Does Predistribution or Redistribution Account for Varying Income Inequality?

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Inequality is higher in the United States than in most European countries, and also varies substantially across Europe, but what lies behind this variation is far from being a settled matter. Market forces shape the 'predistribution' of income from labour and capital, while taxes and state spending reduce inequalities through redistribution. A recent paper by Blanchet et al. (2021) explores these drivers, finding that inequality estimates based on Distributional National Account (DINA) attribute around two-thirds of the US-EU gap to predistribution. Their findings suggest that lower levels of inequality in Europe are mostly explained by the market distribution rather than its subsequent redistribution.

The fact that predistribution plays such a large role is partly due to their use of DINA. When using survey data on its own, they find that over 90% of the gap is accounted for by redistribution. In other words, the adjustments involved in going from household surveys to National Accounts explain this change. These adjustments involve correcting surveys to account for underreporting and undersampling at the top of the income distribution, as well as the allocation of all remaining components of National Income going beyond the household sector. After these adjustments the US-EU gap in gross income inequality accounts for a much larger part of the net income gap. The question that remains is what role is played by the different DINA income concepts and unit of observations.

DINA income concepts differ substantially from those typically studied using household surveys. Because top income adjustments are mostly based on tax data, DINA income concepts closely resemble taxable income. As such, income components such as social contributions are typically excluded from gross income concepts. Similarly, income is measured across individuals (or couples) rather than across households. Furthermore, the way in which additional National Income components are allocated can have important consequences in the changes in both inequality levels and trends. The goal of this paper is to provide a better understanding of the impact of these methodological choices, focusing concretely on their impact on the extent to which redistribution through taxes and is assessed to affect disposable income inequality.

We explore the extent to which inequality reduces as a result of redistribution, and how this differs when income definitions are varied. We do this in two ways. First, we follow the work of Blanchet et al. (2021) and explore the US-EU gap in inequality for different income concepts, units of observations and European regions. We go from pretax factor income averaged adults, as defined

in DINA, to pretax gross income equivalised across households. Where factor income is accrued to the owners of the factors of production, either labour or capital, whereas gross income includes pension income as well as unemployment benefits. Our main finding is that the pension system plays a major role in explaining the gap between the US and Europe. If, contrary to the approach taken by Blanchet et al. (2021), pension income is allocated as gross income, then predistribution accounts for the whole net income gap. In other words, if pension income is part of gross income, the US-EU gap for pretax income is equivalent to the net income gap.

Our second analysis comprises a detailed overview of the DINA income concepts for European countries. We provide multiple definitions for pre and posttax income, assessing the extent to which the Gini decreases in each of these combinations. We provide three definitions for pretax income, all based on DINA concepts. We include for factor and gross income, as well as an intermediate definition where only pension income (but not unemployment benefits) have been included. We provide several posttax definitions under different assumptions to allocate National Income. For example, with individual government spending allocated as a lump sum or proportional to household income, or when individual government spending is further split into health and non-health spending. In addition, we provide all inequality estimates under two units of observation: an average across adults and a household equivalised measure. We find major heterogeneities with the Gini index decreasing by anywhere from 5 to 25 points after redistribution. The two most important components in explaining this heterogeneity are whether pension income is allocated to gross or net income, and whether government spending (particularly, health spending) is allocated equally as a lump-sum or proportionally to income. Our findings show that even within the DINA framework, different definitions and assumptions have a substantial impact on the extent to which taxes and transfers are seen to decrease inequality.

DINA estimates of inequality provide a useful metric to compare differences in income. The fact that they match micro and macro data to achieve consistent estimates allows for better comparisons both across countries and over time. In constructing these measures, income concepts and units of analysis depart from 'standard' definitions in household surveys, designed to reflect differences in resource availability and ultimately, welfare. They do so for multiple reasons, from the need to match tax data to the fact that equivalence scales cannot add up to National Income. Through this paper we aim to bridge the gap between these two strands of literature, thus providing a way of reconciling them and providing inequality estimates that address many of the issues associated with data from household surveys while being consistent with standard concepts and definitions.