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Household income mobility in France over the COVID-19 pandemic: Losers and winners of the crisis

Marta Veljkovic [a,b,*,1], Ettore Recchi [b,c,2], Andrew Zola [b,d,e,3]

[a] Sorbonne University, GEMASS, Paris, France
[b] Sciences Po, Centre de Recherche sur les Inégalités Sociales (CRIS), CNRS, Paris, France
[c] MPC, European University Institute (EUI), Fiesole, Italy
[d] University of Mannheim, Chair of Macrosociology, Mannheim, Germany
[e] Sciences Po, Laboratory for Interdisciplinary Evaluation of Public Policy (LIEPP), Paris, France

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ABSTRACT

Economic hardship induced by the COVID-19 pandemic has mainly been studied over the initial outbreak. We track household income mobility from before to the end of the epidemiological crisis with longitudinal data from France, where welfare support over this period was comparatively strong, possibly protecting households from income loss. In addition to rising inequalities in the overall distribution of household equivalized income attested by income Gini dynamics, downward mobility increased considerably over the crisis (2019–2022) compared to the pre-pandemic years (2016–2019). However, patterns of income loss were independent from COVID-related health conditions and remained largely stable across different social groups from before through the crisis. These findings contradict the idea that the pandemic acted as a 'great equalizer', but at the same time do not fully support the view that the crisis exacerbated economic inequalities along the lines of a strict definition of cumulative disadvantage. In fact, we find persistent patterns of exposure to the risks of downward household income mobility from the pre-pandemic period. We interpret these results partially as a reflection of robust welfare transfers in France that turned an otherwise exceptional crisis into a time of 'business as usual' for income dynamics. Meanwhile, the 'winners' of the pandemic appear to be the households that preserved their income, and have members who largely belong to privileged groups.

1. Introduction

Macroeconomic crises often deepen pre-existing social inequalities (Atkinson & Morelli, 2011; Roine & Waldenström, 2015; Witteveen, 2020), but the specific patterns of inequality that emerge across social groups depend on both the nature of the crisis and the institutional responses to it (Jenkins et al., 2012). This means that the study of the inequality effects of crises must track not only the overall distributional effects, such as changes in income Gini, but also household-level mobility across the income hierarchy and socioeconomic strata.

The COVID-19 pandemic provides an important case study for these purposes because both the virus and the economic recession catalyzed a sudden and unanticipated threat to economic well-being for people in diverse socioeconomic positions (Zola, Naumann, & Marzec, 2025). It was also met in Europe with quick and unprecedented economic and social policy responses. However, while researchers monitored the short-run dynamics of social inequalities over the duration of the epidemiological crisis (e.g. Witteveen, 2020; Grasso et al., 2021), few have assessed its lasting consequences (cf. Vogtenhuber et al., 2024). This article adds to the latter stream of literature by studying the pandemic's impact on French households' incomes after the epidemiological crisis receded. Our goal is to observe how different social groups coped with the shock based on the level and type of resources available to them, and on potential exposure to the virus. We analyze income dynamics over the 2019–2022 period, both in terms of the overall distribution of household incomes and household-level income mobility

* Correspondence to: Sorbonne Université, GEMASS, Paris, France.
E-mail address: marta.veljkovic@sorbonne-universite.fr (M. Veljkovic).
[1] ORCiD: 0000–0001-9659–3397.
[2] ORCiD: 0000–0001-7497–2150.
[3] ORCiD: 0000–0001-6564–2256.

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with multiple waves of France's foremost longitudinal social survey, the *Étude Longitudinale par Internet Pour les Sciences Sociales* (ELIPSS). To our knowledge, there is no other dataset for France that simultaneously covers the changes in income and experiences of respondents living through the COVID-19 pandemic and infected by the virus, while allowing us to compare pre- and post-pandemic income dynamics. We also use *EU Statistics on Income and Living Conditions* (EU-SILC) data for France to confirm and enrich some of our main analyses.

We focus on household income because it is a comprehensive measure of economic standing (Jenkins et al., 2012) that captures earnings from both labor and other sources like pensions, and accounts for the fact that resources are, at least to some extent, shared among people living under the same roof. We further focus on income mobility as a way of tracking changes in a household's position within the income distribution. The time window of our study enables us to examine changes from the start of the pandemic until the time when all state of emergency policy measures had been retracted in France and the pandemic was considered legally over (Service Public, 2022). We compare income changes across different social groups to determine whether there are 'losers' and 'winners' of the pandemic in economic terms, examining the potential epidemiological antecedents for these outcomes. More specifically, we analyze the possible influence of COVID-19 infection, severity of symptoms, and the presence of long-COVID symptoms on household income because exposure to the virus may hold income repercussions that are separate from the economic impact. We zoom in on the French context because social protection 'no matter the cost' ('*quoi qu'il en coûte*', as worded by the president, Emmanuel Macron, during a nationally televised speech in the spring of 2020) may have been more effective at preventing a rise in inequality than in other countries, and because the severity of the public health crisis suggests we may be likely to find epidemiological antecedents for poor economic outcomes.

Our findings suggest that income dynamics over the COVID-19 pandemic correspond neither to a process of equalization nor to an exceptional exacerbation of inequalities, as could be implied by the strict form of cumulative (dis)advantage (DiPrete & Eirich, 2006). Despite rising income inequality in the overall distribution of household equivalized income and an increased chance of downward mobility over the 2019–2022 period, mobility determinants followed similar lines to the pre-crisis period from 2016 to 2019. This is in line with the broad understanding of cumulative (dis)advantage, implying a persistence, rather than widening, of social inequalities during the pandemic. What is more, direct exposure to the virus did not appear to contribute to downward income mobility. Our findings also suggest that being a 'winner' of the crisis largely meant avoiding the deterioration of one's economic situation rather than ensuring its improvement. These results corroborate, fine-tune and temporally extend assessments of the pandemic's immediate effects, which have shown that pre-existing socioeconomic inequalities affected how individuals coped with the economic crisis (Casale & Posel, 2021; Crossley et al., 2021; Dollmann & Kogan, 2021; Grasso et al., 2021; Hu, 2020; Lim et al., 2020; Qian & Fan, 2020; Wiemers et al., 2020; Witteveen, 2020). This implies that studying inequalities in turbulent times can indeed shed light not only on the consequences of the crisis for different social groups, but also on the mechanisms of stratification in 'ordinary' times, based on how different social groups fare over their duration.

The study contributes to the literature by going beyond the analysis of secular trends of change in occupational and income structure to study how major socioeconomic shocks affect social inequalities (Pohlig, 2021). In doing so, it also provides the first assessment of household income dynamics from before until after the pandemic in France. From a comparative perspective, researchers have found a strong correlation between changes in income inequality in France and in the rest of Europe (Almeida et al., 2021; Clark et al., 2021). Given the robust and comprehensive nature of emergency social protection measures in France, we suggest that income dynamic patterns over the pandemic may be more drastically altered in other countries.

In the next section, we elaborate on the case of France and the theoretical background for our study. We then present our data, methods, main results and robustness analyses, before concluding with a discussion of the implications of our findings.

2. Theoretical background and previous work

Researchers have found that crises often aggravate different forms of inequalities beyond the duration of the event (Jenkins et al., 2012; Pohlig, 2021; Vogtenhuber et al., 2024). This article seeks to determine what occurred over the COVID-19 pandemic regarding income dynamics. Our assessment takes into consideration the unique characteristics of this crisis. On the one hand, it triggered an unusually rapid and deep economic downturn that undermined the economic well-being of people even in stable employment. It also threatened thousands of people's physical health, potentially jeopardizing their capacity to earn income. On the other hand, it witnessed state mobilization in much of Europe that amounted to the most robust social protection measures in modern peacetime to mitigate both epidemiological and economic threats. Given that the comprehensive economic and social policy frameworks that high-income countries have developed since World War II may be mobilized as effective tools to deal with economic crises (Jenkins et al., 2012a), policy adaptation by European governments during the pandemic may have mitigated changes to inequalities.

2.1. Changes in inequality over crises

Broadly speaking, crises such as macroeconomic downturns or natural disasters can range from 'great equalizer' events (Scheidel, 2017) to moments that substantially widen the economic gap between social groups. Although the 'equalizer' perspective is historically salient (ibid.), it seems to carry less empirical evidence in modern times (Mein, 2020). Rather, numerous studies corroborate the hypothesis that crises in recent decades either increase inequalities (Atkinson & Morelli, 2011; Roine & Waldenström, 2015; Witteveen, 2020) or do not have a substantial impact on them (Jenkins et al., 2012). When inequalities do increase over natural disasters (Bolin & Kurtz, 2017; Elliott & Pais, 2006), economic downturns (Grusky et al., 2011; Joseph, 2021; Pfeffer et al., 2013; Redbird & Grusky, 2016), or epidemiological crises (Qian & Fan, 2020; Witteveen, 2020; Wu et al., 2021; Vogtenhuber et al., 2024), it may be because they disproportionately affect already disadvantaged individuals, thus widening the gap between social groups. This raises the question of what social mechanisms may explain the selective effects of disruptions to 'ordinary' operating modes of the social structure and organization.

Seeking an answer calls for a consideration of both the unequal immediate impact of the crisis, and the differential recovery chances and

trajectories of social groups. The recovery process itself sometimes resembles a 'second-order disaster' (Bolin & Kurtz, 2017, p. 195), and a crisis' consequences depend on its nature. In the case of natural disasters such as hurricanes, floods or earthquakes, which threaten lives and infrastructure, inequalities are often most apparent in housing due to pre-existing social disparities in the location, quality and protection of the place of residence (ibid.). Furthermore, racial and class disparities seem to contribute to the accumulation of the disadvantages among those who already suffered the most from the disaster (Elliott et al., 2009). The unequal availability and access to private and public resources (such as recovery funds), as well as the uneven spread of social aid networks, account for some of these long-term differences in the chances and speed of the recovery process across social groups (Elliott et al., 2009; see also Bolin & Kurtz, 2017, pp. 195–196).

In the case of a pandemic, individuals with particularly poor health and high exposure to infection risks are more likely to experience severe forms of the disease and to suffer from its long-term consequences, from deprivation to death (Link & Phelan, 1995; Treskova-Schwarzbach et al., 2021). Economic crises may be more complex, because they 'differ greatly from each other' (Atkinson & Morelli, 2011, p. 49) and may differentially influence both the level and distribution of resources (Jenkins et al., 2012). Oftentimes, the wealthiest social groups tend to lose the most during a financial crisis, while the relative effects are larger for the most vulnerable groups (Pfeffer et al., 2013). These differences become even more marked when we consider the role of the previously accumulated resources in coping with and compensating for severe long-term economic losses in turbulent times, particularly when it comes to avoiding falling into the poverty trap (Danziger et al., 2012, 2013).

2.2. The pandemic in France

On January 24, 2020, France was the first country in Europe to report a COVID-19 case; infections then quickly spiraled out of control so that by 2023 France had reported almost 40 million COVID-19 cases, the most of any European country, and over 166,000 deaths (JHU, 2023). The literature shows that COVID-19 infection risk was higher among working classes and ethnoracial minorities (due to continued work outside the home and crowded housing), women (due to occupational specificities in care and cleaning sectors), and those with an immigrant background (Bajos, Counil et al., 2021; Bajos, Jusot et al., 2021).

Although in this respect the COVID-19 pandemic resembles past epidemiological crises (Forbes, 2021), it stands out in the scope of crises that have affected France because it set off the deepest and most rapid macroeconomic downturn since at least World War II: GDP decreased by 18.4 % in two quarters (Baleyte et al., 2021; Mignon & Ferrara, 2021). This can be partially explained by the government's decision to instate stringent non-pharmaceutical interventions designed to reduce cases and mortalities (Shafi & Mallinson, 2023; Yan et al., 2020), which translated into the closure of entire economic sectors (Grasso et al., 2021). This meant that unlike other recessions in recent decades, the one triggered by the pandemic disrupted the economic activities of people across the socioeconomic spectrum.

This could have been devastating for economic well-being, especially for people reliant on labor for income, had the state not rapidly expanded labor market protection measures. By the end of April, 2020, up to 30 % of employees active in the labor force before the pandemic received benefits from the job retention program equal to 70 % of gross wages (84 % of net wages) on earnings up to 4.5 times the minimum wage (Lambert et al., 2020; Vincent, 2021). The duration of benefits was initially 6 months, and renewable up to 12 months. Owners of small businesses and the self-employed, meanwhile, received emergency cash support through a solidarity fund if their turnover for April 2020 was 50 % or less than their turnover for April 2019 or the monthly average in 2019. Originally planned to be in place for just 3 months, the fund was extended several times to last until June 2021 (Seemann et al., 2021). These policies reflect the government's 'whatever the cost' approach to avoid collateral socioeconomic damages by investing more than any other European government in social transfers (Hale et al., 2020; OECD, 2023a; Pereirinha & Pereira, 2021) designed to support workers (Ebbinghaus & Lehner, 2022).[4]

To our knowledge, researchers have not yet assessed whether income inequality grew and how income mobility evolved in this context. We analyze the changes in the overall income distribution and the potentially unequal exposure of different social groups to income loss during the crisis. If we find evidence that the pandemic contributed to growing household income inequalities in France, we contend that economic divides across social groups may have widened even more in countries where welfare protection was not as encompassing, quickly adapted to the crisis context, or supportive of labor hoarding to prevent mass layoffs over this period.

Existing research focuses mainly on the outbreak of the pandemic and shows that inequalities emerged on three different levels: the chances of losing a job and remaining unemployed, working conditions, and work-related earnings (Givord & Silhol, 2020). Already disadvantaged groups (such as those in lower earning categories) were more likely to face economic hardship on all three levels (Casale & Posel, 2021; Crossley et al., 2021; Witteveen, 2020).

For example, the risk of job loss was higher in low-skilled occupations (Bajos et al., 2020; Cardon & Perdoncin, 2021), and its effects were reinforced by the fact that the crisis reduced the possibility of reentering the labor market for those who were already unemployed, in part due to a lack of job creation (Insee, 2022). When employment relations were preserved, working conditions often deteriorated. This was commonly the case for 'essential workers,' including highly qualified employees such as medical personnel, and more frequently unskilled workers such as cashiers and cleaners, whose jobs were deemed to fulfill crucial social functions (see Janietz, 2025). Stable employment for these people implied daily risk of exposure to the virus, with repercussions on both health and further work and income opportunities (Bajos et al., 2021b). For those who worked remotely, notably people in managerial and professional occupations, job preservation came at the cost of increased working hours, stress and even within-family conflicts, resulting in domestic arrangements that were especially disadvantageous for women (Delès, Ferragina, Rossignol-Brunet, & Zola, 2025; Herzberg-Druker, Kristal, & Yaish, 2022; Lambert et al., 2020; Pasqualini et al., 2022; Safi et al., 2020b). Finally, short-time working arrangements left 'lasting scars' on work-related earnings even after the pandemic, especially among women in white-collar and men in blue-collar jobs, who experienced hindered career advancement and loss of overtime hours (Vogtenhuber et al., 2024).

The increased financial distress, leading to some form of income deterioration, was indeed more often reported by households whose members experienced job loss (Debdeep et al., 2023). Even if they remained employed, individuals may still have experienced income loss due to reduced working hours or from becoming furloughed. Short-time work was more frequent among the least advantaged groups, who are less likely to work remotely and overrepresented in sectors where contact restrictions led to reductions or interruptions in working hours (Frel-Cazenave & Guggemos, 2021; Schumacher & Bethmann, 2023). While a part of the population derives income from sources outside the

[4] A full comparative picture of government discretionary measures that supplemented existing automatic stabilizers has been drawn by the IMF (Kirti et al., 2022). Such exceptional policies were stronger in other advanced economies, reaching 25 % of GDP in 2020 in the US. However, the overall public support for income losses stems from both these new measures and pre-existing welfare obligations. In France, the ad hoc fiscal response topped up an already existing strong welfare system, which made the response comparatively more robust.

labor market like social benefits, interest on savings, or other financial assets, wage income remains the main source of most households' income (Jenkins et al., 2012). It seems therefore plausible to argue that the principal channel of the pandemic's effect on household income is the reduction of work-related earnings.

Overall, this existing evidence shows that it was the initially disadvantaged social groups that were exposed to the most severe economic consequences from the COVID-19 crisis (Chłoń-Domińczak et al., 2023, pp. 208–210), suggesting that cumulative disadvantage may pattern changing income inequalities over this period and beyond the outbreak of the pandemic (DiPrete & Eirich, 2006). According to the strict definition of this phenomenon, cumulative (dis)advantage requires a widening gap between social groups, whereas a broader interpretation might imply reproduction of initial (dis)advantages over time, i.e. the persistence, rather than the growth, of inequalities between social groups (DiPrete & Eirich, 2006). Since crises often exacerbate patterns observed in 'ordinary' times, our two hypotheses reflect the strict interpretation of the cumulative (dis)advantage process. More precisely, we present two hypotheses, aiming to examine both a general crisis-related, and a COVID-19-specific contribution to the process of cumulative disadvantage.

Our first hypothesis stems from the notion that the recovery chances could be hindered by the negative economic cycle, which reduces the likelihood of compensating for income loss by increasing the wage-related share of income. This is because both re-employment (for the unemployed) and promotions (for the employed) are significantly lower during the crisis. On the other hand, as long as advantaged households have more diversified income sources from property or interest on financial assets, they can, in principle, compensate for labor income loss by drawing on other accumulated economic resources. This context provides the basis for our first hypothesis:

H1. *The pandemic crisis heightens the risk of downward income mobility, especially among already disadvantaged social groups, that will be disproportionately exposed to the most severe income loss.*

Moreover, we must consider the fact that disadvantaged social groups were overexposed to the virus and the possibility of severe infection due to poorer employment, housing and health conditions (Bajos et al., 2021b). These are channels that may have further amplified the cumulative disadvantage mechanism by heightening disadvantaged social groups' exposure to infection risks and disease complications. Given that infection often resulted in prolonged periods of sick leaves associated with wage reduction and a reduced capacity to work, the pandemic may have had a direct influence on income. Even in the French context, where the welfare state actively compensated for COVID-19 induced hardship with employment protection and sick leaves, the economic effects of the virus may still be apparent in terms of income losses. This may be particularly true for people who experienced long-COVID symptoms or severe forms of the virus, who found their ability to work impaired for several months or longer (Kisiel et al., 2022). A meta-analysis of 24 studies that followed COVID-19 patients with persistent symptoms for over three months indicates that two out of ten of them were impaired in their ability to work afterwards (Sanchez-Ramirez et al., 2021; for a more recent review, see Espinosa Gonzalez & Suzuki, 2024). This possibility frames our second hypothesis:

H2. *Reported COVID-19 infection is associated with overexposure to income loss, especially for those who contracted the virus several times or in a severe form.*

Overall, while the first hypothesis refers to cumulative disadvantage dynamics that may be applicable to other economic crises, the second more clearly portrays the pandemic as a potential accelerator of economic hardship.

3. Analytical framework

Crises can simultaneously affect multiple aspects of individual economic well-being (Grusky et al., 2011). Sociologists have historically relied on occupation, and economists on income to account for an individual's socioeconomic position and its changes over time; nonetheless, the two dimensions of social status have been shown to capture partly different underlying advantages and transmission mechanisms (Mood, 2017). Over the last decade, these two research traditions are beginning to overlap, as a growing number of studies jointly use income and class measures to study the temporal evolution of inequality between generations (Breen et al., 2016) and over the life course (Kim et al., 2018; Westhoff et al., 2022; Yaish & Kraus, 2020).

The choice between the two measures depends not only on prior epistemological or disciplinary preferences, but also on their substantial meaning that may be sensitive to changing social and economic contexts. In this article, we rely on income as a measure of social inequality and capture income mobility by comparing household income changes 'between one year and another during their lifetime' (Jäntti & Jenkins, 2015, pp. 812–813).

While the specific effects of crises on household income and income mobility remain understudied, we argue that, in the wake of the COVID-19 pandemic, scholars should privilege the study of income mobility for four reasons. First, even for those whose employment was continuous — either remaining in full-time work or receiving furlough benefits — work-related income was likely to suffer and an increasing number of households struggled to make ends meet (Hu, 2020; Qian & Fan, 2020). This goes against the common finding that job stability is synonymous with earnings stability, especially during economic recessions, implying that the risk of income loss was partially independent of employment status. Second, while emergency employment protection policies such as job retention were instated to protect against job and severe income losses, the consequences of these policies for economic well-being, such as lower pay from short-time work, are only visible when analyzing income.[5] Third, income mobility measures are often more fine-grained than social mobility measures, and are thus more sensitive to labor market shocks. Fourth, using income allows us to account for the household context, which may be a more accurate measure of economic well-being than the individual-level because resources tend to be shared within households.

Finally, let us note that when sociologists affirm that inequality and social mobility represent 'two sides of the same coin' (Yaish & Kraus, 2020, p. 2; see also Hällsten & Yaish, 2022, pp. 519–520), they agree with economists who have established the link between income inequality and income mobility (Krueger, 2012). However, as plausible and as strong as this relationship seems, one cannot be automatically derived from the other. Inequality measures (such as income Gini, for example) are inherently cross-sectional snapshots, while socioeconomic mobility identifies a longitudinal outcome. Therefore, in this article we use changes in income distribution and overall level of inequality as contextual information, in addition to focusing on household income mobility. To test our hypotheses, we first identify the factors determining income inequality before the crisis, and then assess whether the individuals most exposed to economic difficulties following the COVID-19 crisis are the same as before the crisis, and among those who were directly exposed to the virus.

[5] Indeed, furlough schemes did reduce the impact of the COVID-19 pandemic on employment rates nominally, because furloughed individuals were counted as employed, even if de facto they did not work (see Pénicaud, 2023). This reveals the limits of the traditional definition of employment put forward by the International Labour Office.

3.1. Data

Created in 2012, the *Étude Longitudinale par Internet Pour les Sciences Sociales* (ELIPSS) is an online, nationally representative longitudinal survey of the mainland French population.[6] At the start of each year, the annual survey collects information on socioeconomic characteristics, such as employment situation, type of contract, working conditions, income, place of residence, household composition and marital status. This information is complemented by multiple thematic modules collected throughout the year. During the pandemic, eight COVID-specific waves were conducted between April 2020 and April 2021, aiming to follow the impact of the lockdowns and their consequences for French society (Safi et al., 2020a; Recchi et al., 2020). Two additional COVID-focused waves were conducted in October and November 2022 and provide insights about the everyday life dynamics during the last stages of the pandemic. In this article, we mainly draw on the data collected between the 2019 and 2022 annual surveys, and we occasionally complement the analyses with data from the 2016 annual survey, as well as from the ninth and tenth COVID-related waves collected in October and November 2022. Table S-1 in the Appendix A in the Supplementary material provides more details on the topic and timeframe of each of these surveys.

The use of 2019 as a baseline year for pre-pandemic trends seems reasonable because recent empirical evidence establishes the 'normality' of 2019 in terms of the economic conditions, measured by trends in household income and consumption in France (Bonnet et al., 2022). In other words, the differences between trends in 2017, 2018 and 2019 are negligible compared to those emerging between 2019 and 2020 where a radical decline in household consumption and a rather low rate of increase in household available income were observed. We use 2022 as the latest year for analysis to avoid confounding effects from the spike in inflation and because the pandemic was legally over in August 2022,[7] meaning that COVID-specific policies ended by this time.

3.2. Measures

The main indicator we use in this study is monthly net equivalized household income. During each annual survey, the respondent is asked to report whether they or any other household member receive income from any of the listed income sources (salary, bonuses, unemployment benefits, pension, rent, etc.). If respondents declare that their household receives income from at least one of these sources, they are asked to indicate their monthly total net household income before direct income taxes.[8] In order to take into account household size and composition, the income measure is equivalized, meaning that the household's total income is divided by its size according to the modified OECD equivalence scale (OECD, 2013). The first adult is assigned the weight of 1, and each subsequent individual is given a weight of 0.5 if they are 14 years or older, and 0.3 if they are under 14. By definition, all the members of the household are assumed to have the same income, which means that this measure makes it impossible to account for gender inequalities in the distribution of resources within and between households.[9]

This variable is ordinal and provided in 10 brackets,[10] ranging from less than €650 to €3,200 or more per month. Overall, 7.8 % and 3.1 % of respondents did not report their income in 2019 and 2022 respectively, and so we exclude them from the analyses.[11] We also exclude individuals with missing values on a range of our control variables (presented below). Our final sample size is 804 individuals who responded to both the 2019 and 2022 annual survey. This sample is punctually reduced to 724 individuals when we take into account the 2016 annual survey. Despite a certain level of positive social selection of the ELIPSS sample,

[6] The ELIPSS survey was created with the aim of introducing longitudinal measures designed specifically for social science researchers by themselves (Cornilleau & Duwez, 2021; Joye, 2021). This is achieved through annual open calls for contributions to specific survey modules, covering topics ranging from the study of health to cultural consumption and political attitudes. The ELIPSS sample, initially drawn in 2012 and refreshed in 2016, 2020 and 2023, was created each time following the twostage cluster stratified design. For example, in the first stage, 4500 households were randomly selected in 2012 from the French census survey (procedure conducted by Insee). In the second stage, one individual (aged 18–75 in 2012) was randomly selected from each household. The resulting sample is representative of approximately 45.3 million French households with at least one resident under 80 years of age in 2016 (Pilorin, 2018). In comparison to national data, the ELIPSS sample has two biases, which are age- and diploma-related. Younger individuals are originally under-represented in the panel, as well as individuals with lower educational attainment (Duwez & Mercklé, 2024). The first bias was corrected for by overrepresentation of younger individuals during the 2023 refreshment round, and, along with other biases, it can be partially accounted for by the survey weights. However, we do not use weights in this paper, as they are computed in a cross-sectional rather than in a longitudinal manner.

[7] As of August 1, 2022, French law repealed the Public Health Code regulations relating to the state of public health emergency, created in the spring of 2020, as well as the regime of public health crisis management established by the law of May 31, 2021 (Service Public, 2022).

[8] This measure of income should be understood as a proxy of the equivalized household disposable income. It is supposed to capture all sources of income, including different social benefits and excluding paid taxes. The main difference is that the reported income in this case does not account for direct income taxes. In the original questionnaire, respondents are given the following prompt: 'En prenant en compte tous les types de revenus que vous venez de mentionner, quel est actuellement le montant mensuel de vos ressources à titre personnel? Il s'agit du revenu net (de cotisations sociales et de C.S.G) avant impôts (avant prélèvement à la source le cas échéant). Si les revenus sont fluctuants, faire une moyenne sur l'année.' In English: 'Taking into account all sources of income that you just mentioned, what is the current monthly amount of your personal resources [income]? This is net income (after social contributions [non-wage labor costs and generalized social contribution]), before taxes (before withholding tax, if applicable). If these incomes fluctuate, report the monthly average over the year.'

[9] This is particularly unfortunate since, as opposed to the gendered effect of the Great Recession that was well documented (Grown & Tas, 2011), the evidence remains inconclusive when it comes to the COVID-19 crisis. Indeed, while the burden of increasing domestic and care activities fell disproportionately on women (Pasqualini et al., 2022; Zamberlan et al., 2021), it is less clear if the lay-offs, furlough and income loss also followed gender lines (Kristal & Yaish, 2020; Lambert et al., 2020; Cardon & Perdoncin, 2021; Hossain, 2021; Witteveen, 2020).

[10] When it comes to income coding, the income-related question was first asked as an open question, but if respondents refused to answer, they were asked to choose their income bracket, among the following 14 income categories: 1. Less than 400 €, 2. From 400–599 €, 3. From 600–799 €, 4. From 800–999 €, 5. From 1000–1199 €, 6. From 1200–1499 €, 7. From 1500–1799 €, 8. From 1800–1999 €, 9. From 2000–2499 €, 10. From 2500–2999 €, 11. From 3000–3999 €, 12. From 4000–5999 € 13. From 6000–9999 €, 14. 10000 € and above. Since income data is not distributed in its 'raw' form, but rather as equivalized income (household's income divided by its size), we make use of the most detailed form available in the data in our analyses, that is, the 10-group equivalized income category (1. $<$ 650 €, 2. 650 $\geq$ 949 €, 3. 950 $\geq$ 1199 €, 4. 1200 $\geq$ 1399 €, 5. 1400 $\geq$ 1649 €, 6. 1650 $\geq$ 1899 €, 7. 1900 $\geq$ 2199 €, 8. 2200 $\geq$ 2499 €, 9. 2500 $\geq$ 3199 €, 10. $\geq$ 3200 €). However, these income brackets are defined by the data providers and do not hold significant sociological meaning.

[11] A descriptive analysis of the social profile of individuals whose income is missing at one of the two observation points shows that male respondents, young (18−34) and old (65 +), less educated, respondents struggling to make ends meet, unemployed and blue collar workers are comparatively overrepresented among those who do not declare their income. This socially disadvantaged profile of missing income values is confirmed when we look at the 2022 income of individuals who did not declare their income in 2019, who are overrepresented among the lowest income groups in 2022 (and especially among individuals earning less than €650, those in the €650 to €949 and in the €950 to €1199 income groups) and underrepresented in all other income categories.

which is further reinforced by the socially selective nature of the attrition process,[12] the median monthly disposable household income per capita of our sample in 2019 falls within the €1,900–2,199 bracket, which is only slightly higher than the national median equivalized income, which was €1,837 at the time (Guidevay & Guillaneuf, 2021), reflecting the quality of the ELIPSS data in this respect.

We also note that we do not adjust the reported annual disposable household income per capita for inflation for two reasons. First, the data we rely on were produced immediately before the significant increase in inflation in February 2022, following the outbreak of the war in Ukraine.[13] s, given that our income measure is based on respondents' declarations, it should be understood as a general proxy of its real value, implying that individuals' reports are unlikely to reflect a 1 or 2 % variation in their household's total annual income (which corresponds to the inflation rate in France over the observed period), suggesting that accounting for inflation could lead to over-adjustment of our income measure. Additionally, some of our robustness checks rely on a more conservative definition of income mobility that allows us to qualify mobility only as changes that entail significant income variation, thus indirectly controlling for the eventual inflation effect (see Robustness analyses section).

To assess how social groups differ in their probabilities of experiencing income changes, we rely on a set of independent variables in the 2019 annual survey. The descriptive statistics for our analytical sample are presented in Table 1. Knowing that our main variable of interest is derived from household income, we seek to define our independent variables as proxies for the characteristics of the household rather than the individual. Thus, if an individual declares living with a partner, we also account for the partner's situation whenever the data allow us to do so.[14] The relevant variables that were used to account for the pre-pandemic (dis)advantages include information on the type and characteristics of the household, its sociodemographic profile and economic situation. The household's type and characteristics are measured by the household composition (single person household, couple without children [reference], couple with children, complex household), ownership status (owner [reference], owner with loan, tenant) and the type of urban area of residence (rural, area with < 100,000 residents, area with ≥ 100,000 residents excluding the Paris region [reference], Paris

Table 1
Sample composition of the ELIPSS survey (n = 804).

	%	n
Gender		
Men	47.5	382
Women	52.5	422
Age group		
18–34	4.9	39
35–44	16.7	134
45–54	25.1	202
55–64	25.5	205
65 +	27.9	224
Nationality at birth		
Born French	95.1	765
Not born French	4.9	39
Conjugal status		
In relationship	74.8	601
Single	25.3	203
Living with partner (LT = living together)		
Couple LT	67.8	545
Couple NLT	7	56
Single	25.2	203
Household composition in 2019		
Single-person	31.3	252
Couple only	28.6	230
Couple+children	29.0	233
Complex	11.1	89
Main residence ownership status in 2019		
Owner	53.6	431
Owner with loan	23.3	187
Tenant	23.1	186
Area of residence in 2019		
Rural area	15.2	122
< 100,000 residents	20.4	164
≥ 100,000 residents (excl. Paris)	47.4	381
Paris area	17.0	137
Household employment situation in 2019		
Fully employed hshld	52.5	422
At least 1 person unemployed	6.6	53
Inactive hshld (w/o employed)	40.9	329
Household education level in 2019		
At least 1 person > Bac (high school degree)	56.5	454
Hshld ≤ Bac (high school degree)	43.5	350
Household SES in 2019		
Manager hshld	16.5	133
Intermediate professions hshld	22.8	183
Clerk hshld	27.1	218
Self-employed and farmer hshld	10.8	87
Blue collar hshld	10.7	86
Working class one-person hshld	12.1	97
Difficulties to make ends meet in 2019		
Yes	14.8	119
No	85.2	685
Had COVID before January 2022		
Yes	22.3	179
No	77.7	625
COVID−19 symptoms		
No Covid	77.7	625
Asymptomatic or mild	10.6	85
Moderate or severe	11.7	94
Number of COVID−19 infections		
No Covid	77.7	625
Once	15.3	123
Twice or more	7.0	56
COVID-long symptoms		
No Covid	77.7	625
No long Covid symptoms	6.5	52
Some long Covid symptoms	15.8	127
Received some COVID−19 social aid		
Yes	10.2	82
No	89.8	722
Equivalized household income in 2019		
< 650 €	1.7	14
650–949 €	4.9	39
950–1199 €	6.0	48
1200–1399 €	7.0	56
1400–1649 €	11.8	95

(continued on next page)

[12] Tables S-2a and S-2b (Appendix A in Supplementary material) provide further details on the volume and characteristics of the attrition process of our sample. Figure S-1 shows the results from the regression model where the outcome variable is a dummy for leaving the sample between 2019 and 2022. The model shows that perceived household deprivation and low income are significant predictors of the relative chances of attrition.

[13] The 2019 ELIPSS annual survey was conducted between March and May 2019. According to OECD data (OECD, 2023b), the average inflation rate (as measured by consumer price index, CPI) over this three-month period in France was 1.1 %, whereas it was 2.9 % in January 2022, and 3.6 % in February 2022, which is significantly lower compared to the 2022 average, which was 5.2 %. This means that this study relies on particularly well-timed data, as future studies relying on later data will be faced with the difficulty of having to disentangle the COVID-19 effect from the role that inflation and the repercussions of the war in Ukraine may have on income.

[14] This is, of course, a rather crude measure of the household situation, since we only have information on the individual and his or her partner if they live together. If the person lives with adults other than their partner (siblings, flatmates, parents, etc.), we are unable to account for their characteristics. However, sociologically speaking, this analytical strategy makes sense knowing that people are more likely to share resources and make common decisions about their allocation with their partner rather than with other household members. We also lack information about the partner's nationality, house ownership status, age group and exposure to COVID-19 and COVID-related benefits. Consequently, the effects associated with these variables should be interpreted as conservative estimations of the corresponding effect, since they imply that having at least one household member (i.e. the respondent) with certain characteristics is associated with income changes.

Table 1 (*continued*)

	%	n
1650–1899 €	11.3	91
1900–2199 €	14.1	113
2200–2499 €	9.0	72
2500–3199 €	15.5	125
≥ 3200 €	18.8	151
Equivalized household income in 2022		
< 650 €	5.5	44
650–949 €	8.7	70
950–1199 €	7.0	56
1200–1399 €	6.8	55
1400–1649 €	7.1	57
1650–1899 €	14.7	118
1900–2199 €	7.5	60
2200–2499 €	15.3	123
2500–3199 €	7.6	61
≥ 3200 €	19.9	160
Income mobility 2019–2022		
Immobile	30.6	246
Upward mobility	33.7	271
Downward mobility	35.7	287
Mobility_dummy		
Mobile	69.4	558
Immobile	30.6	246
Upward mobility-dummy		
Upward mobility	33.7	271
Immobility or downward mobility	66.3	533
Downward mobility_dummy		
Downward mobility	35.7	287
Immobility or upward mobility	64.3	517

Example: In 2022, 19.9 % of respondents (160 individuals) were in the top income category in terms of their equivalized household income.
Source: ELIPSS panel

region). The household's sociodemographic profile is measured by the respondent's origins (born French [reference], not born French), the household's employment situation (fully employed household, household with at least one unemployed person, inactive household[15] [reference]) and education level (all household members have attained the Baccalauréat [equivalent to a high school diploma] or less, at least one person in the household has a higher education degree [reference]).[16] Finally, economic situation is measured by the household's initial level of equivalized income (grouped in three levels, ≤ €1,400, €1,400–2499 € [reference], ≥ €2,500), the household's perceived economic deprivation (where we juxtapose households for which the respondent declared that their household is not able or struggles to make ends meet [reference] from those where no such difficulties were reported) and by the household's socioeconomic status, hereafter SES. Different household SES groups (manager household, intermediate professions household, clerk household [reference], self-employed and farmer household, blue collar household, working class one-person household) were coded according to the Insee's latest socio-economic classification, which consists of combining information on the household's configuration and socioeconomic position of its adult members when defining household SES.[17]

Whereas the effects of these different social characteristics on income changes can be interpreted as a consequence of the macroeconomic disruption generated by the COVID-19 crisis (reflecting H1), they are not necessarily associated with the direct effects of virus exposure on a household's socioeconomic situation (reflecting H2).[18] We thus use an additional set of variables to account for exposure to the COVID-19 virus and reception of COVID-related benefits aimed at compensating for economic hardship. We rely on self-reports of previous COVID-19 infections,[19] detailed by the number of times the respondent was infected (no infection [reference], once, twice or more), the severity of symptoms experienced (no infection [reference], asymptomatic or mild, moderate or severe) and the persistence of at least one symptom three months after the infection (no infection [reference], no long COVID symptoms, some

[15] Couples where one partner is inactive and the other employed (n = 65) are grouped with fully inactive households, composed of either single inactive individuals or a couple where both partners are inactive for the sample-size reasons.

[16] It should be noted that ELIPSS data also contain information on the respondent's age group (available only in aggregate form for confidentiality reasons), but not on the age of their partner. Interpreting differences in equivalized household income according to the age of the respondent makes little sense from a sociological point of view, and we therefore do not consider age differences in our analyses.

[17] To code household socioeconomic status, we used the household SES scheme developed by the French statistical office, Insee (Amossé & Cayouette-Remblière, 2022). This approach consists of combining information on the respondent's SES with their household composition in a parsimonious manner. If the respondent is single, then the scheme accounts only for their occupation. If they live with a partner, then information on the occupation of both people is used. This approach avoids using the dominance approach while still considering more than just the respondent's economic situation. This household SES is shown to better account for multiple dimensions of between-household inequalities in France than earlier schemes (Ibid.). The household SES schema is presented in more detail in Table S-3 (Appendix A in Supplementary material). In our coding strategy, we have slightly modified the initial schema by regrouping all households where at least one partner is a farmer or self-employed in one single category, as these groups were particularly affected by the crisis. We also do not consider inactivity/unemployment as a social position, but rather treat it separately.

[18] Bearing in mind the strong association between these different dimensions of household socioeconomic status, considering them together in our regression models could give rise to problems of multicollinearity. If some degree of collinearity is inevitable, its more severe forms could strongly inflate standard errors of the model and make regression coefficients unstable (URG, 2024). To test for this, we have conducted multicollinearity tests using Stata regression postestimation command allowing for collinearity diagnostics ('estat vif'). There are two commonly used measures of the strength of the association among the independent variables: 'tolerance (an indicator of how much collinearity that a regression analysis can tolerate) and VIF (variance inflation factor, an indicator of how much of the inflation of the standard error could be caused by collinearity). The tolerance for a particular variable is 1 minus the R^2 that results from the regression of the other variables on that variable. The corresponding VIF is simply 1/tolerance. If all of the variables are orthogonal to each other (in other words, completely uncorrelated with each other), both the tolerance and VIF are 1. If a variable is very closely related to another variable (s), the tolerance goes to 0, and the variance inflation gets very large' (UCLA, 2024). Typically, variables whose VIF values are greater than 10 (or, correspondingly, with tolerance value lower than 0.1) are usually considered as problematic (URG, 2024). In our case, applied to full specifications of our core regression models, neither of the two indicators shows a serious multicollinearity problem (the tolerance value being systematically higher than 0.5 and the VIF being always below 2), implying that these different variables indeed help us account for different aspects of social status. For a more detailed presentation and discussion of the association between household equivalized income and perceived deprivation measure, see Appendix J in Supplementary material.

[19] Our estimate of COVID-19 infections is limited to cases occurring before January 2022 (timing which is well aligned with our income data), and is relatively close to the cumulative number of confirmed cases since the start of the pandemic, which, according to the data from World Health Organization, in France was 15.3 % as of January 2nd (OWD, Our World in Data, 2025). Our estimate (22.3 %) is higher, but this discrepancy is likely due to limited testing or lack of reporting: officially confirmed cases under-count the actual number of infections, some of which were not communicated initially for the absence of test facilities and later for the possibility of self-testing at home.

long COVID symptoms).[20] We also control for the reception of COVID-related benefits aimed at compensating for economic hardship, since information is available on whether the respondent received any public financial support during the pandemic, such as furlough payouts for employees or special economic support for self-employed individuals. These COVID-related variables were collected retrospectively, in October and November 2022, and as such encompass virtually the totality of pandemic effects since infections had dropped substantially by the end of 2022 and no systematic COVID-related social transfers were provided after late summer 2022.

3.3. Modeling strategy

We proceed in three steps. First, we present a set of descriptive findings regarding the variation of income distribution, income mobility and income inequality over time. Second, we use a wide range of predictors to model 2019 income to identify disadvantaged and advantaged groups in the pre-crisis period. Third, we model income mobility between 2019 and 2022 to analyze whether the consequences of the crisis on economic well-being follow the same social gradient as before the crisis. We also include predictors that identify direct exposure to COVID-19 to determine whether infection influenced household income change. This third step comprises two analytical approaches. First, we define income mobility as at least a one-interval income change, and create dummies for upward and downward income mobility.[21] We use standard binomial logistic regression models to (separately) predict the probabilities of experiencing income immobility, upward and downward income mobility depending on pre-pandemic social characteristics described above.[22] s, given that our income variable is triple censored, we use interval regressions to model[23] 2022 income and analyze how different pre-pandemic household characteristics and previous COVID-19 experiences could have exposed or protected households from positive and negative income changes. To assess the association between these characteristics and income mobility, we control for pre-pandemic household characteristics and COVID-19 related variables described above. Since these two analytical strategies yield similar results, the following section mostly focuses on the findings of the first strategy, whereas the results of the second strategy, as well as other robustness tests, are reported in detail in the Supplementary material and commented in the Robustness analyses section.

Finally, we also mobilize data from the EU-SILC on France as a robustness check for and to enrich our main analyses. These additional analyses are guided by two objectives. First, we replicate the measures and modeling strategies with the EU-SILC data as closely as possible to confirm our findings using ELIPSS data with high quality register data on income measured as a continuous variable (as provided by the EU-SILC). Second, the EU-SILC analyses allow us to include an additional measure of household material deprivation to enrich our findings presented in the main text. More details on the EU-SILC design, our replication approach, and detailed results can be found in the Appendix I in the Supplementary material, while the main findings are reported at the end of the following section.

4. Results

4.1. Income distribution and mobility

In the first stage of the analysis, we present the descriptive results regarding the overall trends in the income distribution between 2019 and 2022, as well as the temporal variation of income mobility comparing the pre- and post-crisis period. Fig. 1 shows the cross-sectional distribution of net household income per capita for both the 2019 and the 2022 annual surveys. The post-crisis median income appears to be lower (€1,650-€1,899 in 2022) than the pre-crisis median income (€1,900-€2,199 in 2019). Given that the growing prevalence of the two lowest income groups (less than €950) occurred in parallel with the stability, or even decline, in the proportion of the two highest income groups (€2,500 or more), this result might suggest some general impoverishment, but should be interpreted with caution given the categorical nature of our income variable.

This impression is further confirmed by the variation of the Gini coefficient over time. Given that we measure income with an ordinal, interval variable, which is both left and right censored, we need to first 'close' the lowest and the highest income interval to interpolate the full income distribution out of tabulated income data (Blanchet et al., 2022). While we consider 0 to be the lower bound of the income distribution, following Hout (2004) we implement two different strategies to assign a midpoint income value to the otherwise open-ended top income group (with no upper limit). The first strategy consists of adding 30 % to the lower bound of the highest income interval, while the second one relies on extrapolated information on the adjacent income group. As shown in Table 2, the exact value of the Gini coefficient depends on the strategy used to define the top income category midpoint and on the way the coefficient has been calculated (see Appendix B in Supplementary material for more technical details).[24] However, these different calculation methods yield very similar results of a 12–15 % increase in income Gini, suggesting that income inequalities widened over the COVID-19 crisis. As shown in the table, both of these results — increasing poverty and inequality levels in France in the aftermath of COVID-19 — have been confirmed by the most recently available administrative data (Albouy et al., 2023). These macro-level economic trends provide context for our household-level mobility analyses.

Figs. 2 and 3 adopt a more longitudinal perspective by showing gross income mobility rates in the 2019–2022 period, while comparing them to those observed within the equivalent, three-year time window before the pandemic and by graphically displaying the detailed mobility table, respectively. Fig. 2 indicates a substantial increase in income mobility over time, which is almost exclusively due to the growing proportion of downward income mobility. Whereas 27.5 % of households experienced a drop in income group from 2016 to 2019, this was the case for 35.5 % of households from 2019 to 2022.

[20] We rely here on the World Health Organization's definition of post-COVID infection (WHO, 2023).

[21] Note that since we use the household equivalized income measure, some income changes may reflect the mere changes in demographic composition of the household (such as the birth of a child, or a death of a household member) that might affect the household equivalized income even if income may have remained unchanged (Avram et al., 2022). However, whether they have or not a demographic origin, we argue that these changes affect the household overall material well-being.

[22] In this work, the terms *downward income mobility* and *income loss* are used interchangeably.

[23] Our dependent variable is left-censored, right-censored and interval censored, meaning that we ignore the lower bound of the lowest group income, the upper bound of the highest group income and the exact value of income for individuals of all income groups. Interval regression models are a specific form of linear regression designed to cope with this kind of data (StataCorp, 2023).

[24] Comparing these values to those observed through French administrative data for available (earlier) years (Insee, 2024; OECD, 2023c), it appears that the '30 % addition strategy' yields Gini coefficient values that are more accurate. However, for the purpose of this paper, we are more interested in the temporal change than the exact value of the coefficient. In this respect, no matter the strategy used, our data shows an increase of the Gini, suggesting a rise in social inequalities in income distribution between 2019 and 2022. This confirms the observations that were already apparent from the data presented in Fig. 1.

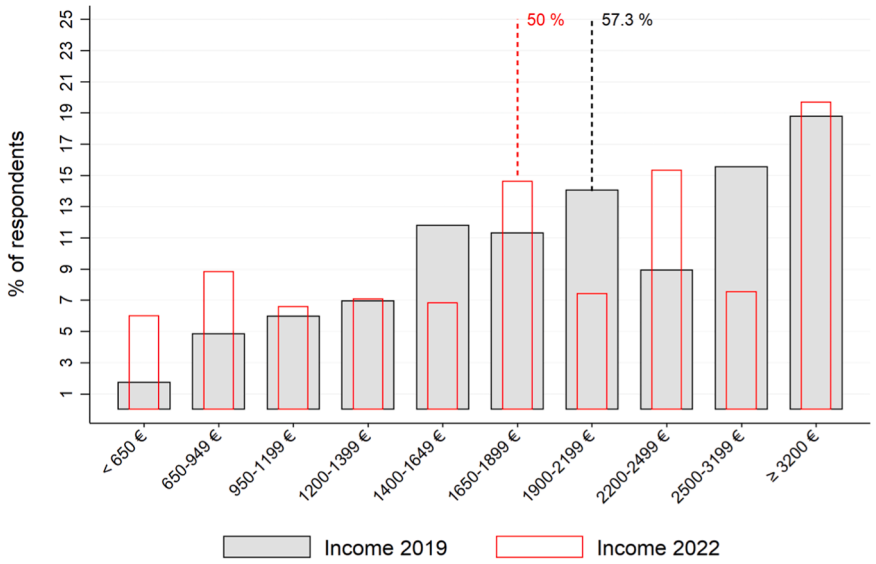

Fig. 1. Household equivalized income distribution 2019–2022.
Note: The dotted lines indicate the interval in which the median equivalized household of the sample falls in 2019 (black) and in 2022 (red).
Example: In 2019, 4.9 % of respondents belonged to a household with an equivalized household income ranging from 650 to 949 euros.
Source: ELIPSS panel; Insee (2024).

Table 2
Household equivalized income Gini coefficients in France, 2019–2022: ELIPSS (various calculation methods), INSEE estimates.

Gini coefficient					
Top-income category mid-point definition	Hout (2004)	Hout (2004)	30 % addition	30 % addition	Insee (2024)
Top-income category mid-point value	€ 6,350	€ 6,350	€ 4,160	€ 4,160	/
Gini calculation method	GPI variant	Simple variant	GPI variant	Simple variant	/
2019	0.37	0.34	0.27	0.26	0.28
2022	0.42	0.38	0.31	0.30	0.29
diff.	0.05	0.04	0.04	0.04	
% growth	13.5	11.8	14.8	15.4	

Note: The table relies on two different strategies for defining the top-income category midpoint value, and for calculating Gini coefficients. Regarding the midpoint definition strategy, the '30 % addition strategy' consists of adding 30 percent to the lower bound of the highest income interval, and is rather a conventional one. The 'Hout (2004)' strategy allows for its extrapolation based on the adjacent income group interval boundaries and was developed by the author. Regarding the Gini calculations, 'GPI variant' refers to the Gini based on generalized Pareto interpolation. 'Simple variant' consists in treating interval mid-points as income values and using the initial frequencies as an indicator of the number of individuals with specific incomes. Different calculation methods for top-income category midpoint assignment are explained in the Appendix B in Supplemental material. The last column of the table compares the Gini coefficient values obtained in this paper with those calculated by Insee.
Example: 'Hout (2004)' strategy of calculating the midpoint income of the upper open-ended income category, combined with Gini calculations that rely on generalized Pareto interpolation, yield a Gini coefficient of 0.37 in 2019. According to these calculations, the Gini coefficient increased by 13.5 % in 2022.
Sources: ELIPSS panel; Insee, 2024.

While much of the observed income mobility, both upward and downward, occurs within adjacent income groups, Fig. 3 clearly shows that longer-range mobility movements are not fully absent, as there are households present across the entire mobility table. Conversely, the highest rates of immobility are observed at the bottom and top of the income distribution, which could be partly due to the structure of our income variable and threshold effects.[25]

Taken together, these observations suggest that the pandemic period was associated with increased economic hardship on the macroeconomic level, leading to a rise in the proportion of individuals at the bottom of the income ladder. Indeed, over the 2016–2019 pre-crisis period, upward mobility was a dominant form of income mobility in France, whereas during the 2019–2022 crisis period, downward mobility prevails.[26]

4.2. *(Dis)advantaged social groups in the pre-crisis period*

Our next objective is to assess whether income mobility was uneven among different social groups according to their social position in the period preceding the crisis, or between those who were and were not

[25] We observe similar patterns when we look at household mobility between income quantiles using the EU-SILC data (see Figure S-10 in the Appendix I).

[26] However, as shown in the Figure S-5 in the Appendix C (Supplementary material), it should be noted that when the top (and the lowest) income category are excluded as possible 'origin' states, results regarding the increasing downward mobility remain identical, but upward mobility becomes more frequent than downward mobility (and increasing) over time. This implies that these results are partially but in no way entirely due to the effects of banded income data.

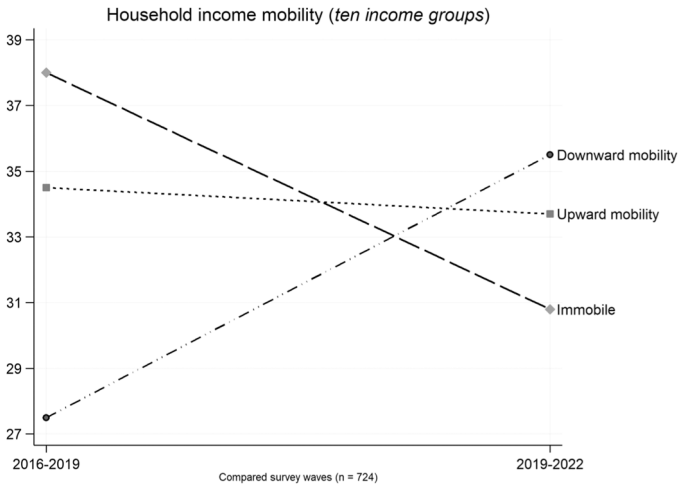

Fig. 2. Trends in gross household equivalized income mobility rates
Example: In 2019, 27.5 % of respondents experienced a loss in their equivalized household income (i.e. downward mobility) compared to 2016.
Source: ELIPSS panel.

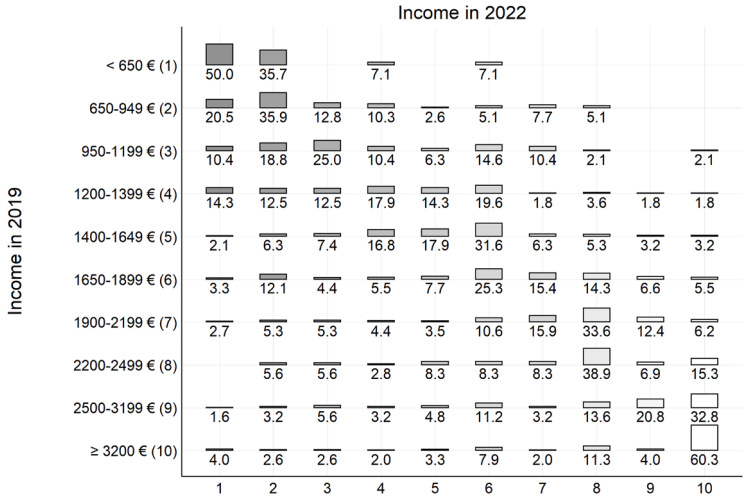

Fig. 3. Household equivalized income mobility patterns (2019–2022).
Note: The figure indicates row percentages.
Example: 50 % of respondents who received less than 650 euros of monthly household equivalized income in 2019 belonged to the same income group in 2022.
Source: ELIPSS panel.

directly exposed to the virus. Descriptive statistics regarding the distribution of different mobility types according to the household's socio-economic status in pre-COVID times (presented in Figures S-2, S-3 and S-4 in the Appendix C in Supplementary material) suggest that disadvantaged groups (on all dimensions except for income, possibly partly reflecting floor and ceiling effects) faced a disproportionately high share of downward mobility in the aftermath of the crisis. To further investigate this, we proceed in two steps. First, we use a range of independent variables to predict the initial, pre-crisis level of income. In the second step, we use the same set of predictors to model income mobility chances, while controlling for the initial level of income. This allows us to assess whether the social groups that were the most disadvantaged in the pre-crisis period were also the most likely to suffer from COVID-19 induced economic hardship. We further test this by comparing the 2016–2019 and 2019–2022 determinants of household equivalized income mobility, that allow us to test to what extent the observed patterns are crisis-specific.

To model 2019 income, we use interval regression models. We first estimate the models that include each group of independent variables separately: household type and composition, socio-demographic characteristics and socioeconomic status. These results are presented in Table S-4 in the Appendix D in Supplementary material. The results in

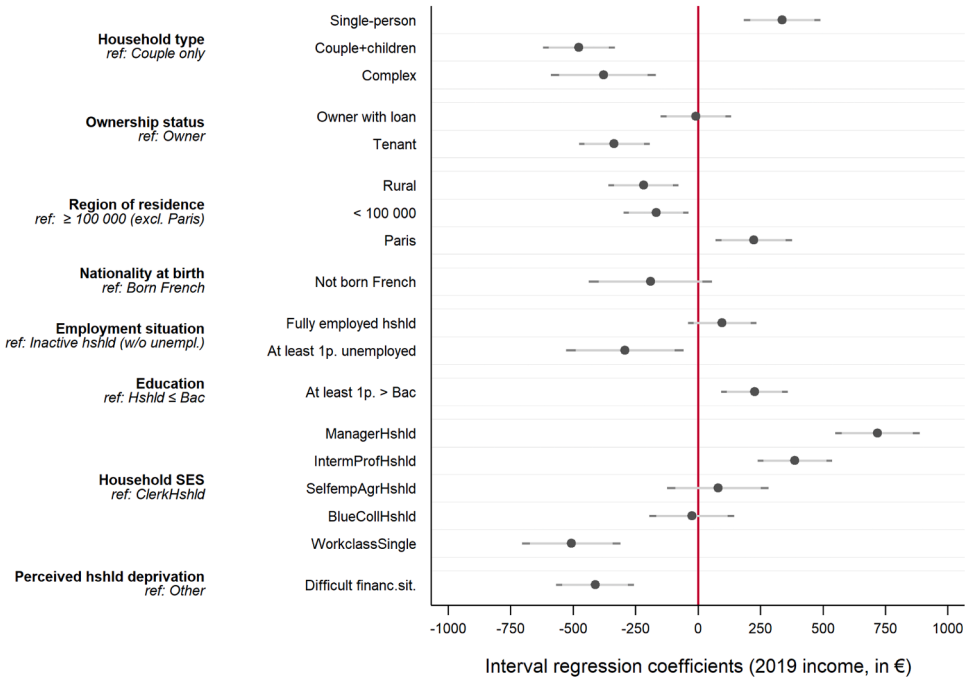

Fig. 4. Coefficient plot for the regression on 2019 household equivalized income.
Note: Confidence intervals have two shades, with the lighter indicating the 90 % CI, and the darker the 95 % CI. The output is based on the interval regression model of 2019 income on covariates measured in the same year. The covariates include household type, ownership status, region of residence, nationality at birth, employment situation, education, household SES and perceived household deprivation. Effect sizes are expressed in euros, and they should be read as in standard OLS regression.
Source: ELIPSS panel.

Fig. 4 visualize the coefficients associated with the full model including all variables. We do not control for direct exposure to COVID-19 in this model because the data come from before the pandemic. As a robustness check, we also use interval regression models with the log-income variable as outcome, standard OLS models and ordered probit models, relying on different assumptions about the nature of our dependent variable. As all the models generate practically identical conclusions, in the main text we only report the coefficients associated with the full interval regression models, while Table S-5 in the Appendix D in Supplementary material reports results from these alternative specifications.

As can be seen in Fig. 4, there are significant income disparities between households according to their type and composition, sociodemographic profile and socioeconomic status. All else equal, compared to households consisting of couples without children, more complex households (including monoparental families) and couples with children have significantly lower income. Tenants also tend to have lower incomes than those who own their place of residence (whether with a loan or not). Additionally, households in smaller urban and rural areas have lower incomes. When it comes to income inequalities according to a household's sociodemographic characteristics, fully employed households earn more, and households with at least one unemployed person earn significantly less than households where at least one individual is out of the labor force. Education also matters, since having at least one person in the household with a higher education degree is associated with higher household income. Not surprisingly, there is a significant household SES gradient in income variation. Households of managers and intermediate professions tend to have higher incomes than clerk households, whose incomes do not display significant differences from those of self-employed, farmer and blue-collar households. Conversely, working class single-person households are much more disadvantaged in terms of their income compared to the abovementioned groups. Finally, keeping all other covariates constant, households reporting difficulties in making ends meet in 2019 earn significantly less than households reporting no such financial difficulties.[27] We find no significant variation in income according to the immigrant background of the respondent, but this may be a consequence of our small immigrant sample rather than an indication of the non-existence of such an effect. Indeed, all our models suggest that households with at least one non-native respondent earn less than other households. This overview of antecedents of income mobility provides a backdrop for our analysis of income mobility over the 2019–2022 period.

4.3. *Tracking how households fared over the pandemic*

With a baseline picture of the disadvantaged and advantaged groups in the pre-crisis period, we now assess whether the effects of the crisis on economic well-being as measured by household income follow the same social gradient, or whether this outcome was more random, eventually leading to a redistribution of life chances. For this purpose, we construct three dependent variables: a dummy for immobility, a dummy for upward and a dummy for downward mobility. The first equals one if the

[27] While this predictor can be seen as endogenous, in reality it is only partially associated with a household's income. Lower income groups are the most numerous among those who declare that their household struggles to make ends meet, but also 37 % of those who declare facing financial difficulties earn between €1,400 and €2,499 in 2019 (for more details, see Table S-13, S-14 and S-15 in the Appendix J in Supplementary material). This is why we argue that this subjective variable captures more than just income: it can also reflect spending trends, outstanding debts, perceived purchasing power or simply any other unobservable household characteristics. Indeed, the Cramer's V statistic measuring the global association between the two variables is 0.43, which can be considered to be a strong but not perfect association (Rea & Parker, 2014, p. 219). Finally, as reported in footnote 15, post-estimation regression diagnostics of our core models do not indicate that we are facing any collinearity problem.

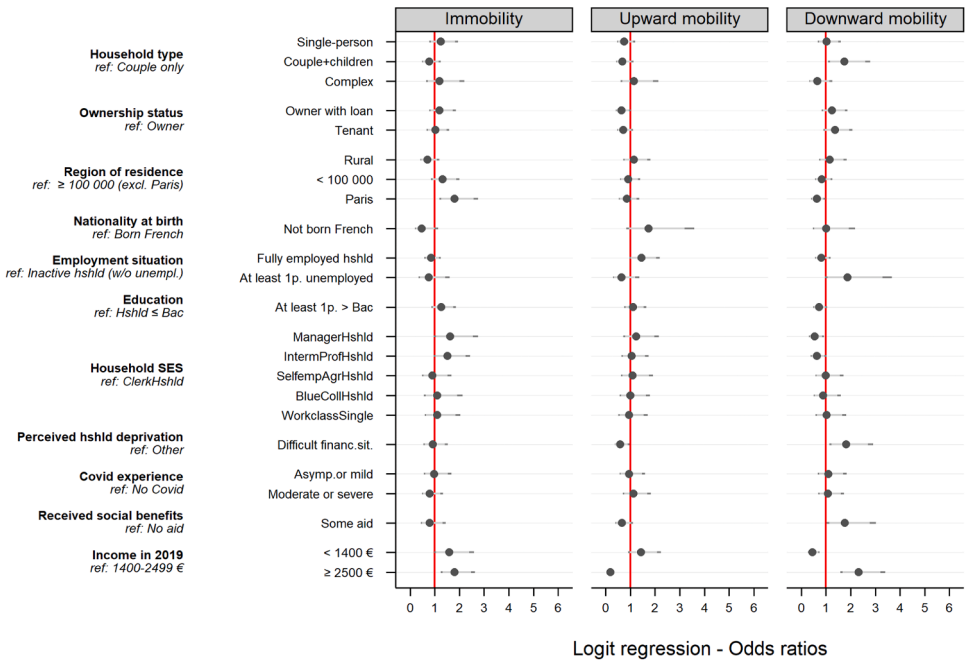

Fig. 5. Odds-ratios associated with full income (im)mobility model (M9).
Note: Confidence intervals have two shades, with the lighter indicating the 90 % CI, and the darker the 95 % CI. The output is based on three separate binomial logistic regression models. In the first, we model household equivalized income immobility between 2019 and 2022 as the outcome variable; in the other two, we model upward and downward income mobility, respectively, with the reference category corresponding to immobile households and those experiencing mobility in the opposite direction from the one being considered. The covariates aim to describe the household situation in 2019, and include the same covariates as the model presented in Fig. 4, as well as two additional COVID-19 specific variables, and the initial level of income.
Source: ELIPSS panel.

household did not change income category between 2019 and 2022, whereas the latter two equal one if the household changed at least one household income group (upwardly and downwardly, respectively), and 0 otherwise. We then apply binomial logistic regression models.[28] The analysis includes all of the previously used predictors, with an additional group of COVID-19 controls, aiming to capture direct COVID-19 effects, whether they are related to either having experienced a virus infection previous to income change or having received pandemic-related government aid.

The results in Fig. 5 visualize the odd ratios associated with the full model including all variables of interest.[29] We also estimate the models that include each group of the above mentioned variables separately. These results are presented in Tables S-6 and S-7 in the Appendix E in Supplementary material.

Two different stories emerge from Fig. 5. When it comes to household income immobility, households living in Paris, occupying managerial or intermediate level occupations and households whose income is equal to or greater than €2,500, as well as those on the bottom of the income structure were more likely to remain in the same income category over the crisis than to experience any form of income mobility compared to their respective reference categories. Furthermore, almost none of the variables in our full model predicts income gains between 2019 and 2022. The same goes for the more simple mobility models, where we include each group of our independent variables separately (see Table S-6 in the Appendix E in Supplementary materials). If anything, holding other covariates constant, households that were struggling to make ends meet in 2019 have lower odds of experiencing upward mobility than of staying in the same income category between 2019 and 2022. This first set of results suggests that income immobility might resemble a more favourable income dynamic in crisis times. In other words, income immobility may be understood as a form of advantage in a context where income gains for most social groups may become less likely.

Turning now to the second set of results, it is noteworthy that our model appears more predictive of exposure to income loss over the period (right-hand side of Fig. 5). As expected, holding other covariates at their fixed values, we find that households with at least one unemployed person, couples with children, and households facing difficulties to make ends meet in 2019 are significantly more likely than others to experience income loss after the COVID-19 period. The same applies for households having received some COVID-19 related government aid, which therefore appears insufficient to have fully compensated for loss of income. Conversely, households in the Parisian area, with at least one member with a higher education degree, exercising managerial or intermediate level occupations were more protected than others from the risk of income loss during the pandemic period. Finally, and somewhat at odds with our expectations in hypothesis 1 (which we will explore further shortly), compared to the households belonging to the mid-income category before the COVID-19 outbreak, households in the lowest income group were less likely to suffer from income loss, as

[28] In a separate analysis we found that probit models yield almost identical results (available on request). We have also estimated models with different reference categories for mobility dummies, by excluding downwardly mobile households from the reference category when modeling upward mobility and vice versa (available on request). Although these comparisons provide a more homogeneous reference category, they reduce the sample size and do yield similar results to the ones that we decide to present in the manuscript.

[29] For the sake of parsimonious graphical representation, and in order to be able to include the highest and the lowest income groups in the analysis of upward and downward mobility respectively, we recode income as a three-level variable when we use it as a predictor. The results are however quite similar to the ones observed when ten income categories are used.

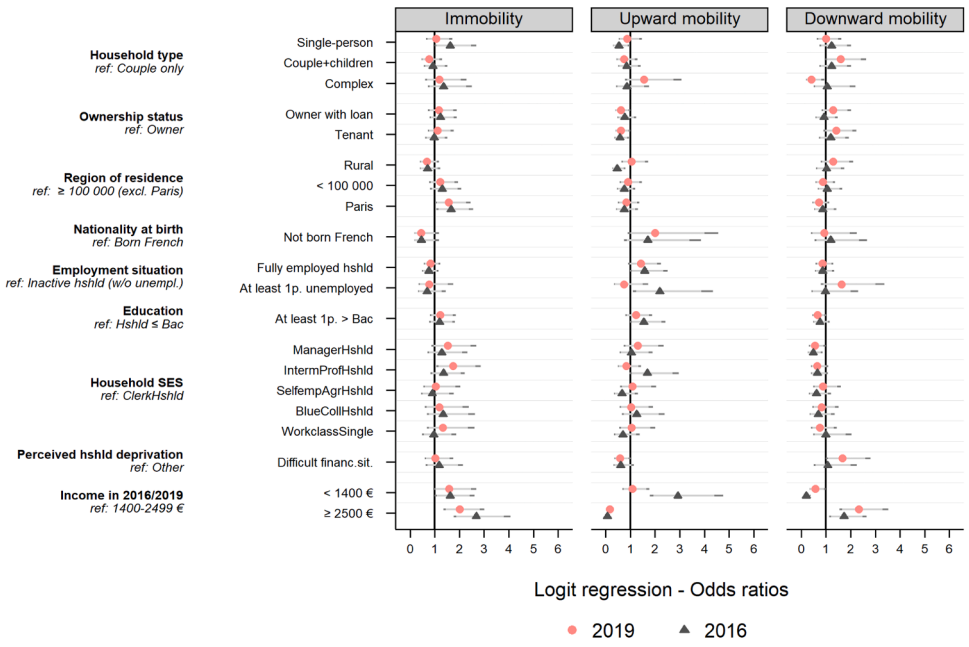

Fig. 6. Household equivalized income (im)mobility predictors in 2016–2019 and in 2019–2022 period.
Note: Confidence intervals have two shades, with the lighter indicating the 90 % CI, and the darker the 95 % CI. The figure plots odds ratios from six different binomial logistic regression models of equivalized household income (im)mobility on covariates from pre-crisis period. Odds ratios are marked in red for the crisis period (2019–2022), and in gray for the pre-crisis period (2016–2019). This model is equivalent to the one presented in Fig. 5, except that, for the sake of comparison between the 2016–2019 and 2019–2022 models, we exclude COVID-19-related variables, which exist only for the 2019–2022 period.
Source: ELIPSS panel.

opposed to the highest income category.[30]

Importantly, our model does not provide evidence of any direct effects of COVID-19 infection on income mobility, leading us to reject hypothesis 2. This conclusion holds regardless of the way in which this direct effect is taken into account: at least one infection since the beginning of the observation period, the number of infections, the severity of the symptoms, or the presence of post-COVID infection conditions (see Table S-8 in the Appendix E in Supplementary material).

Fully assessing the extent to which our findings may support hypothesis 1 requires an investigation of whether these income dynamic patterns are specific to the pandemic period. To do so, we conduct additional analyses that compare the mobility predictors in the pre-crisis (2016–2019) period to those observed during and after the pandemic (2019–2022). Two important findings emerge from these analyses, presented in Fig. 6 (see also Figure S-6 in Appendix F, Supplementary material). First, when comparing the 2016–2019 and the 2019–2022 periods, we observe a rather generalized increase in chances of downward income mobility over different groups of households. Second, there is an overall similarity in the predictors of mobility in 'ordinary' and in 'turbulent' times, suggesting that the crisis effects on income mobility generally align with the pre-crisis patterns, including when it comes to a rather heterogeneous profile of households overexposed to downward income mobility.[31] Both findings confirm that this crisis did not act as a 'great equalizer' in terms of factors shaping mobility chances. However, in the light of this comparison, it also seems that the crisis reproduced pre-existing inequality patterns rather than amplifying them. This leads us to reject hypothesis 1 because we do not find evidence for a strict definition of cumulative disadvantage. Nevertheless, a broad conception of cumulative disadvantage — i.e., the persistence of inequalities (DiPrete & Eirich, 2006) — appears to appropriately describe the patterns we observe.

To sum up, three implications emerge from these findings.

First, in certain circumstances, the absence of mobility might be synonymous with economic stability rather than with economic stagnation. Indeed, our results suggest that being a 'winner' of the pandemic

[30] Since income is one of the three socioeconomic characteristics defined earlier (together with household perceived deprivation and SES), this result may appear to be at odds with previous findings. To further test the robustness of this effect, that also appears when using EU-SILC data, and given the already mentioned strong correlation between perceived deprivation and income, in the Appendix J in the Supplementary material, we have conducted a series of tests ranging from comparisons of simple models to introduction interaction term between perceived deprivation and income. In the simple model, including income only or income and deprivation jointly, the effects of initial income on income mobility are the same; the introduction of the interaction term in the full model (including all covariates) shows that income loss seems to be particularly pronounced among the households who, in 2019, belonged to the highest income group and yet declared facing difficulties to make ends meet; this, however, does not appear as COVID-19 specific effect, since similar findings hold for 2016–2019 period. To a certain extent, it seems that a part of the global effect of perceived deprivation is driven by this rather small, but very homogeneous group of households. However, given the limited size of this group of households, we are unable to proceed with this analysis, which we nevertheless take as a sign that the initial income effect in our model can signal more than mere statistical noise, as well as a further relativization of the cumulative (dis)advantage hypothesis in the strict form.

[31] In this respect, our findings illustrate a more complex story with regards to hypothesis 1. While the effect of 2019 income is not consistent with a strict definition of cumulative (dis)advantage, the effects of other socioeconomic characteristics (i.e., perceived household deprivation and SES) suggest that this pattern may be present. While different minimum income allowance policies are likely to limit the extent of losses that can be experienced by already low income groups and thus might account for their lower likelihood of downward mobility, the greater exposure of the highest income group to income loss appears not to be merely due to a statistical artefact. That said, our alternative modeling strategy (see Table S-9 and Figure S-7 in Supplementary material) shows that, while they are more likely to lose a part of their income, the highest income groups do not necessarily lose their relative advantage, as they continue to earn more than other groups.

meant avoiding the deterioration of one's financial situation rather than ensuring its improvement.

Second, while we observe an overall increasing risk of income loss during the crisis, the analysis of unequal exposure to downward mobility according to the initial level of resource portrays a more nuanced picture than suggested by a strict form of cumulative (dis)advantage in times of crisis. Although the initially disadvantaged social groups in terms of employment or SES suffered the most from the economic repercussions of the crisis, the same holds for the highest income group. Indeed, households belonging to the lowest income groups in 2019 were less exposed to income loss, possibly due to floor effects that emerge from various minimum income allowance policies in the French context.[32] What is more, these patterns do not appear to be specific to the crisis, which implies that a broad conception of cumulative (dis)advantage, while present, is not generated by the crisis-related processes.

Third, income dynamics during the crisis do not seem to display any COVID-19 related dependencies. This is true in a double sense. On the one hand, downward mobility appears not to be influenced by direct exposure to the virus. Although nearly six in 10 French residents were confirmed to have contracted the virus by the end of 2022 (WHO, 2024), we do not find evidence that infection influenced household income changes over the pandemic. On the other hand, the comparisons of 2019–2022 to 2016–2019 income dynamics show that the patterns of income variation and dynamics largely follow the pre-crisis lines.

This is not to say that there were no effects specific to COVID-19. For instance, we have seen that couples with children were more likely than others to experience economic hardship. This may be linked to the fact that they may have been forced to reduce their working hours, or even leave employment during the crisis, due to the increase in household and child-related work entailed by the lockdown policies (Dias, Chance, & Buchanan, 2020; Pailhé, Solaz, & Wilner, 2022; Pasqualini et al., 2022). More broadly, while government assistance was certainly effective in mitigating the most severe economic outcomes, it did not systematically prevent loss of income, which was sometimes the price to pay for preserving one's job or business. In this respect, we can not rule out that the overall outcome of the crisis would have been different if these policies had not been put in place.

Ultimately, the case of COVID-19 adds to analyses of previous crises by contradicting the idea that turbulent times—even in presence of relatively strong welfare interventions—are 'great equalizers'. It also shows that this crisis did not necessarily correspond to a drastic amplification of inequalities, but may have rather contributed to 'business-as-usual' income dynamics.

4.4. Robustness analyses

We implement three additional analytical strategies to assess the developments we observe over the COVID-19 crisis period. The first strategy consists of using interval regression models to regress households' 2022 income on predictors from the pre-crisis period, while also controlling for the level of income in 2019. This allows us to analyze which pre-crisis characteristics were associated with positive or negative income differences in the post-crisis period, comparing individuals with the same pre-crisis level of income. In addition, we varied the way in which we treat the initial income level variable, coding it as both categorical and continuous. While our main results appeared robust to these different specifications (see Appendix G, Supplementary material), these models complement our previous findings regarding the effects of 2019 income on 2022 income, by showing that the overall income order (as defined by the level of earnings of different income groups) was not necessarily altered during the pandemic, as those who earned the most in the beginning of the observation period continued to earn the most by its end, whereas the opposite holds for the lowest income groups.

For the second robustness check, we change not the modeling strategy, but rather the coding of the dependent variable itself. While we consider income mobility as a change of at least one income category in our inferential analyses, we seek to confirm that income mobility is not exclusively due to movements to adjacent income groups. To do so, we consider households as mobile only if they move two or more income groups, and treat households that move to an adjacent income group as immobile. This allows us to isolate households with long-range income mobility. As expected, defining income immobility in a more conservative manner doubles the rate of income immobility and decreases the frequency of all types of mobility. However, the increase in downward mobility is now even more pronounced, as shown in Fig. 7. When we treat every change of income group as a form of mobility, downward mobility rises from 27.5 % in 2016–2019–35.5 % in 2019–2022. When considering long-range mobility only, downward movements still rise from 11.2 % to 25.4 % between the two periods. The substantial increase of downward mobility during the pandemic was thus not only due to short-range mobility moves. Table S-10 in the Appendix H in Supplementary material presents output from the full model using this alternative definition of mobility as outcome variable. The results should be here interpreted with more caution, as frequencies of both upward and downward mobility are now smaller. Even though certain coefficients are no longer significant, our main findings remain stable.

The third robustness check involves replicating and complementing our analyses on the EU-SILC data. We present here three mainline results, while more details can be found in Appendix I in Supplementary material, where we present all EU-SILC data related results. First, median income is lower in 2022 than in 2019 (Figure S-8), and there has been a rise in downwardly mobile households, along with a decline in upwardly mobile households. Changes of more than ±5 % of income between these two years were especially pronounced (Figure S-9), even though (long-range) changes in income quintiles remain relatively rare, especially at the top and at the bottom (Figure S-10). These trends corroborate our main analyses based on the ELIPSS data and suggest that the income mobility patterns we find are not explained by the interval and banded structure of our income variable, nor by short-range mobility moves between income categories alone. Second, and all else equal, households facing difficulties to make ends meet in 2019 were most at risk of lower income in 2022. As for the effects of 2019 income quintiles, as in the case of the ELIPSS data, we find that, compared to the middle quintile, the households whose income corresponds to the bottom 20 % of income distribution were less, and those in the top quintile more exposed to income loss, even if those who gain more in 2019 also do so in 2022 (Figure S-13).

We confirm these findings with two measures of deprivation: a subjective variable that asks whether the household struggles to make ends meet (Figure S-11 and S-13), and a material deprivation indicator that captures seven different items considered as necessary or desirable to a dignified life (see Table S-12, and Figures S-14a, S-14b and S-15).[33] These measurements enrich the main analyses using the ELIPSS panel,

[32] As for the greater exposure of the highest income group to income loss, our findings echo some of the observations in economic literature, where the peak of income volatility among the top 1 % has been called 'the wild ride of the 1 %' (Hardy & Ziliak, 2014). This is nevertheless an exception to the general finding of decreasing income volatility across income distribution, often observed in studies focusing on labour income only (see Guvenen, Pistaferri, & Violante, 2022), knowing that the sources of this volatility are also strongly varying across the income distribution (Brewer et al., 2025). Several studies provide strong evidence that the volatility of non-labour income sources (Hardy & Ziliak, 2014; Menta, Wolff, & D'Ambrosio, 2021) is substantial, and some highlight the particularly high volatility of self-employed incomes (Jensen & Shore, 2008). In a nutshell, the higher share of nonlabour income among top income groups might also partly account for their greater income volatility. However, our data do not allow us to further test this hypothesis.

[33] For an analysis of the association between these two indicators with initial level of income, see Appendix J in Supplementary material.

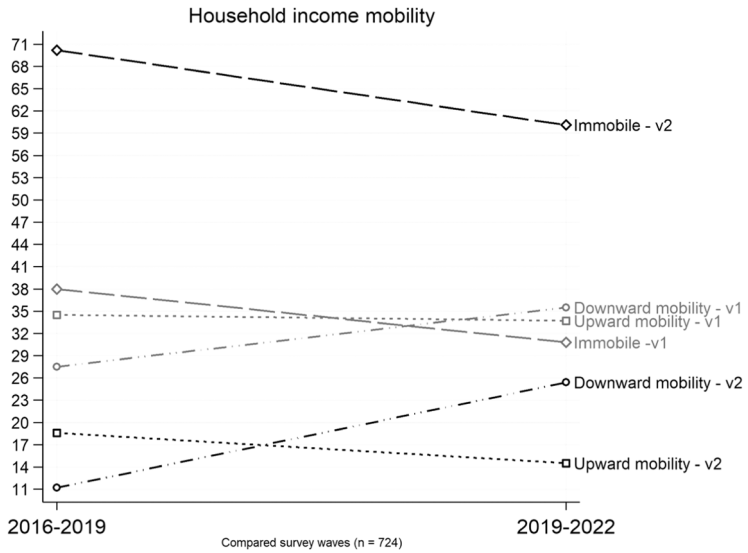

Fig. 7. Gross long-range household equivalized income mobility rates (2016–2022).
Note: v1 (in gray) refers to the initially used definition of income mobility, where every income group change is treated as mobility. v2 (in black) consists of treating as immobile individuals whose mobility is directed towards the adjacent upper or lower income group. This means restricting the mobility definition only to long range income mobility moves.
Example: see Fig. 2.
Source: ELIPSS panel.

which only allow us to measure subjective difficulty in making ends meet. Finally, the EU-SILC data also allows us to validate our findings regarding the stability of the patterns of association between income mobility and its main predictors, suggesting that, despite their greater prevalence, the risks of income loss were similarly distributed in the pre-crisis and crisis period (Figures S-16 and S-17).

That said, some divergences appear between the EU-SILC and ELIPSS analyses with regards to the correlation between household characteristics and income mobility, especially when it comes to the effects of the household composition and tenure status. These no longer indicate the relative overexposure to downward mobility among couples with children, as well as tenants and owners with loans (compared to couples only and owners); instead, they suggest the opposite. While we suspect these patterns to partially reflect an age effect,[34] we are unable to test for this directly, given that our analyses are conducted at the household level.

5. Summary and conclusion

The present article investigates COVID-19 induced economic hardship at the end of the epidemiological crisis. It focuses on the case of France where the scarring effects of the crisis have not previously been studied in detail. Echoing some of recent register data analyses (see Albouy et al., 2023), by looking at the overall income distribution changes and Gini income dynamics, we find some evidence of rising income inequality. When it comes to income mobility, we also find that more than one third of French households experienced a drop in their income from the pre-pandemic period, making the scenario of income loss much more likely than before the crisis.

Although it appears that a decline in income was significantly more likely among some social groups that were already socioeconomically disadvantaged before the crisis started (such as households with unemployed or less educated members, lower SES and households declaring difficulties to make ends meet), in fact, households with higher initial (pre-crisis) income suffered more from income loss. At the same time, lower income groups appear less exposed to downward income mobility, possibly due to social assistance policies such as the minimum income allowance (*Revenu de solidarité active*, or RSA) lowering their exposure to negative shocks.

These patterns are further confirmed by our analyses that compare the mobility predictors in the pre-crisis (2016–2019) and crisis (2019–2022) periods, that show that although the pandemic led to increasing downward income mobility, it does not seem to correspond to a period of major redistribution of opportunities for income mobility, as these opportunities largely evolved according to their pre-crisis patterns. As a consequence, our results do not provide evidence of cumulative (dis)advantage when defined in a strict form and reflected in our first hypothesis, but they are in line with the broader definition of this process that suggests the maintenance, rather than the increase of social inequalities when it comes to income mobility (DiPrete & Eirich, 2006). In no way do they provide support for the idea that crises necessarily act as 'great equalizers', as for that to be true, the crisis would have had to lead to an alteration of the common mobility patterns.

This 'business-as-usual' operating mode of income dynamics during the crisis is further confirmed by our findings ruling out the possibility that downward income mobility was linked to the health-related effects of the pandemic. Contrary to our second hypothesis, once we control for pre-existing household sociodemographics, exposure to the virus by being infected or experiencing stronger or long-term symptoms did not accrue greater risk of downward income mobility. Overall, the economic standing of French households was hit more by the disruption of the socioeconomic context than by the disease itself. While we cannot account for the impact of COVID-19 deaths in the household, which may be a precipitating factor of economic losses, we can nonetheless

[34] This interpretation relies on the finding that young individuals are significantly more likely to be tenants than owners without loans (Insee, 2023), and that couples with children may, on average, be younger than couples without children in the household. While it is true that, among the working-age population, the probability of income mobility (especially upward) decreases with age (Loisel & Sicsic, 2023), when considering the entire population, older respondents appear to be more exposed to income loss due to retirement. Consequently, our household composition and ownership status variables may be capturing an unobserved age effect, partially related to respondents' employment status. This bias may be less prominent in the ELIPSS data, where we control for employment status.

highlight such an outcome as a potential success of employment protection and other welfare policies in France. Having said this, we also found some evidence that a decline in income was more frequent among households that *did* benefit from COVID-specific government transfers. This means that such aid was rather well targeted (Chattopadhyay et al., 2023), but possibly insufficient to prevent significant income drops. The case of France—where welfare support was comparatively strong—may thus provide an indication of possible worse scenarios in other countries, where social policies were not in place to mitigate cumulative disadvantage mechanisms.

While there is evidence that exposure to and severity of infection during the pandemic was strongest among disadvantaged groups in France (Bajos, Counil et al., 2021; Bajos, Jusot et al 2021; Khlat et al., 2022), therefore leading to widening social inequalities in epidemiological terms, this does not seem to be the case when it comes to relative income mobility chances. More specifically, socioeconomically disadvantaged groups do not appear uniformly overexposed to negative income dynamics, and the generating patterns of household equivalized income mobility are not exceptional during the crisis compared to the pre-crisis period.

Several limitations of our study need to be highlighted. First, in line with pre-established knowledge of attrition processes, both in the ELIPSS and in the EU-SILC data, the economically least advantaged households are more likely to drop out from the sample. These households may be the most exposed to the negative effects of the crisis. Consequently, our results may provide only the lower bound of the real COVID-19 effect on economic hardship, implying that the negative consequences of the pandemic on household income inequality may be larger in reality than what we find in our analyses. Second, due to the interval and left- and right-censored nature of our income indicator in the ELIPSS data, our results possibly underestimate the mobility phenomenon (both upward and downward) among the highest income group. However, it does not seem that this drives our results regarding the temporal change of income mobility, especially the increasing importance of downward mobility, a result that is robust to the exclusion of the highest and lowest income groups, and which appears in our EU-SILC analyses based on register income data provided in continuous form. Third, although we take advantage of all the household-level predictors available to us, ELIPSS data do not contain information on household members other than the respondent's partner, and we do not always have equivalent information on respondents and their partners (e.g., we lack information on the partner's nationality). Fourth, our household-based analyses prevent us from analyzing inequalities within households, such as disparities between men and women or between different age groups, which could have increased as a result of the pandemic. Fifth, further analysis is needed to explore the association between income mobility patterns and the overall level of social inequalities, which we examined separately in this work.

The study of the temporal evolution of social inequalities during major exogenous shocks like the COVID-19 pandemic is important for the analysis of social inequalities, and can also have considerable implications for public policy. Our results demonstrate that the pandemic did not act as a 'great equalizer'. However, possibly due to the unprecedented state redistributive interventions, it did not enhance or alter the main mechanisms that underlie the ordinary operating mode of the social structure either. Indeed, our results show that the COVID-19 pandemic in France did not drastically alter the lasting, unequal distribution of income opportunities across social groups, and that pre-crisis patterns remained salient during this otherwise exceptional moment for societies across the globe.

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CRediT authorship contribution statement

Ettore Recchi: Writing – review & editing, Writing – original draft, Supervision, Project administration, Methodology, Investigation, Funding acquisition, Conceptualization. **Andrew Zola:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Data curation, Conceptualization. **Marta Veljkovic:** Writing – review & editing, Writing – original draft, Visualization, Validation, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

Declaration of Competing Interest

The authors report there are no competing interests to declare.

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Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.rssm.2025.101093.

Data availability

The data underlying this article were produced and provided by the Centre de données socio-politiques (CDSP). Data can be shared on request to the corresponding author with permission of CDSP.

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