Did the COVID-19 pandemic impact income mobility and distribution?
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Long abstract.

The economic shock caused by the pandemic is unprecedented. As governments were forced to adopt draconian measures to protect the lives of their citizens, GDPs fell abruptly across all Member States, registering losses in the order of -10% quarter-on-quarter. However, up to now, knowledge about how impacts were felt across the population has been limited by a lack of data. Indeed, the large household surveys which are generally used to analyse income inequality (e.g., EU-SILC – Survey on Income and Living Conditions), are only available with a significant lag (2 to 3 years). Because of this, much of the debate on income inequality is based on expert opinions, on alternative data collection solutions (such as ad hoc surveys), and microsimulation model exploiting past data. With regards to ad hoc surveys, the most complete and reliable one appears to be the COME-HERE panel survey led by the University of Luxembourg (see Clark et al., 2021) including France, Germany, Italy, and Spain, which has been collected since the beginning of the pandemic. Findings based on this study suggest that income inequality fell from January 2020 to January 2021 in these four countries, largely thanks to income support measures. Microsimulation analyses (see for instance Almeida et al. 2020, 2021; Cantó et al., 2021; Christl at al. 2021, 2022) rely on models calibrated on past data to simulate the COVID-19 shock, and in the absence of a policy response, they predict an increase in income inequality, while interventions in the form of changes in the tax and benefit systems lead to a fall in inequality. Hence, the results coming from different strands of the literature seem to point to similar conclusions.

Against this background, this paper contributes to the literature by taking a different, although complementary approach, relative to those illustrated above. First, it relies on the Eurostat Labour force Survey (LFS), one of the official EU datasets, for which income decile data are gradually becoming available for 2020. While, the EU LFS is not originally designed as a panel (i.e., with a longitudinal dimension) it has a rotational structure that permits, for each wave (i.e., within the same year), some longitudinal analysis to be applied. Exploiting the longitudinal dimension and the individual income decile data, we construct transition matrices from one quarter to another, within the same year, and calculate a series of mobility indices. Transition matrices, coupled with mobility indices, provide finely-grained information about the relative position of the portion of respondents in the income distribution and specifically of the overall population of employees (with some breakdowns by demographic aspects, namely gender, age, and educational attainment). More specifically, the work suggests an ad hoc interpretation of the transition matrices and of relative indices that fit well with the question of how COVID-19 (and relative policy responses) impacted income distribution. In addition, it offers insights on the different segments of the income distribution and allows to draw conclusions on the regressive/progressive nature of the crisis and its countermeasures. The study compares the COVID-19 scenario (2020) with a pre-COVID-19 scenario (by selecting as a benchmark year 2019, and for robustness check 2018 as well) and also the COVID-19 scenario with past crises, notably the financial crisis and the sovereign debt crisis. The selection touches six Member States among which four (Greece, Ireland, Italy, and Portugal) were severely hit by the financial and public debt crises. The group also includes Denmark and Estonia, which could be considered as control countries. These two were only marginally affected by the financial crisis and reacted very fast to the COVID-19 pandemic.

In terms of results, we find that inter-quintile income mobility in 2020 is higher than in 2019 (and even more than in 2018) in all countries under consideration. For most of the countries concerned, it is even higher than in the specific years of the sovereign debt crisis. This can be explained by the fact that the
shock in the two crisis has a completely different nature. With additional data, it can be seen that in the financial/sovereign debt crisis transition is more accentuated from employment to unemployment rather than across income categories for employees. Based on the transition matrices, comparing 2020 with the 2019 benchmark year we find a similar or better pattern for those belonging to the first quintile (lowest income class) and a similar pattern for the upward movers of the second quintile. By contrast, data suggest a worsened pattern for the downward movers of the third, the fourth, and the fifth quintiles. It is assumed that it is unlikely to observe an improvement in the income distribution of the lowest classes of income during the pandemic. Because of this, such upward mobility in the first quintile, (and to a certain extent in the second quartile) compared to the benchmark year, is explained by measures targeted at the poorest part of the distribution. The highest mobility (downward in the remaining classes) is likely to be a mix of the ‘pure’ pandemic-crisis effect and the fact that the cushioning measures are not designed to benefit these latter classes. Interestingly, this is also the case for the third quintile and, to a certain extent the second, where possibly the broadest part of the population in absolute terms is concentrated. These results are broadly in line with the existing literature.

**Keywords:** income mobility, transition matrices, income mobility index, quantile analysis.