash Benefits and Indirect Taxes

So far, we have presented disposable income as the terminal point – at least when studying household surveys. That is not necessary the case if we consider how household also pay indirect taxes and receive in-kind benefits from Government. While these two components do not affect households cash holdings, they do affect their consumption choices through the price of consumption and by substituting private spending with government spending, respectively. Using the ONS definitions (ONS 2022), we refer to disposable income minus indirect taxes as 'post-tax income', further extending to allocate government spending benefitting individual households directly, primarily health and education, then produces what ONS call 'final income'. Figure A1 in the Appendix shows each of these definitions, together with our previous survey-based concepts.

One important difference between our measures of post-tax and final income and those of the ONS lies in how these component are allocated empirically. The ONS follows a microsimulation approach, looking into the conditions and requirements of each transfer and allocating them to households based on their socio-demographic characteristics. On the other hand, we rely on the ways in which DINA allocates income, either in proportion to income or as a lump-sum, equally distributing it across households. Because the DINA series aims to distribute all National Income, they use these rules to allocate income components that are not typically – nor easily – allocated, such as spending on national defence or infrastructure. Moreover, the DINA series aim to achieve consistency with National Accounts above all, a different objective than that of fiscal incidence studies. As it is, existing DINA microfiles do not allow us to look at specific country-by-country allocation rules based on the particularities of each tax and transfer system. [3]

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[2] One way to address this is to focus on the working-age population.
[3] The World Inequality Lab argues that fiscal incidence is not the purpose of DINA (WIL 2021), which closely follows the National Accounts accounting framework, but DINA could be used as an input for such models.

3.4   Adjusting surveys: additional income components and the 'missing rich'

While the literature has recognised the problems household surveys suffer when capturing top incomes for decades (e.g., Atkinson, 1975), the increasing availability of tax records and other sources of external data have given rise to a growing number of adjustments methods. Indeed, a recent volume of the Journal of Economic Inequality – appropriately named 'Finding the Upper Tail' – is entirely focused on this topic (see Piketty, Saez, and Zucman (2022) for an overview of the volume). These adjustments can involve replacing the survey income (or the individuals themselves) of those at the top of the distribution, the reweighting of the complete survey, rescaling incomes, or a combination of these approaches. Similarly, these methods can rely on external data sources or not. Independent of the method itself, the common outcome of these approaches is an 'adjusted' or 'corrected' income distribution.

Carranza et al. (2021) present an overview of this literature, discussing the implications of top income adjustments in the European context. They show how inequality estimates can increase substantially once the 'missing rich' problem has been addressed. They find that adjustment methods have a significant impact, particularly among countries that do not rely on administrative registers to correct survey income. Countries such as the Netherlands, Slovenia or Denmark provide already adjusted income series, and ex-post adjustments make little difference to their level of income inequality.

For the purpose of adjusting the EU-SILC, our analysis relies on the DINA framework and their 'synthetic microfiles' (WIL 2021). Synthetic microfiles are representative of the distribution of income of the entire population, and are organised in the same way as any standard household survey would be. The adjustment method in these microfiles differs from the previously mentioned approaches and can be described in two steps. First, for each percentile of the gross income distribution, income is multiplied by the ratio of mean income in tax data to mean income in survey data, thus rescaling income by that factor. Second, imputed rent and household stock ownership are added to each survey income concept. The first adjustment seeks to address the non-response bias at the top, much in the way that replacing or reweighting methods would. The second adjustment expands household disposable income by allocating tax-exempt and unreported incomes, so that it matches with National Accounts definitions.

3.5   Distributional National Accounts

DINA estimates of income inequality allocate the entirety of National Income across households. This includes the government and business sectors. As the business sector is already allocated through the adjustments discussed in the previous section, the last step to achieve DINA is to allocate the government sector. The DINA framework makes different allocations for pre and post-redistribution income. For pre-distribution income, it is government income that is allocated to households, in proportion to gross income. For post-distribution income, it is government spending that they allocate, either proportionally to disposable income or equally across households.

The DINA framework is not the only one to look into the allocation of National Income. In 2011 the OECD created its Expert Group on Disparities in National Accounts (EG DNA) to provide inequality estimates for income, consumption and savings that were consistent with National Accounts (Fesseau and Mattonetti 2013). The goal of the EG DNA is to study the distribution of income, consumption and savings for the household sector, thus excluding other National Accounts sectors. While the two approaches share a common goal in going beyond household surveys in the study of inequality, they have different goals which are reflected in their methodological choices.

Following Zwijnenburg (2019), the OECD EG DNA and DINA approaches differs in three main aspects. First, they differ in scope. While DINA studies income and wealth, the EG DNA studies income, consumption and savings. Similarly, they provide different level of detail, with the DINA approach focusing on 'generalized percentiles' (which include a finer grid for the top 1%, i.e., top 0.1%, 0.01%, etc.) and the EG DNA approach providing income averages at the quintile level. Second, they differ in how they define concepts such as income or population. DINA mainly focuses on adults while EG DNA looks at households, DINA studies individual income while EG DNA studies household equivalised income (a point we aim to address in this article), and – as discussed before – they differ in the income concept. Lastly, the two approaches differ in their methodology, the main difference being that DINA relies on tax data to adjust surveys while EG DNA uses different adjustment methods, depending on the income concept and the available data.

Through the use of DINA, we can assess the role of direct and indirect government spending on redistribution. Governments shape the distribution of National Income not only through direct taxes and cash transfers, but also through indirect taxes and individual spending, such as spending in health or education. These are income components that – as we discussed in previous sections – can be allocated to households. Collective spending such as spending on infrastructure or the national defence, on the other hand, is much harder to allocate, which is why other approaches have excluded it from their distributional analysis. By looking at the different components of government income, together with different ways in which they can be allocated, we assess the extent of redistribution of National Income in its entirety.

4 Results from Factor to Disposable Income

As Figure A2 in the Appendix shows, the range of income components, adjustments and allocation assumptions we have discussed results in a large number of potentially relevant income variables. Assessing the redistributive capacity of each country by comparing all pre-distribution to all post-distribution concepts would result in many combinations, some of which would not provide relevant information nor useful implications. For that reason, we focus the results we present on the more limited set of comparisons which turn out to be most informative. At each step, we assess redistribution by presenting a sequential analysis, assessing the influence of each income component on the Gini coefficient in a piecewise manner, starting with survey factor income, adding one component at a time, and measuring the Gini at each step.

Tables 1 presents Gini coefficients for EU-SILC countries for the core income concepts we have distinguished from factor to gross income, while Table 2 has the corresponding Gini measures for disposable income (columns 1 to 3) – all equivalised and person-weighted for the year 2018. Key measures of redistribution – seen as the change in the Gini - derived from these are shown in Figure 1.[4]

One can see from Figure 1 that factor income inequality ranges from 33 points of the Gini (Czechia) to 48.1 (Finland) Gini points, with an average of 42.9 points. Germany, France, Bulgaria and the UK show relatively high factor income inequality, whereas Estonia, Czechia, Iceland and Poland have the lowest levels. Moving from factor income our first definition of market income, we see that private pensions makes little difference, with results remaining unchanged.

Contrary to private pensions, SI-based contributory pensions make a substantial difference. If we measure income inequality under our second definition of market income we get an average Gini index of 38.2 points, ranging from 30.5 points for Iceland to 44.4 for Belgium. This reduction in the Gini, however, is highly heterogeneous. Countries like France or Hungary end up with much lower income inequality, Denmark and Ireland remain high-inequality countries. While SI-based contributory pensions appear to be important on average, this is not the case across all countries.

While all remaining contributory benefits do not have a large impact on inequality, with a Gini index of 37.3 on average, non-contributory cash benefits play an important role. On average, the Gini index for gross income (which includes all cash benefits from the State) is 34.7, ranging from 26.8 for Iceland to 41.6 for Bulgaria. On the bottom of the distribution with high levels of gross income inequality we see Lithuania, Latvia and Serbia, while Iceland, Norway, Poland are on the other end of the distribution. Similarly to contributory pensions, the relative importance of non-contributory benefits varies across countries, being particularly relevant for Norway and Denmark.

Overall, changes in inequality happen among countries with high factor inequality. Countries like Iceland, Poland and Czechia do not see large changes in pre-distribution inequality. On the other hand, countries like Finland, France or Hungary see large decreases in inequality once SI contributory pensions are included, while Norway and Denmark see large drops when including non-contributory benefits, enough to go from being high (factor) income inequality countries to being among the lowest levels of (gross) income inequality, increasing over 20 positions in the relative country ranking (out of 30 countries). As one would expect, countries where inequality does not change once we include cash transfers worsen their relative position. Lithuania and Latvia fall over 10 positions in the cross country-ranking once SI pensions are included, and so do Belgium and Greece once non-contributory benefits are included.

The deduction of direct taxes and social insurance contributions also makes a large dent in inequality, resulting in an average Gini of 29.9. Inequality in disposable income ranges from

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[4] We exclude Slovakia as the EU-SILC cannot distinguish between contributory and non-contributory benefits.

23.4 points of the Gini index for Iceland to 39.8 for Bulgaria. In relative terms, the two most 'extreme' cases are Switzerland that falls 10 places in the cross-country ranking, while Ireland improves its position in 11 places. Other large changes in relative position are Poland (goes down 8 positions) and Belgium (improves in 9 positions).

Regarding the change in inequality, including private pensions has little redistributive impact, reducing the Gini by 0 points on average. Including SI contributory pensions as part of pre-distribution income reduces the Gini index by 5 points on average. The largest reductions, i.e., where SI contributory pensions matter the most, happen in France (11 points), Hungary (10 points) and on Germany, Finland, Luxembourg (9 points). On the other extreme, the Baltics – Estonia, Latvia and Lithuania – see little to no change.

There is little change in inequality when including other contributory benefits (1 point on average), while the inclusion of non-contributory benefits reduces the Gini on 3 points on average. Norway and Denmark are clear outliers, with reductions of 11 points once non-contributory benefits are included, followed by the Netherlands (8 points). On the other hand, the inclusion of these benefits make little difference in Portugal, Greece or Serbia.

Moving on to disposable income, we find that deducting taxes and social insurance contributions result in a large average drop in the Gini, of 5 points, same as SI contributory pensions. Ireland shows the largest reduction in inequality due to taxes and contributions, of 10 points, followed by Portugal, Belgium, Slovenia and Croatia (7 points). Taxes and contributions have little redistributive impact on Bulgaria and Switzerland.

Overall, going from factor income to disposable income, the Gini decreases on 13 points on average. Finland and Norway see the largest drops, of 21 points, followed by the Netherlands, France, Hungary and Denmark with 19 points. Romania, Serbia and the Baltics see the smallest changes, between 5 and 7 points of the Gini.

Different definitions of pre-distribution income make a major difference in assessing the role of the State in reducing income inequalities. This is because the relative importance of difference components differ across countries, and whether we treat them as pre-distribution or redistribution will inevitably change both the level to which inequalities go down as well as cross-country rankings. Contributory pensions play a big role in France and Hungary, non-contributory benefits matter in Norway and Denmark, and taxes and transfers are important in Ireland or Portugal. Other countries, such as Romania, Serbia and the Baltics see little overall redistribution, so the choice of pre-distribution income makes little difference. On average, redistribution can go anywhere from 5 to 13 points of the Gini index depending on how we define redistribution.

5   Results incorporating indirect taxes and government spending on households

As set out previously, we can go beyond disposable income to assess the role of government spending directly affecting households and the indirect taxes they pay. We do so by exploiting the availability from the WID DINA output – discussed in more depth below – of intermediate

concepts that deal with indirect taxes and individual government spending, but using them in a different manner to that of the DINA series.[5] Figure 2 extends Figure 1 by including the change in inequality due to indirect taxes and individual government spending.

Indirect taxes – as reported in the DINA microfiles – include two components, taxes on products and taxes on production. The DINA microfiles allocates the former proportionally to consumption and the latter proportionally to pretax income. This assumption is a relevant one as taxes on products are a large share of National Income and distributing it proportionally to consumption makes it much more equally distributed than in proportion to gross income, increasing inequality when deducted.[6] On the other hand, the way we allocate taxes on production makes little difference. We opt to keep this allocation rule to avoid further departures from the microfiles.

On average, the Gini increases 4 points when deducting indirect taxes from disposable income. Hungary sees the largest increase (8 points), followed by Sweden, Bulgaria, Serbia, Denmark, Czechia and Croatia (6 points). Switzerland and Poland see no major changes. Once we include individual government spending (allocated as a lump-sum across all households), inequality falls 5 points on average. Serbia and Sweden see the largest drops (8 points), followed by the Netherlands and Romania (7 points) while, on the other end, Switzerland sees little change (1 point). Overall, it seems that the increase in inequality when indirect taxes are deducted and the decrease when allocating individual government spending cancel each other out.

If we assess the full extent of redistribution, from factor to final income, there is an average drop of 13 points of the Gini, same as from final to disposable income. Figure A3 in the Appendix reinforces this point, showing that the extent of redistribution and each country's relative position sees little difference whether we consider disposable or final income as our measure of post-redistribution income. Two exceptions to this conclusions are the Netherlands and Hungary. The former sees lower inequality under final income while the converse is true for the latter. The case of the Netherlands is illustrative of the role these additional income components can play. When considering disposable income, the Netherlands behaves similarly to Germany or France in terms of redistribution, while its redistributive capacity is closer to that of Finland and Norway when looking at final income.

6   Results adjusting for missing/top incomes

Overall, our findings do not change substantially once we adjust to address higher non-response rates at the top (Figure 3), but they do change for some countries once we include additional income components, namely the household's ownership of stocks and imputed rents (Figure 4). On average, the first adjustment – rescaling incomes to address non-response

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[5] Concretely, indirect taxes are added up to pre-distribution in DINA while they are deducted from disposable income in this context.

[6] e.g., France has a Gini for equivalised disposable income of 29, deducting indirect taxes when taxes on products are proportional to consumption increases it to 33, deducting them when proportional to income decreases it to 27.

– results in an increase of the Gini ranging from 0.5 to 1.3 points, depending on the income concept. The second adjustment – including the ownership of stocks and imputed rents – increases the Gini for factor income (and for factor plus private pensions) in 5.7 points on average. This increase is attenuated once we include additional income components, falling to 1.7 when including SI contributory pensions, 1 point when including other contributory benefits, and to 0.1 when including non-contributory benefits.

In terms of redistribution, the first adjustment does not change our findings in a relevant way. On average, the redistributive capacity of SI contributory pensions becomes slightly larger (decreasing the Gini in 4.76 points instead of 4.69 in our benchmark case) while the converse is true for taxes and contributions (from our benchmark of 4.46 to 4.78 points). Contrasting Figures 1 and 3 we see how this adjustment makes little different in terms of redistribution, with the exception of Greece that sees a very large increase in gross income inequality (from 35 to 53 points) and in disposable income inequality (32 to 59) which results in an artificial 'negative' contribution of the last two income components – non-contributory benefits and taxes.

The second adjustment has a large impact in terms of redistributive capacity for some countries. We see that the level of redistribution increases for all components due to an increase in factor income inequality. The average reduction in the Gini when including other contributory benefits (besides pensions) goes 0.9 to 1.6. The reduction when including non-contributory benefits goes from 2.67 to 3.1. The largest increase, however, is for SI contributory pensions, going from 4.7 to 8.7 points. This is largely in part because factor income inequality sees the largest increase while the remaining income concepts see much smaller increases.

We see an increase of the redistributive capacity of SI contributory pensions among countries where factor income increases the most such as Romania, Czechia, Greece or Poland. On the other hand, countries like Iceland, the Netherlands, Switzerland or Norway saw no changes in their redistributive capacity as neither factor nor disposable income changed substantially. 'Top income adjustments' matter for redistribution to the extent that they correct inequality in pre-distribution income, particularly that of factor income.

7   Results in a DINA perspective

DINA estimates of inequality use the adjusted income series as their initial building block. These series are rescaled to match the aggregate National Income sector they represent, in this case, the household and corporate sector. They then add the government sector differently for pre- or post-distribution income. For pre-redistribution, they add all of government income (including income from public corporations, from taxes and miscellaneous income) proportionally to gross income, while for post-distribution they add government spending in different ways. The result, as classified in Figure A2 in the appendix, is a single allocation rule for pre-distribution income and multiple rules for post-distribution income.

Contrary to our survey analysis when we dealt with multiple pre-distribution income concepts, here we will deal with multiple post-distribution concepts and a single pre-distribution concept. As Table 3 shows, the choice of survey pre-distribution concept becomes irrelevant in the DINA context, as government income accounts for most if not all of the final income distribution. For that reason we will assess redistribution by contrasting DINA gross income against the different post-distribution concepts, which differ in how they allocate three main components of government spending: health spending, individual spending (which includes health spending), and collective spending.

Within the DINA framework there are two main ways in which these components are allocated, either proportionally to disposable income or as a lump-sum, equally across households. A proportional allocation has no impact on relative measures of inequality such as the Gini, while a lump-sum allocation – if large enough – will decrease inequality. These two ways are presented as 'extreme' cases of allocation, as the actual allocation should lie somewhere in the middle, based on sociodemographic characteristics, consumption choices or factors such as life-expectancy for the case of health.

Following the sequential approach presented in previous sections, we create four post-distribution concepts, as shown in Figure A2 in the Appendix. We begin by allocating all government spending proportionally to income – equivalent to not including it at all. We then distribute health spending equally among households. Our third post-distribution concept distributives the remaining components of individual government spending (mainly education and housing) as a lump-sum across households. Our last concept adds collective spending, distributing all government spending as a lump sum.[7] Figure 5 shows the reduction in the Gini going from DINA gross income to each of these four concepts.

From the offset we see that, independent of our measure of post-distribution income, average redistribution is larger in DINA than for survey-based estimates. The average reduction in the Gini going from factor income to either disposable or final income was 13 points (range, 4 to 22). On the other hand, the average reduction in the Gini going from DINA gross income inequality to DINA posttax disposable income (where all government spending is allocated proportionally) is 14 points (range, 3 to 24), going up to 22 points when allocating all government spending as a lump-sum (range, 9 to 35). DINA redistribution is larger mostly because pre-distribution inequality is larger and to a lesser extent because post-distribution inequality is lower. In other words, once we go beyond the household and corporate sector, the DINA allocation of government income to pre-distribution income increases inequality while the allocation of government spending decreases inequality.

Sequentially, by assessing each DINA post-distribution income concept we would be looking at the influence of health spending, non-health individual spending (e.g., housing, education) and collective spending. Through this approach we can then capture the 'marginal' contribution of including each of these components, when allocated equally across households.

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[7] These concepts are consistent with the three alternative DINA series discussed in WIL (2021; p. 65), to which we add a fourth where individual government spending is allocated as a lump-sum.

Figure 6 looks at the sequential contribution of each component, much in the way that Figures 1 to 5 did in the survey context. Allocating health spending as a lump-sum reduces DINA post-tax income inequality in 3.1 points of the Gini. The remaining components of individual spending further reduce the Gini on 2.3 points, similar to collective spending that reduces the Gini in an additional 2.5 points. On average, whether we allocate health spending equally across households or in proportion to income makes the largest difference in assessing redistribution.

Allocating health spending as a lump-sum rather than proportionally matters the most for Sweden, Denmark and Germany, decreasing the Gini in around 5 points. It has the least impact on the Netherlands and Switzerland, decreasing the Gini in less than 1.5 points. Interestingly, non-health individual spending plays an important role in the Netherlands, reducing the Gini in almost 6 points, followed by Estonia with a decrease of 4 points, but with little impact on Cyprus, Czechia and the UK. Lastly, government collective spending matters the most in Latvia, Greece and Estonia, reducing the Gini in more than 4 points.

In interpreting these findings the distinction between individual and collective spending is crucial. While the redistributive consequences of individual government spending are fairly easy to grasp, for example through the role of public health or education, the role through which collective spending influences the income distribution is not as clear. Further inspection is required to understand what are the most important components of collective spending, particularly among countries where it has a large redistributive capacity.

8 Conclusions and Implications

Key findings from the analysis presented in this paper are as follows. At the survey level, the two most relevant components for redistribution are the inclusion of SI contributory pensions, important for France and Hungary, and the deduction of taxes and SI contributions, relevant in Ireland and Portugal. Non-contributory benefits matter considerably in Norway and Denmark but have little impact elsewhere.

Going beyond household income we see that deducting indirect taxes and including in-kind benefits from the government makes little difference on average, as those two components cancel each other. One interesting exception is the Netherlands, which 'behaves' in terms of redistribution as a Western European country under disposable income and as a Nordic country under final income.

Top income adjustments increase the level of redistribution among countries where pre-distribution inequality rises the most. This is particularly true for factor income, but less so for other pre-distribution concepts as the additional income components attenuate this increase. Overall, there is little change on disposable income inequality and the relative of redistributive capacity of the different income components remains largely unchanged.

In the DINA context the allocation of health spending plays a major role in shaping redistribution, particularly in Norway and Sweden. The way it is allocated will then shape the relative important of pre-distribution and redistribution, particularly when making cross-country comparisons. Education, housing (i.e., non-health spending) matters in the Netherlands, while collective spending matters in Greece and Latvia. Overall, we find that the assumptions behind the allocation of government spending are particularly important and require further exploration.

These findings have major implications for how one thinks about and understands income inequality and redistribution. Different approaches to the treatment of social insurance play a central role in the divergence in conclusions across different studies with respect to whether differences in pre-distribution inequality or in redistribution are primarily responsible to differences in inequality in disposable income. When the scope of the analysis is broadened beyond disposable income, the treatment of state healthcare spending and how the benefits from that spending are allocated across households is also seen to be critical to the extent of redistribution one finds.

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Figure 1: Sequential contribution of each income component to the Gini index (survey income)
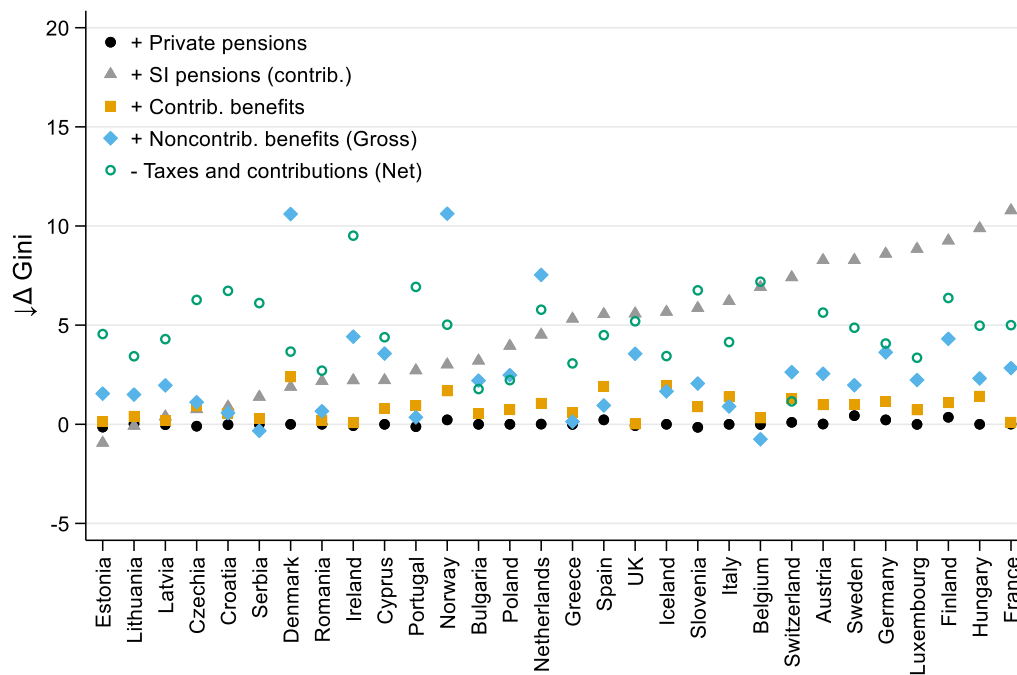
Note: Stepwise change in the Gini index after the inclusion of an additional component. Household equivalised income.

Figure 2: Sequential contribution of each income component to the Gini index (incl. indirect taxes and gov. spending)
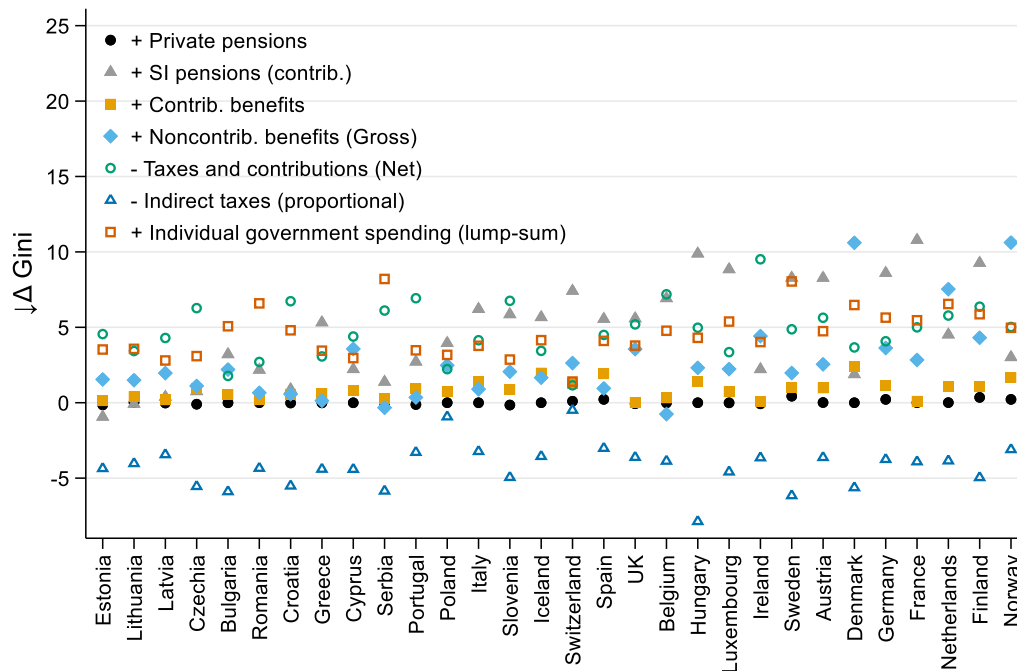
Note: Stepwise change in the Gini index after the inclusion of an additional component. Household equivalised income.

Figure 3: Sequential contribution of each income component to the Gini index (unadjusted disposable income)
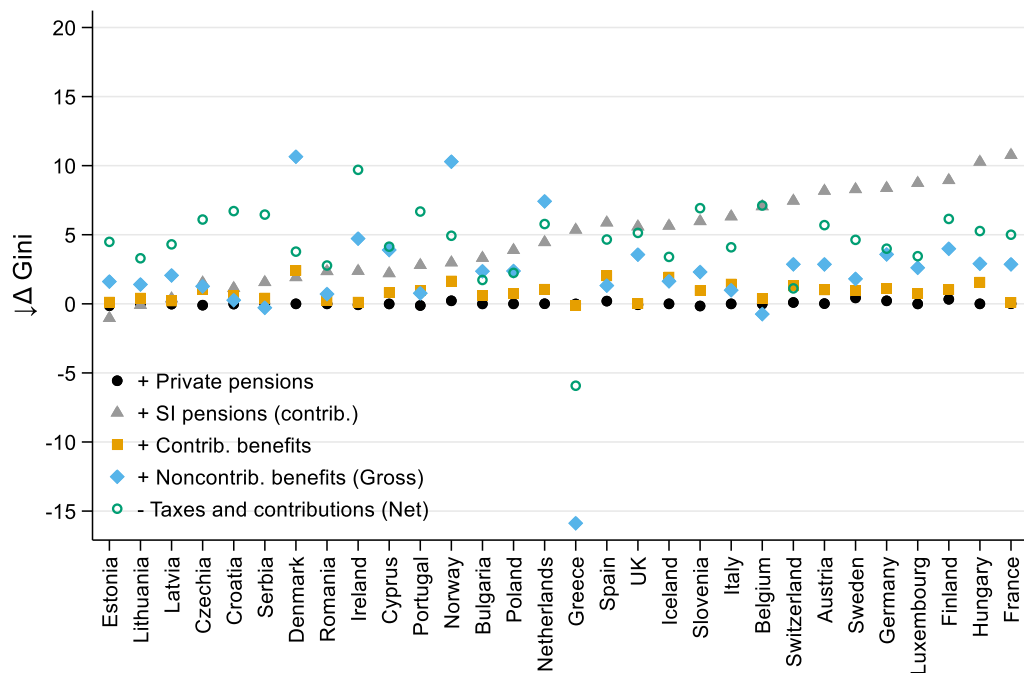
Note: Stepwise change in the Gini index after the inclusion of an additional component. Household equivalised income.

Figure 4: Sequential contribution of each income component to the Gini index (adjusted disposable income)
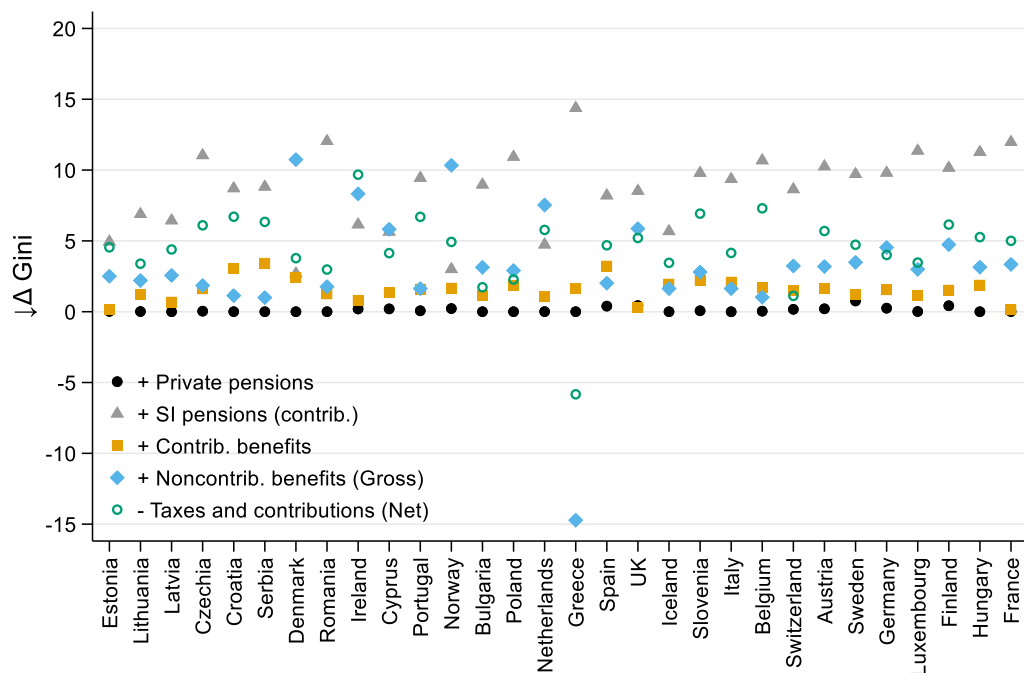
Note: Stepwise change in the Gini index after the inclusion of an additional component. Household equivalised income.

Figure 5: Decrease in Gini under different DINA posttax national income concepts
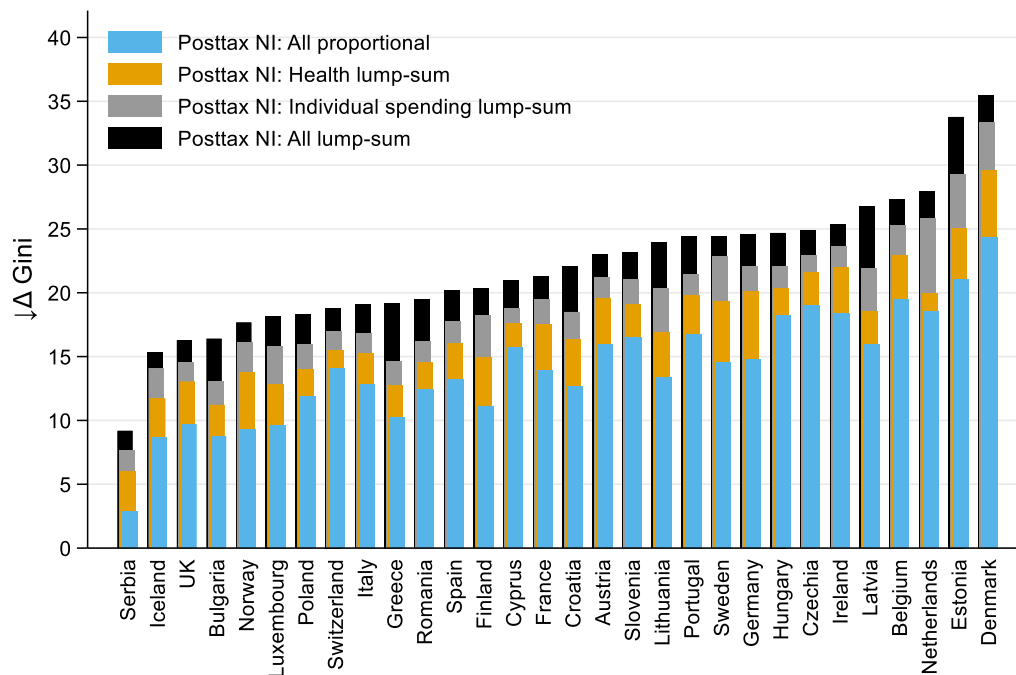
Note: Difference between pretax gross income and each of the posttax income concepts.
Distributional National Income, added up at the household level and equivalised.

Figure 6: Sequential contribution of each government spending component to the Gini index (DINA)
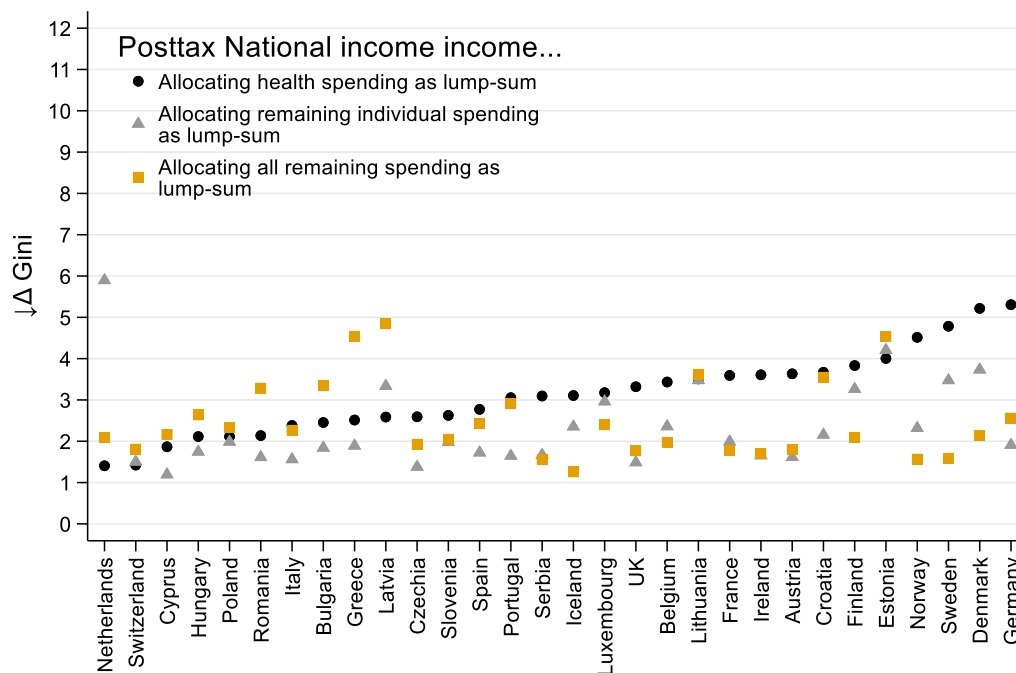
Note: Stepwise change in the Gini index after the inclusion of an additional component.
Distributional National Income, added up at the household level and equivalised.

Table 1: Gini index estimates for survey-based income concepts (Pre-distribution income)

	Factor			Mkt1			Mkt2			Mkt3			Gross		
	Survey	Adj1	Adj2	Survey	Adj1	Adj2	Survey	Adj1	Adj2	Survey	Adj1	Adj2	Survey	Adj1	Adj2
AT	0.449	0.458	0.490	0.449	0.457	0.488	0.366	0.376	0.385	0.356	0.366	0.369	0.331	0.337	0.337
BE	0.408	0.413	0.484	0.409	0.413	0.484	0.339	0.343	0.377	0.336	0.339	0.360	0.344	0.346	0.350
BG	0.476	0.491	0.561	0.476	0.491	0.561	0.444	0.458	0.471	0.438	0.452	0.460	0.416	0.428	0.429
CH	0.428	0.432	0.450	0.427	0.431	0.448	0.353	0.356	0.362	0.340	0.343	0.347	0.313	0.315	0.315
CY	0.401	0.405	0.467	0.401	0.405	0.465	0.379	0.383	0.408	0.371	0.375	0.394	0.335	0.336	0.336
CZ	0.330	0.321	0.429	0.331	0.322	0.429	0.323	0.307	0.318	0.314	0.296	0.302	0.303	0.284	0.284
DE	0.480	0.491	0.520	0.477	0.489	0.518	0.391	0.406	0.420	0.380	0.394	0.404	0.344	0.359	0.359
DK	0.455	0.469	0.478	0.455	0.469	0.478	0.436	0.450	0.451	0.413	0.426	0.426	0.307	0.319	0.319
EE	0.355	0.364	0.435	0.357	0.365	0.435	0.366	0.376	0.386	0.365	0.374	0.384	0.349	0.358	0.359
ES	0.464	0.460	0.507	0.462	0.458	0.503	0.407	0.399	0.421	0.387	0.379	0.389	0.378	0.366	0.369
FI	0.481	0.492	0.518	0.478	0.489	0.514	0.385	0.400	0.412	0.374	0.389	0.397	0.331	0.349	0.350
FR	0.479	0.480	0.497	0.479	0.480	0.497	0.371	0.372	0.378	0.370	0.371	0.376	0.342	0.343	0.343
GB	0.474	0.474	0.535	0.474	0.474	0.531	0.419	0.418	0.445	0.418	0.418	0.442	0.383	0.382	0.384
GR	0.413	0.423	0.543	0.413	0.423	0.543	0.360	0.369	0.400	0.354	0.370	0.383	0.353	0.529	0.530
HR	0.382	0.392	0.502	0.382	0.392	0.502	0.373	0.381	0.415	0.368	0.375	0.385	0.362	0.372	0.373
HU	0.467	0.455	0.471	0.467	0.455	0.471	0.368	0.353	0.359	0.354	0.337	0.340	0.331	0.308	0.308
IE	0.448	0.447	0.531	0.449	0.448	0.529	0.427	0.424	0.468	0.426	0.423	0.460	0.382	0.375	0.376
IS	0.361	0.363	0.364	0.361	0.363	0.364	0.305	0.306	0.307	0.285	0.287	0.287	0.268	0.270	0.271
IT	0.461	0.450	0.498	0.462	0.450	0.498	0.399	0.387	0.404	0.386	0.372	0.383	0.377	0.362	0.367
LT	0.420	0.443	0.534	0.420	0.443	0.534	0.420	0.444	0.465	0.416	0.440	0.453	0.401	0.426	0.431
LU	0.456	0.465	0.500	0.456	0.465	0.500	0.367	0.378	0.386	0.360	0.370	0.374	0.338	0.344	0.344
LV	0.423	0.432	0.504	0.423	0.432	0.504	0.419	0.428	0.439	0.418	0.426	0.432	0.398	0.406	0.407
NL	0.464	0.472	0.476	0.464	0.472	0.476	0.419	0.427	0.428	0.409	0.416	0.418	0.333	0.342	0.342
NO	0.450	0.455	0.456	0.448	0.453	0.453	0.417	0.423	0.423	0.401	0.406	0.407	0.294	0.303	0.303
PL	0.373	0.394	0.482	0.373	0.394	0.482	0.333	0.355	0.373	0.326	0.348	0.354	0.301	0.324	0.325
PT	0.432	0.435	0.519	0.433	0.436	0.518	0.406	0.408	0.424	0.397	0.399	0.408	0.393	0.391	0.392
RO	0.405	0.407	0.527	0.405	0.407	0.527	0.383	0.383	0.407	0.381	0.381	0.394	0.374	0.374	0.377
RS	0.408	0.420	0.546	0.408	0.420	0.546	0.394	0.404	0.458	0.391	0.400	0.424	0.395	0.403	0.414
SE	0.435	0.438	0.476	0.430	0.434	0.469	0.347	0.351	0.372	0.337	0.341	0.359	0.318	0.323	0.325
SI	0.395	0.395	0.453	0.397	0.397	0.453	0.338	0.337	0.355	0.329	0.328	0.332	0.309	0.304	0.304

Note: Factor income includes all income concepts stemming from ownership of capital and labour. Market income 1 (Mkt1) adds private pensions. Market income 2 (Mkt2) adds contributory pensions. Market income 3 (Mkt3) all other contributory benefits. Gross income adds non-contributory benefits (including pensions). The first adjustment (Adj1) rescales income to match average taxable income at each percentile of the gross income distribution. The second adjustment (Adj2) adds imputed rents and stocks holding of households. See Figure A1 for a diagram representing each step of the process.

Table 2: Gini index estimates for survey-based income concepts (Post-distribution income)

	Disposable income			Final Income	
	Survey	Adj1	Adj2	Minus taxes	Plus spending
AT	0.274	0.280	0.280	0.311	0.263
BE	0.272	0.275	0.277	0.310	0.263
BG	0.398	0.411	0.411	0.457	0.406
CH	0.302	0.304	0.304	0.307	0.293
CY	0.292	0.295	0.295	0.336	0.306
CZ	0.240	0.223	0.223	0.296	0.265
DE	0.303	0.319	0.319	0.340	0.284
DK	0.270	0.281	0.281	0.326	0.261
EE	0.304	0.313	0.314	0.348	0.312
ES	0.333	0.319	0.322	0.363	0.322
FI	0.267	0.288	0.288	0.317	0.258
FR	0.292	0.293	0.293	0.331	0.276
GB	0.331	0.331	0.331	0.367	0.329
GR	0.322	0.589	0.589	0.366	0.331
HR	0.295	0.305	0.306	0.350	0.302
HU	0.281	0.255	0.256	0.360	0.317
IE	0.287	0.278	0.280	0.323	0.283
IS	0.234	0.236	0.236	0.269	0.228
IT	0.335	0.322	0.325	0.367	0.330
LT	0.367	0.393	0.397	0.407	0.372
LU	0.304	0.310	0.310	0.350	0.296
LV	0.355	0.363	0.363	0.389	0.361
NL	0.275	0.284	0.284	0.314	0.248
NO	0.244	0.254	0.254	0.275	0.225
PL	0.279	0.302	0.302	0.288	0.257
PT	0.324	0.324	0.325	0.356	0.322
RO	0.347	0.346	0.347	0.391	0.325
RS	0.333	0.338	0.351	0.392	0.310
SE	0.269	0.277	0.277	0.331	0.250
SI	0.241	0.235	0.235	0.291	0.262

Note: Disposable income subtracts taxes and social insurance transfers. Survey income only relies in household surveys. The first adjustment (Adj1) adds imputed rents and stocks holding of households. The second adjustment (Adj2) rescale income to match average taxable income at each percentile of the gross income distribution. Final income (last two columns) represents household disposable income (survey-based) minus indirect taxes (second to last column), allocated proportionally to gross income, and plus individual government spending (last column), allocated as a lump-sum across all households. See Figure A1 for a diagram representing each step of the process.

Table 3: Gini index estimates for DINA income concepts

	Pre-distribution					Post-distribution			
	Factor	Mkt1	Mkt2	Mkt3	Gross	Disposable	Health	Ind. Spending	All spending
AT	0.462	0.462	0.462	0.462	0.462	0.303	0.250	0.232	0.266
BE	0.494	0.494	0.494	0.494	0.494	0.299	0.241	0.222	0.265
BG	0.553	0.553	0.553	0.553	0.553	0.465	0.422	0.389	0.441
CH	0.452	0.452	0.452	0.452	0.453	0.312	0.283	0.265	0.298
CY	0.483	0.483	0.483	0.483	0.483	0.325	0.295	0.273	0.307
CZ	0.433	0.433	0.433	0.433	0.435	0.245	0.205	0.186	0.219
DE	0.481	0.481	0.481	0.481	0.481	0.333	0.261	0.235	0.280
DK	0.619	0.619	0.619	0.619	0.619	0.375	0.286	0.264	0.323
EE	0.660	0.660	0.660	0.660	0.661	0.451	0.368	0.323	0.411
ES	0.522	0.522	0.522	0.522	0.522	0.390	0.345	0.320	0.362
FI	0.422	0.422	0.422	0.422	0.422	0.311	0.240	0.219	0.272
FR	0.451	0.451	0.451	0.451	0.453	0.314	0.258	0.240	0.278
GB	0.407	0.407	0.407	0.407	0.408	0.311	0.263	0.245	0.277
GR	0.683	0.683	0.683	0.683	0.685	0.583	0.539	0.493	0.558
HR	0.473	0.473	0.473	0.473	0.473	0.346	0.288	0.252	0.310
HU	0.500	0.500	0.500	0.500	0.500	0.318	0.279	0.253	0.297
IE	0.543	0.543	0.543	0.543	0.544	0.360	0.308	0.291	0.324
IS	0.335	0.335	0.335	0.335	0.335	0.248	0.194	0.181	0.217
IT	0.480	0.480	0.480	0.480	0.481	0.352	0.313	0.290	0.328
LT	0.581	0.581	0.581	0.581	0.581	0.448	0.378	0.342	0.413
LU	0.436	0.436	0.436	0.436	0.437	0.341	0.279	0.255	0.309
LV	0.562	0.562	0.562	0.562	0.562	0.403	0.343	0.295	0.377
NL	0.509	0.509	0.509	0.509	0.509	0.324	0.251	0.230	0.310
NO	0.354	0.354	0.354	0.354	0.354	0.261	0.193	0.177	0.216
PL	0.454	0.454	0.454	0.454	0.455	0.336	0.295	0.272	0.315
PT	0.528	0.528	0.528	0.528	0.529	0.361	0.314	0.285	0.330
RO	0.515	0.515	0.515	0.515	0.515	0.391	0.353	0.321	0.370
RS	0.358	0.358	0.358	0.358	0.358	0.329	0.282	0.266	0.298
SE	0.445	0.445	0.445	0.445	0.445	0.300	0.217	0.201	0.252
SI	0.429	0.429	0.429	0.429	0.429	0.265	0.219	0.198	0.238

Note: Factor income includes all income concepts stemming from ownership of capital and labour. Market income 1 (Mkt1) adds private pensions. Market income 2 (Mkt2) adds contributory pensions. Market income 3 (Mkt3) all other contributory benefits. Gross income adds non-contributory benefits (including pensions). All pre-distribution income concepts include government income, allocated proportionally to gross income. Disposable income subtracts taxes and social insurance transfers, implicitly allocating all government spending proportionally to adjusted survey income, being equivalent to the DINA concept of 'posttax disposable income'. The following column (named 'Health') only allocates health spending as a lump-sum, the rest in proportion to income. The 'Individual spending' column allocates individual government spending as a lump-sum (health, education, housing, etc.). The last column allocates the entirety of government spending. See Figure A1 for a diagram representing each step of the process.

Figure A1: Income concepts and their components (Factor to final income)

Factor income (with or without employer SI contributions)
- -
+ Private (personal and occupational) pensions

+ SI contributory old age benefits   Gross
                                                                      income
+ Other SI contributory benefits   Disposable
                                                                               income
+ All non-contributory benefits   Post-tax
-                income
− Taxes on income and wealth   Final
                                                                                                income
− SI contributions (with or without employer SI contributions)

− Indirect taxes
- -
+ In kind benefits paid for by the state
- -
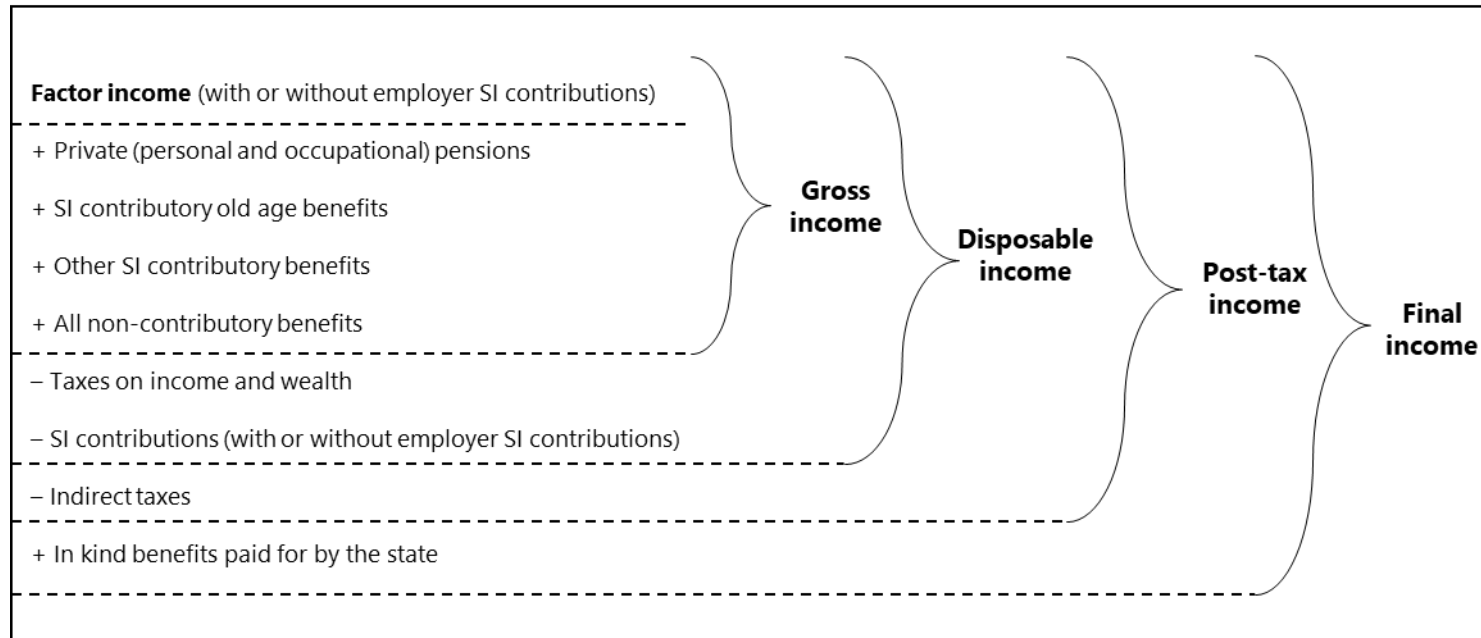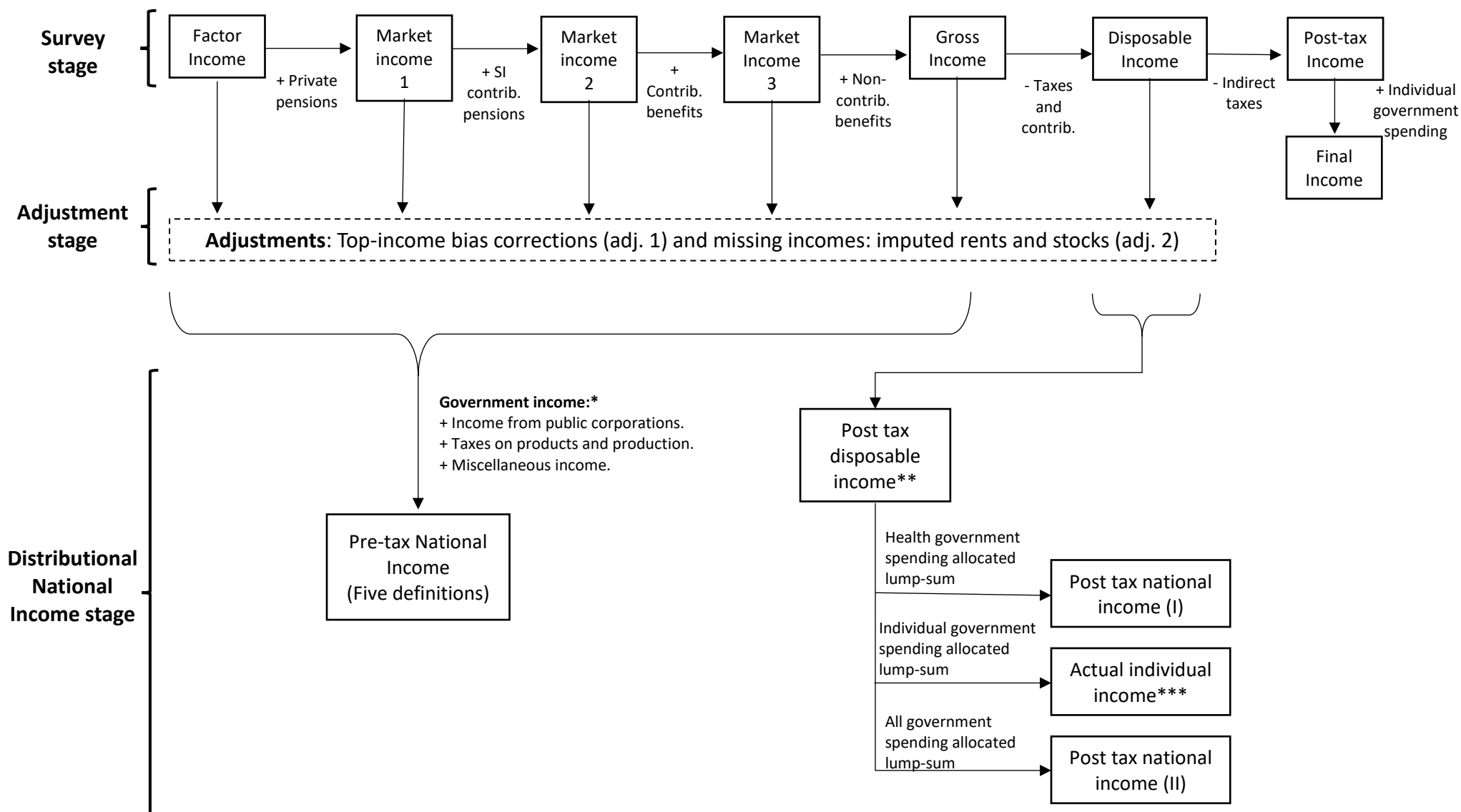
Figure A2: Detailed construction of all income concepts (Survey, adjusted and DINA)

*   All taxes are allocated proportional to gross income. Taxes on products can also be allocated in proportion to household consumption.

** This measure is equivalent to assume that all government income is allocated proportionally, thus leaving any relative inequality index unchanged.

*** This concept is similar to 'final income' as defined by the UK Office of National Statistics, differing in that state-paid in-kind benefits in final income are allocated 'based on households characteristics' rather than as a lump-sum.

Figure A3: Total reduction in the Gini under disposable and final income
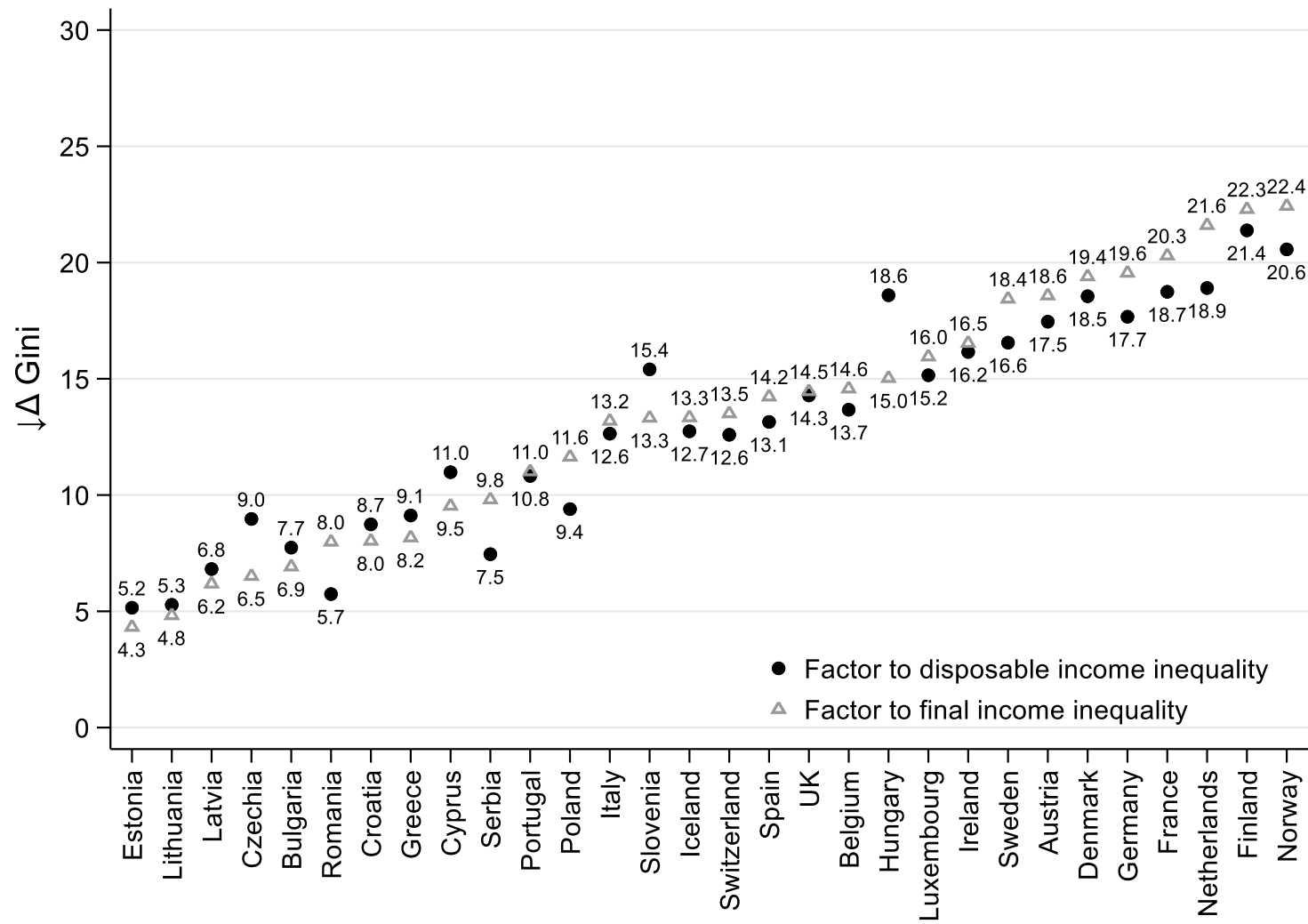
Table A1: Survey-based definitions for pre-distribution income (with EU-SILC codes)

DINA factor income (finc)		DINA pretax post-unemployment income (ginc)		EU-SILC total household gross income (hy010)	
Individual income components		Individual income components		Individual income components	
Gross employee cash or near cash income	PY010G	Gross employee cash or near cash income	PY010G	Gross employee cash or near cash income	PY010G
Company car	PY021G	Company car	PY021G	Company car	PY021G
Employer's social insurance contribution	PY030G	Employer's social insurance contribution	PY030G		
Gross cash benefits or losses from self-employment, including royalties	PY050G	Gross cash benefits or losses from self-employment, including royalties	PY050G	Gross cash benefits or losses from self-employment, including royalties	PY050G
		Pensions received from individual private plans, other than those covered under ESSPROS	PY080G	Pensions received from individual private plans, other than those covered under ESSPROS	PY080G
		Unemployment benefits	PY090G	Unemployment benefits	PY090G
		Old-age benefits	PY100G	Old-age benefits	PY100G
		Survivor' benefits	PY110G	Survivor' benefits	PY110G
		Sickness benefits	PY120G	Sickness benefits	PY120G
		Disability benefits	PY130G	Disability benefits	PY130G
				Education-related allowances	PY140G
Household income components		Household income components		Household income components	
Income from rental of a property or land	HY040G	Income from rental of a property or land	HY040G	Income from rental of a property or land	HY040G
				Family/children related allowances	HY050G
				Social exclusion not elsewhere classified	HY060G
				Housing allowances	HY070G
				Regular inter-household cash transfers received	HY080G
Interests, dividends, profit from capital investments in unincorporated business	HY090G	Interests, dividends, profit from capital investments in unincorporated business	HY090G	Interests, dividends, profit from capital investments in unincorporated business	HY090G
Income received by people aged under 16	HY110G	Income received by people aged under 16	HY110G	Income received by people aged under 16	HY110G
Deductions:		Deductions:		Deductions:	
None		Income tax (contribution to pensions)	OECD data	None	
		Income tax (contribution to unemployment)	OECD data		
		Social contributions (share accrued to unemployment)	OECD data		
		Social contributions (share accrued to pensions)	OECD data		
		Employer's social insurance contribution (share accrued to unemployment)	PY030G		
		Employer's social insurance contribution (share accrued to pensions)	PY030G		
		Contributions to individual private pension plans	PY035G		

Table A2: Survey-based definitions for post-distribution income (with EU-SILC codes)

EU-SILC Total disposable household income (hy020)		DINA disposable income (ninc)	
Individual income components		Individual income components	
Gross employee cash or near cash income	PY010G	Gross employee cash or near cash income	PY010G
Company car	PY021G	Company car	PY021G
		Employer's social insurance contribution	PY030G
Gross cash benefits or losses from self-employment, including royalties	PY050G	Gross cash benefits or losses from self-employment, including royalties	PY050G
Pensions received from individual private plans, other than those covered under ESSPROS	PY080G	Pensions received from individual private plans, other than those covered under ESSPROS	PY080G
Unemployment benefits	PY090G	Unemployment benefits	PY090G
Old-age benefits	PY100G	Old-age benefits	PY100G
Survivor' benefits	PY110G	Survivor' benefits	PY110G
Sickness benefits	PY120G	Sickness benefits	PY120G
Disability benefits	PY130G	Disability benefits	PY130G
Education-related allowances	PY140G	Education-related allowances	PY140G
Household income components		Household income components	
Income from rental of a property or land	HY040G	Income from rental of a property or land	HY040G
Family/children related allowances	HY050G	Family/children related allowances	HY050G
Social exclusion not elsewhere classified	HY060G	Social exclusion not elsewhere classified	HY060G
Housing allowances	HY070G	Housing allowances	HY070G
Regular inter-household cash transfers received	HY080G	Regular inter-household cash transfers received	HY080G
Interests, dividends, profit from capital investments in unincorporated business	HY090G	Interests, dividends, profit from capital investments in unincorporated business	HY090G
Income received by people aged under 16	HY110G	Income received by people aged under 16	HY110G
minus:		minus:	
Regular taxes on wealth	HY120G	Regular taxes on wealth	HY120G
Regular inter-household cash transfer paid	HY130G	Regular inter-household cash transfer paid	HY130G
Tax on income and social insurance contributions	HY140G	Income tax	OECD data
		Social contributions (unemployment and pensions)	OECD data
		Employer's social insurance contribution	PY030G
		Contributions to individual private pension plans	PY035G