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We here use panel data from the COME-HERE survey to track income inequality during COVID-19 in France, Germany, Italy, Spain and Sweden. Relative inequality in equivalent household disposable income among individuals changed in a hump-shaped way over 2020. An initial rise from January to May was more than reversed by September. Absolute inequality also fell over this period. As such, policy responses may have been of more benefit for the poorer than the richer.

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1. Introduction

At the time of writing, more than 50,000,000 cases of COVID-19 have been reported globally, and the number of new infections in some Western European countries like France, Germany, Italy, Sweden and Spain has plateaued at high levels after weeks of constant growth. In line with epidemiological models (Ferguson *et al*., 2020, and Lourenco *et al*., 2020), many governments have adopted policies aiming at restricting population movement (such as lockdowns, travel restrictions and curfews). The rationale for these restrictions is to save lives and prevent health systems from being overwhelmed. These policies have led to unprecedented effects on household incomes, that Governments have addressed via extraordinary measures such as furlough payments and direct support of those who lost the most during the pandemic. While much of this effort has been national, in Europe the European Union recently agreed to complement national programmes via the largest-ever stimulus package of €1.8 Trillion to help rebuild a greener, more-digital and more-resilient post-COVID-19 Europe.

There is a very fast-growing literature on the impacts of COVID-19 lockdowns (some examples are Brodeur *et al*., 2021, Layard *et al*., 2020, and Fang *et al*. 2020), and more generally the economic and distributional consequences of the COVID-19 pandemic. Some work has explicitly focused on the labour market. Adams-Prassl *et al.* (2020) show that the pandemic in March and April 2020 had a negative impact on labour-force participation (LFP) and working time: these effects are stronger in the UK and the US than in Germany, and, within countries, hit less-educated workers and women harder, so exacerbating pre-existing inequality. Using US data from the American Time Use Survey in 2017 and 2018, Alon *et al.* (2020) predict that the COVID-19 shock will increase gender inequality by placing a disproportionate burden on women. Compared to past recessions, the fall in employment due to social distancing had a greater effect on sectors with high female-employment rates; at the same time, women have shouldered the lion's share of the burden of greater childcare following

the closure of schools and daycare centers. Exploiting variations across US States in COVID-19 cases and death, Beland *et al.* (2020) show that COVID-19 increased unemployment, reduced hours of work and LFP, but had no significant effect on wages: these detrimental effects were more pronounced for some types of workers (e.g., Hispanic and younger workers). Similar conclusions are drawn by Guven *et al.* (2020) using the Longitudinal Labour Force Survey data up to the end of May 2020 in Australia: COVID-19 reduced LFP by 2.1%, increased unemployment by 1.1% and produced a one-hour drop in weekly working hours. The effect again differed across groups, with the LFP and working hours of the less-educated being more affected, and unemployment rising more for immigrants and those with shorter job tenure or occupations unsuitable for remote work. Bottan *et al.* (2020) equally underline the greater impact of COVID-19 on the least well-off in Latin America and the Caribbean between January and April 2020 using online-survey data.

Bonacini *et al.* (2021) simulate the feasibility of working from home using data on worker characteristics in Italian surveys from 2013 and 2018. Working from home is easier for male, older, better-educated and higher-paid workers, increasing labour-income inequality. The four hypothetical scenarios of stringent policy response across 29 European countries in Palomino *et al.* (2020) also produce uneven wage losses and rising wage inequality.

The above contributions focus on the labour market; we here wish to focus on household disposable income, of which labour income is only one (important) part. Beyond direct labour-market intervention, Governments have also implemented a variety of interventions, such as mortgage holidays, rent support, and fiscal, monetary and macro-financial policies. The policy tracker of the IMF contains an excellent, and regularly updated, summary of the key economic responses of the governments of 197 countries (see https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19).

Two broad approaches have been taken to track household disposable-income inequality during COVID-19. The first appeals to micro-simulation and calibration due to the scarcity of adequate recent micro data. Using EUROMOD, Almeida *et al.* (2020) simulate separately the effect of the pandemic and the policy responses in 27 European countries. In the absence of policy response, the 2020 relative Gini coefficient would have risen by 3.6 points, but the policy response will instead reduce relative inequality by 0.7 points. Brewer and Tasseva (2020) come to the same conclusion using the UK module of EUROMOD, with lower values of the Gini coefficient, Theil index and Mean Logarithmic Deviation in 2020 from COVID-19 policy responses and the pre-existing tax-benefits system; see also O'Donoghue *et al.* (2020) and Li *et al.* (2020) for Ireland and Australia, respectively. Brunori *et al.* (2020) simulate the short-term effects of two months of lockdown on Italian income distribution in the IRPET MicroReg tax model. Again, the Gini coefficient for equivalent disposable household income falls due to policy interventions that target the poorest, from 0.3396 to 0.3373. However, the Italian analysis using EUROMOD in Figari and Fiorio (2020) predicts rising inequality from one month of lockdown.

The second approach uses direct information from surveys on income changes. This data is scarcer, and often cross-sectional and of relatively low frequency. Brewer and Gardiner (2020) suggest that the probability of reporting lower household income is relatively constant across pre-COVID-19 income quintiles in a cross-section of 6,000 UK adults in early May 2020. Belot *et al.* (2020) use cross-section data from China, Japan, South Korea, Italy, the UK and the US in April 2020 (around 1,000 respondents per country) to show that those 18-25 were more likely to experience a drop in household income. Neither of these papers calculates formal inequality indices.

The scarcity of data of this nature, let alone longitudinal and cross-country, is understandable given the cost and associated challenges. As Figari and Fiorio (2020, p.2) note:

"*Lack of longitudinal up-to-date information on household income and labour market circumstances, usually available a few years after the economic shock and in a limited number of countries only, constrains the possibilities for empirical analysis*".

Our paper helps to fill this gap. We have access to a unique longitudinal high-frequency information on household disposable income in five European countries (France, Germany, Italy, Spain and Sweden) from the COME-HERE survey run by the University of Luxembourg starting at the end of April 2020. This allows us to track relative and absolute inequality in equivalent disposable household income among individuals between January, our pre-COVID-19 observation, and September 2020. While the five countries in our analysis are comparable in terms of economic development, they are not so regarding the spread of COVID-19 and pandemic policy responses. Our sample includes both Italy, the first country to introduce a national lockdown on March 9th 2020, and Sweden, which has never had a lockdown.

In line with most micro-simulation results discussed above, relative inequality in most of our five countries fell between January and September 2020: a by-product of government compensation schemes has been to reduce relative inequality. The exception is France, with a slight increase in relative inequality measured by half the square of the Coefficient of Variation (GE(2)) from wider income differences at the top of the distribution. The same country pattern is also found in indices of absolute inequality (measuring gaps in income levels as opposed to shares).

The decomposition of these changes in relative inequality by age, gender, education and marital status, reveals that most movement has been within groups; the between-group changes are mixed.

The remainder of the paper is structured as follows. Section 2 describes the COME-HERE survey and the measures of inequality we use. Section 3 contains our results regarding the

evolution of income inequality in France, Germany, Italy, Spain and Sweden between January and September 2020. Last, Section 4 concludes.

2. Data and Method

The data we use here are from the COME-HERE (COVID-19, MEntal HEalth, REsilience and Self-regulation) panel survey collected by the University of Luxembourg. The survey was conducted with Qualtrics on representative samples in France, Germany, Italy, Spain and Sweden. Respondents were asked to complete an on-line questionnaire that took approximately 20 minutes. Ethics approval was granted by the Ethics Review Panel of the University of Luxembourg. This dataset collects information at the individual and household levels, and is longitudinal. The first four waves of survey were respectively conducted around May 1st, June 9th, September 5th and November 20th 2020. At least three more waves are planned for 2021.

Over 8,000 individuals took part in the first survey and were then invited to respond in subsequent waves. Around 82.5% took part in at least one other survey wave, with 42% participating in all four surveys, 25% to three surveys, and 15.8% to two surveys. Our analysis will be carried out on unbalanced panel data.

The objective of the survey is to collect sufficient individual information to describe living and mental-health conditions during COVID-19, but also to identify recent changes and events that might have affected individuals' lives. Standard sociodemographic characteristics such as age, gender, education, and labour-force and marital statuses were also collected. Special single-wave survey modules addressed topics such as risk attitudes, time discounting, preferences for redistribution, income comparisons, and working conditions.

We measure income inequality via a question in each survey round asking respondents about their household disposable income three to four months prior to the survey, with responses in the following bands: "0 to 1250 Euros", "1250 to 2000 Euros", "2000 to 4000

Euros", "4000 to 6000 Euros", "6000 to 8000 Euros", "8000 to 12500 Euros" and "Over 12500 Euros". Our empirical analysis will cover household disposable income at three points in time. The first is January 2020 (from Wave 1), that we will take as the pre-COVID-19 figure. The second refers to May 2020 (from Wave 3), at the end of the first COVID-19 wave and the third to September 2020 (from Wave 4), after the Summer but before the beginning of the second wave of COVID-19 in Europe. The income question in Wave 2 adds little information as it refers to April, producing very similar figures to those for May in Wave 3.

To track the evolution of income inequality across Europe we first estimate Lorenz curves and calculate four relative measures of inequality: Gini, and three members of the Generalized Entropy family, Mean Logarithmic Deviation (GE(0)), Theil (GE(1)) and half the square of the Coefficient of Variation (GE(2)). These indices differ in their sensitivity to income changes, with the Gini coefficient being more sensitive to income differences around the mode of the distribution, and Generalized Entropy measures increasingly to changes affecting the upper tail as the parameter values in parentheses rise from 0 to 2.

The Generalized Entropy measures are the only Lorenz-consistent indices that are additively decomposable by population subgroups. We make use of this property in the next section to see if some groups were more affected than others, and decompose relative inequality within and between age, gender, education and marital status.

The scale-invariance property of the Lorenz-consistent measures implies that inequality remains unchanged as all incomes change in the same proportion: we measure inequality in income shares. This is not the only way forward, and departures from the relative criterion have become increasingly common following Atkinson and Brandolini (2004) who showed that conclusions regarding the evolution of world income inequality differed with relative and absolute measures. We thus turn to absolute measures of inequality. The translation-invariance property of these indices imply that now inequality is unchanged as all incomes change by the

same amount: we measure inequality in levels of income. We will here consider the absolute Gini coefficient, the variance of the income distribution, and two versions of the Kolm index with inequality-aversion parameters of $5*10^{-4}$ and 10^{-4} (the results are very similar with other parameter values).

Our empirical analysis covers all respondents with valid information on disposable household income. As this latter is measured in bands, we take the mid-point in Euros and in PPP (using 2019 US Dollars as the reference). We attributed a value of 12 500 Euros to the open-ended top income category: this value produces the best fit when comparing our relative Gini coefficients in January 2020 to those produced by Eurostat in 2019. Each income figure is then equivalized using the square root of the number of household members, and the resulting value is then attributed to each household member. The decomposition by population subgroups is carried out taking as reference the characteristics of the survey respondent.

There are 17,183 observations (7,302 individuals) in the analysis sample. The French, German, Italian and Spanish samples cover around 22% of the sample each, but the Swedes only 11% of observations, in line with the countries' relative populations.

We check the quality of our income data by comparing our relative Gini coefficients from January 2020 to the latest figures produced by Eurostat, available at https://ec.europa.eu/eurostat/databrowser/view/ilc_di12/default/table?lang=en. These coefficients are very similar in France, Germany, Spain and Italy: the Eurostat Gini coefficients in 2019 were respectively 0.292, 0.297, 0.328 and 0.330, while the analogous COME-HERE figures from January 2020 were 0.294, 0.302, 0.336 and 0.339. None of these differences are therefore over 0.8 Gini points. The only exception is Sweden where our Gini coefficient is higher than that from Eurostat: 0.314 *versus* 0.276.

Before turning to the analysis of inequality in the next section, we first describe the observed changes in the income densities by the summary statistics in Table 1 and the

histograms in Figure 1. Average equivalised disposable household income across all countries is U-shaped from January to September 2020, falling by 3.3% between January and May and then recovering to almost its initial level by September. This U-shaped pattern is also found in the EUROMOD predictions (see, for example, Figure 8 in Almeida *et al.*, 2020). The initial income fall in May 2020 likely reflects the COVID-19 outbreak *per se* and the initial restrictive measures, and the subsequent recovery the governmental compensation schemes implemented throughout 2020. This U-shaped income pattern is found in all individual countries but France, where income rather steadily rose over the period (although all of the income changes here, over a short period, are necessarily quite small).

Median income over this eight-month period is somewhat more stable: this did not change in France and Germany, and increased in Sweden only between May and September. The U-shaped pattern found for mean income is also apparent in median income in Italy and Spain. Notably, Italy is the only of our five countries in which neither mean nor median income had recovered to its January level by September.

The country income distributions are plotted in Figure 1. The left-hand panel here refers to the January-May movements, and the right-hand panel to those between January and September. The income distribution shifted to the left between January and May in Italy, Spain and Sweden, while in France and German there is a notable rise in the modal category.

Turning to the January-September distributions, we see a general shift from the bottom of the distribution towards values in the middle. Italy is the exception, and is notably the only country where the percentage of respondents with income under 1,000 Euros per month in September remained higher than that in January.

3. Changing Income Inequality

We first visually inspect the evolution of relative inequality by plotting the Lorenz curves for the whole sample and then separately for each country between January and September 2020 in Figure 2. There is a slight shift of the Lorenz curve towards the line of perfect equality in the whole sample. The weak Lorenz dominance here (as there is some overlap at the extremes) indicates that relative inequality fell in the whole sample. A formal quantitative measure of this shift is provided by the Gini coefficient (measuring the normalized area between the line of equality and the Lorenz curve) at the foot of the figures: for the whole sample this fell from 0.322 to 0.314 between January and September 2020.

There are somewhat similar relative inequality patterns in all countries in the remaining panels of Figure 2, although there is no Lorenz dominance in France and Italy as the curves cross. In France the September curve is above that of January for lower income shares and below it for higher income shares; in Italy we find the opposite shift.

Figure 3 plots the Gini coefficient and the three Generalized Entropy indices in January, May and September 2020, where January is normalised to 100 as the baseline (the actual values are listed in Appendix Table A1). In the top-left panel of Figure 3, for all countries together, all relative-inequality measures rose between January and May. For example, the Gini coefficient increased by roughly 0.7 points. We observe similar changes in France, Spain, Italy and Sweden. Note that the increases in the Gini coefficients in these countries lie between 0.5 and 1.3 points, which is in line with the predictions in Almeida *et al.* (2020) under the scenario of no policy intervention. The higher Italian Gini coefficient is also very much in line with the simulations in Brunori *et al.* (2020) that compare pre-COVID-19 to a COVID-19 situation where the only governmental response is a lockdown. Germany is an exception here: in May 2020, the Gini coefficient was lower (as indeed were all of the German inequality indices) so that the initial phase of the pandemic was associated with a fall in inequality.

The German experience at the beginning of the pandemic is actually a precursor for the other four countries as we move to September 2020: relative inequality is lower in September than in January in every country. The only exception is the GE(2) measure in France, where we see a slight increase due greater income differences at the top of the distribution. The largest fall in relative inequality is with the GE(2) in Italy and Sweden. In Italy, the fall in inequality depends on the Generalized Entropy parameter: the larger drop in GE(2) reflects the tightening of the income differences at the top of the distribution. We noted above the opposite shifts in the Lorenz curves in Italy and France, and these are consistent with their different GE(2) experiences.

The overall picture of the distribution of income in Europe during the pandemic can then be split into two periods. The advent of COVID-19 increased relative income inequality in the first period (except in Germany); however, in the second period the evolution of the pandemic and the effect of various policy interventions has more than reversed this initial widening of inequality.

Tables 2 to 4 contain the decomposition by population subgroups of the three Generalized Entropy measures in January and September 2020 by four individual characteristics: gender, age (above age 50 *vs.* otherwise), education (post-secondary education *vs.* otherwise) and being in a couple. First, in all countries and periods the within components explain by far the largest part of total inequality (both in levels and changes). This result is commonplace in the inequality literature.

We find that inequality within groups fell over time, with the exception of France for GE(2) for the gender and age decompositions. That this results only for GE(2), and not for GE(1) and GE(0), highlights that the cause of increasing inequality within gender and age groups in France is the income changes in the upper tail of the distribution.

The results for the between group components are mixed, and for 24 out of the 52 country values there is no change. The largest change in the between component over time is with respect to education in France and Italy, and with respect to being in a couple in the other three countries. There is a fall in inequality between the weighted income means by education in all countries apart from Germany, where there is no change, and France, where this figure rises. We also find an increase in the between partnered *vs.* non-partnered component in all countries bar Spain. This result is unsurprising if we consider partnership to provide insurance in times of uncertainty. This is the only decomposition with non-zero value in Germany (with the exception of Theil for gender).

Contrary to much of the literature surveyed above, we find no increase in inequality between men and women in any of the single countries: the between component of inequality for gender is unchanged in 11 out of 15 cases, falls for the three French figures, and rises only for the Theil index in Germany. When we pool all five countries together, all three gender indices exhibit small rises.

We last turn to absolute inequality. Appendix Table A2 lists index values in January, May and September 2020, and these are plotted in Figure 4 using January as the baseline. The top-left panel reveals a steady drop in absolute inequality pooling all countries together. This is different from the hump-shape in relative inequality, which can be understood by the U-shaped pattern in mean income in Table 1 (this is very easy to see in the case of the Gini coefficient, as the absolute Gini is equal to the relative Gini multiplied by mean income). Two different patterns emerge considering the countries separately. While relative inequality increased everywhere between January and May except in Germany, absolute inequality rose only in France and, to a lesser extent, Spain. By September 2020, absolute inequality was below its January value everywhere but in France. This drop in absolute inequality may well reflect that the poorest households benefited more from government support during the pandemic.

4. Conclusion

Longitudinal data from the COME-HERE survey covering France, Germany, Italy, Spain and Sweden reveals a fall in relative inequality between January and September 2020. The one exception is a slight increase in GE(2) in France due to widening income differences at the top of the distribution. The evolution of relative inequality was not monotonic: inequality mostly increased in from January to May before dropping back below its pre-COVID level in September. The absolute inequality in equivalised disposable household income also fell in most COME-HERE countries. One interpretation is that the policy responses to COVID-19 have produced lower inequality, perhaps due to their relative focus on those towards the bottom of the income distribution who were potentially the most affected by the pandemic.

Although this paper is one of the first to track the changes in relative and absolute inequality across different European countries via a harmonised survey, it is not without limitations. We do, however, believe that these latter can be addressed in future research. First, we have seen some differences in patterns using data from only five countries: surveys including more (or at least different) countries should be explored to improve our understanding of the effects of COVID-19 on both national and international inequality. Second, the question of the mechanisms remains open, and we would like to better understand the efficiency of the various policy responses. Last, the last survey round that we used here referred to disposable household income in September 2020, at the very beginning of the second wave of COVID-19. More-recent data would allow us to see whether the compensation schemes in place were sufficient to avoid a potential new jump in inequality during the restrictions of the second wave. Addressing these questions and limitations constitutes a promising and necessary field of investigation for future research.

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Figures and Tables:

Table 1: Equivalised Disposable Household Income in PPP in COME-HERE over 2020 - Descriptive Statistics

	Mean	Median	S.D.	Min	Max
Total:					
January	2343.8	2139.8	1453.5	268.8	14002.7
May	2269.1	2049.2	1425.0	287.3	13907.7
September	2325.7	2139.8	1399.1	287.3	16347.7
France:					
January	2474.2	2366.2	1403.7	348.6	14002.7
May	2511.6	2366.2	1445.2	322.7	9901.4
September	2550.6	2366.2	1453.1	348.6	14002.7
Germany:					
January	2565.9	2350.1	1496.6	346.2	13907.7
May	2520.9	2350.1	1446.6	299.8	13907.7
September	2555.9	2350.1	1445.0	379.3	13907.7
Italy:					
January	2037.7	1999.5	1364.2	310.5	10801.6
May	1875.2	1712.4	1267.5	310.5	10801.6
September	1944.4	1825.3	1196.2	310.5	10801.6
Spain:					
January	2201.1	2139.8	1429.9	332.3	11559.6
May	2179.3	1953.3	1438.4	376.8	11559.6
September	2262.4	2139.8	1406.4	376.8	16347.7
Sweden:					
January	2593.3	2106.8	1536.8	268.8	12467.7
May	2378.8	2106.8	1434.7	287.3	12467.7
September	2591.1	2580.3	1429.4	287.3	7198.2

Note. The figures here refer to the analysis sample from the COME-HERE survey.

Figure 1: The distribution of equivalised disposable household income in COME-HERE over 2020 in France, Germany, Italy, Spain and Sweden.

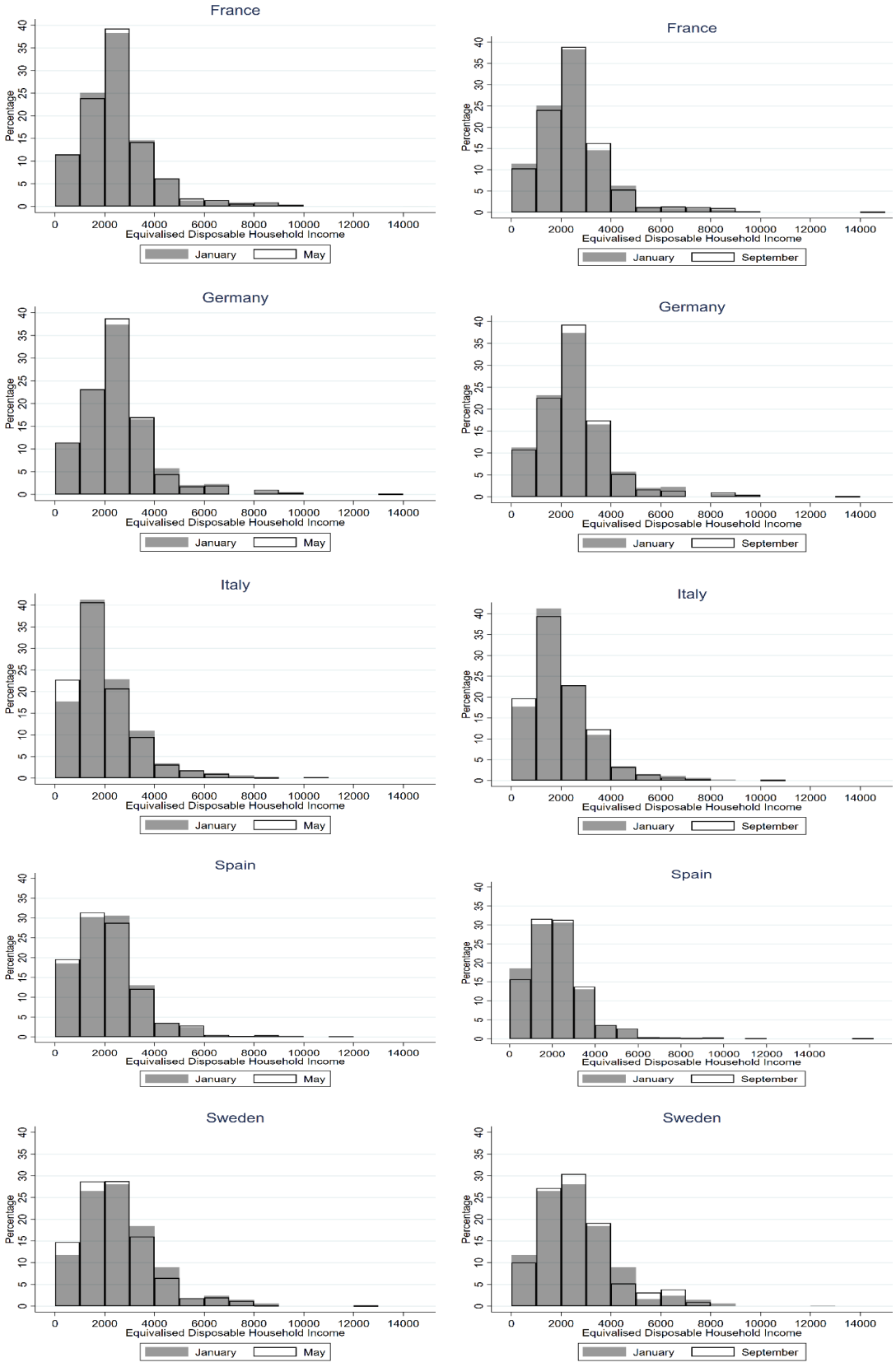
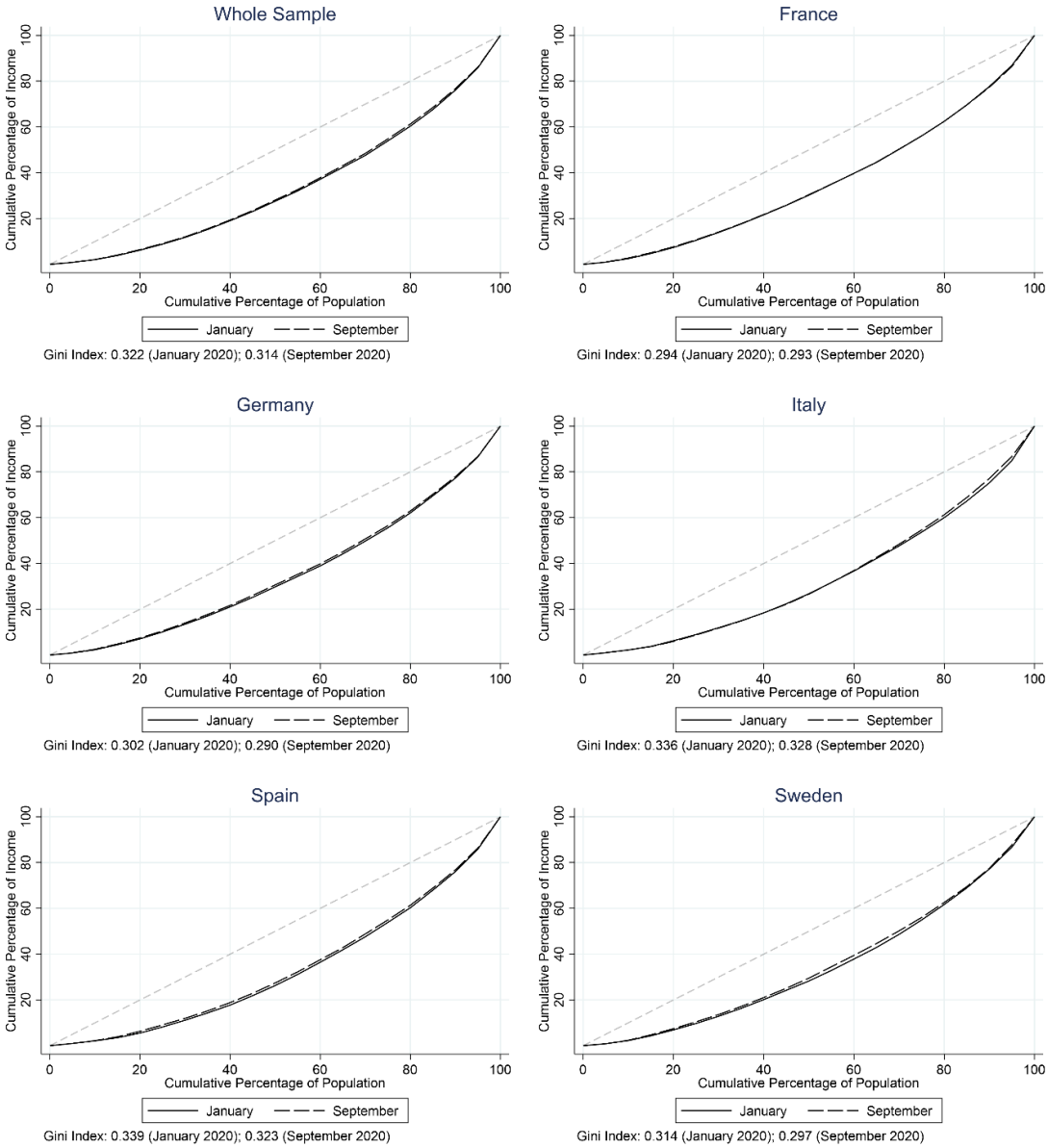
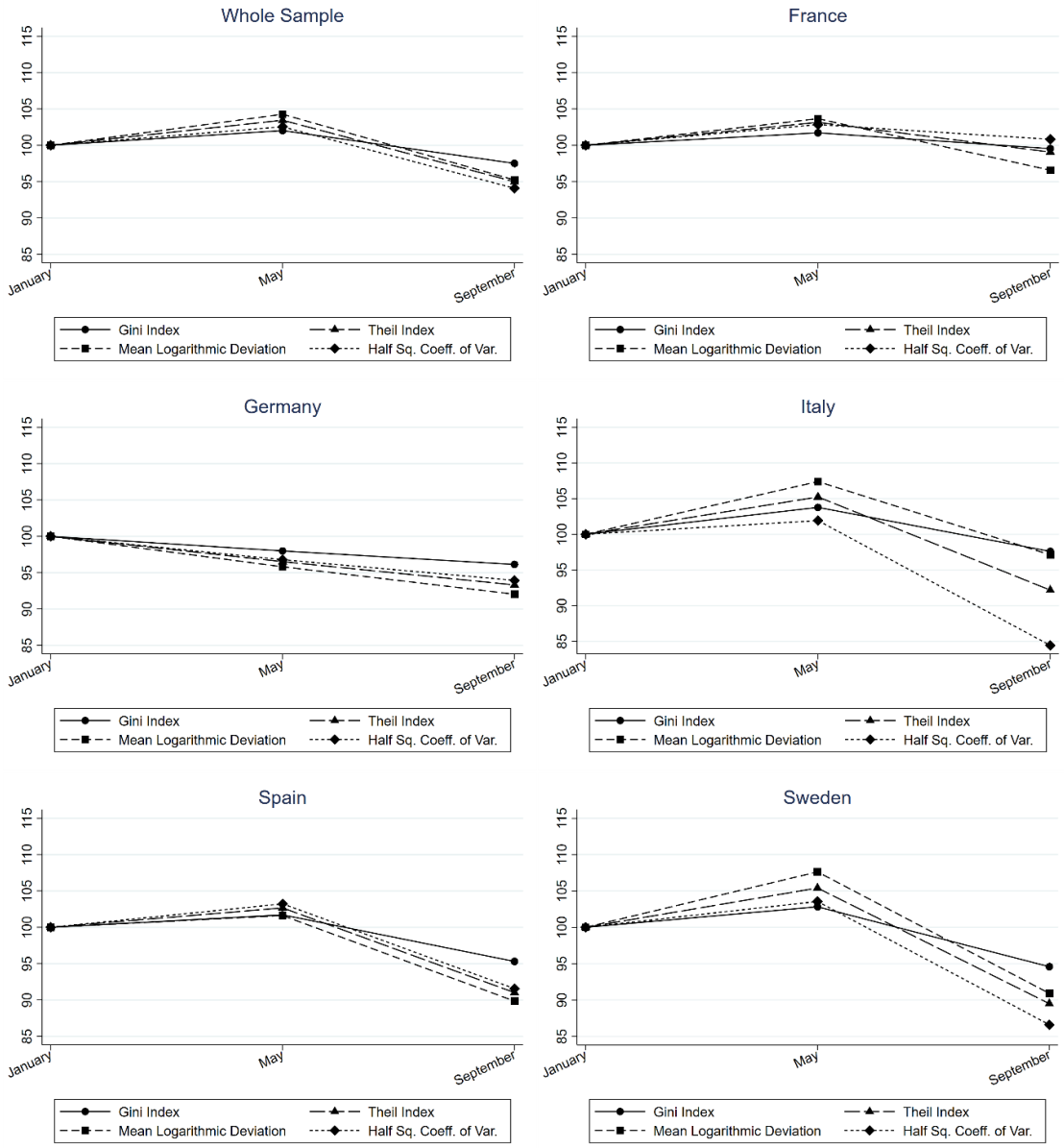


Figure 2: Lorenz Curves in COME-HERE over 2020



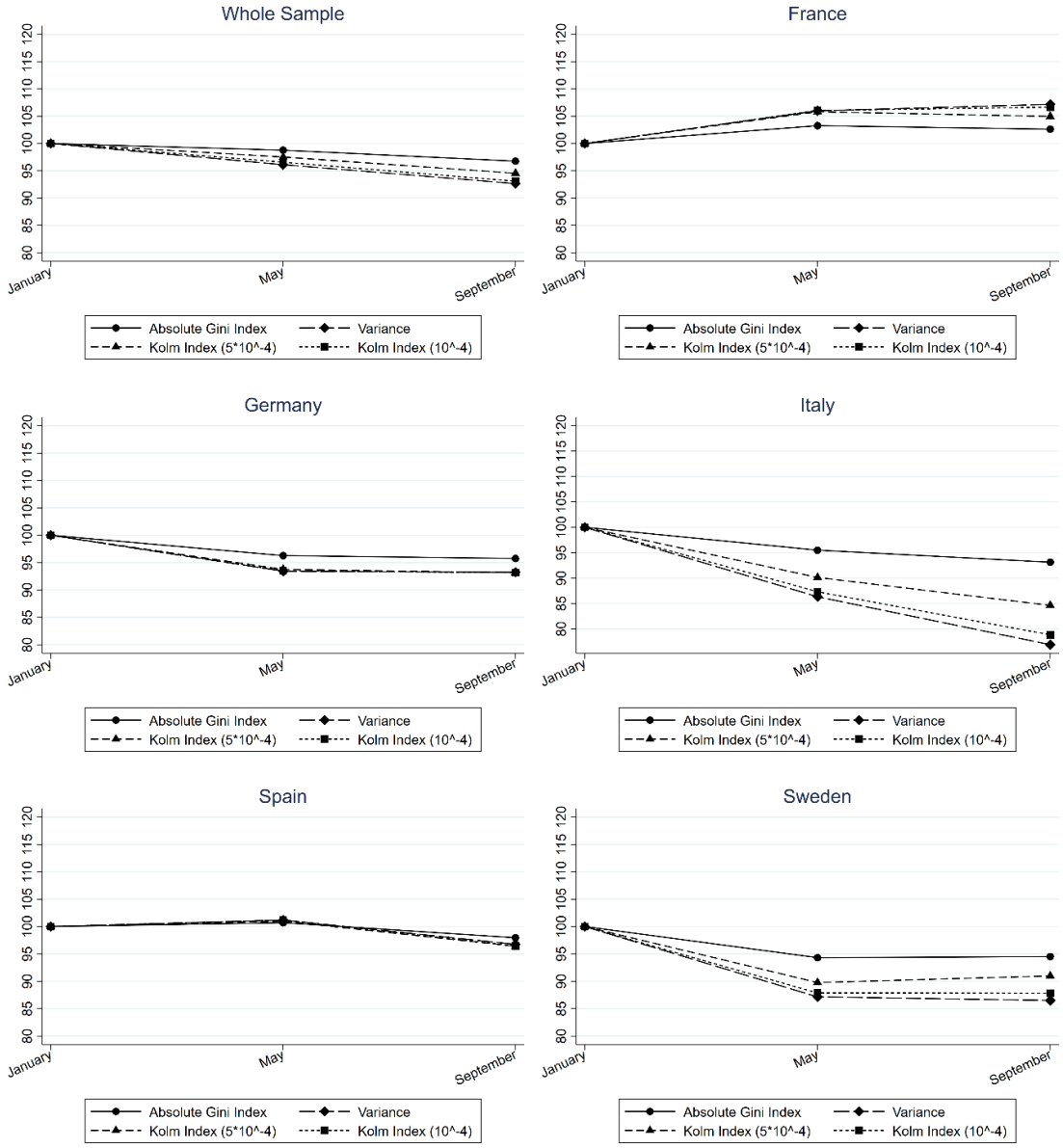
Notes. These figures refer to the analysis sample from the COME-HERE survey. "Income" refers to equivalised disposable household monthly income in Euros and PPP.

Figure 3: The evolution of Relative Income Inequality in COME-HERE over 2020



Notes. These figures refer to the analysis sample from the COME-HERE survey. "Income" refers to equivalised disposable household monthly income in Euros and PPP.

Figure 4: The evolution of Absolute Income Inequality in COME-HERE over 2020



Notes. These figures refer to the analysis sample from the COME-HERE survey. "Income" refers to equivalised disposable household monthly income in Euros and PPP.

Table 2: Mean Logarithmic Deviation Index (GE(0)) – Decomposition of Income Inequality

	January			September		
Whole Sample	Total	Within	Between	Total	Within	Between
Gender	0.194	0.191	0.003	0.185	0.181	0.004
Age	0.194	0.191	0.003	0.185	0.182	0.003
Education	0.194	0.184	0.010	0.185	0.175	0.010
Partnered	0.194	0.188	0.006	0.185	0.178	0.007
France	Total	Within	Between	Total	Within	Between
Gender	0.161	0.155	0.006	0.156	0.151	0.005
Age	0.161	0.157	0.004	0.156	0.152	0.004
Education	0.161	0.152	0.009	0.156	0.145	0.012
Partnered	0.161	0.152	0.009	0.156	0.146	0.010
Germany	Total	Within	Between	Total	Within	Between
Gender	0.172	0.169	0.003	0.158	0.155	0.003
Age	0.172	0.172	0.000	0.158	0.158	0.000
Education	0.172	0.160	0.012	0.158	0.146	0.012
Partnered	0.172	0.168	0.004	0.158	0.151	0.007
Italy	Total	Within	Between	Total	Within	Between
Gender	0.207	0.205	0.002	0.201	0.199	0.002
Age	0.207	0.207	0.001	0.201	0.201	0.000
Education	0.207	0.197	0.010	0.201	0.196	0.005
Partnered	0.207	0.202	0.005	0.201	0.194	0.005
Spain	Total	Within	Between	Total	Within	Between
Gender	0.216	0.210	0.006	0.194	0.188	0.006
Age	0.216	0.208	0.008	0.194	0.189	0.005
Education	0.216	0.203	0.013	0.194	0.184	0.010
Partnered	0.216	0.211	0.005	0.194	0.193	0.001
Sweden	Total	Within	Between	Total	Within	Between
Gender	0.183	0.182	0.001	0.167	0.166	0.001
Age	0.183	0.181	0.002	0.167	0.167	0.000
Education	0.183	0.173	0.010	0.167	0.160	0.007
Partnered	0.183	0.180	0.003	0.167	0.158	0.009

Notes. These figures refer to the analysis sample from the COME-HERE survey. "Income" refers to equivalised disposable household monthly income in Euros and PPP.

Table 3: Theil Index (GE(1)) – Decomposition of Income Inequality

	January			September		
Whole Sample	Total	Within	Between	Total	Within	Between
Gender	0.174	0.171	0.003	0.166	0.162	0.004
Age	0.174	0.171	0.003	0.166	0.163	0.003
Education	0.174	0.164	0.010	0.166	0.157	0.009
Partnered	0.174	0.169	0.005	0.166	0.159	0.007
France	Total	Within	Between	Total	Within	Between
Gender	0.147	0.141	0.006	0.146	0.141	0.005
Age	0.147	0.143	0.004	0.146	0.142	0.004
Education	0.147	0.138	0.009	0.146	0.135	0.011
Partnered	0.147	0.139	0.008	0.146	0.136	0.010
Germany	Total	Within	Between	Total	Within	Between
Gender	0.155	0.152	0.003	0.145	0.141	0.004
Age	0.155	0.155	0.000	0.145	0.145	0.000
Education	0.155	0.142	0.012	0.145	0.133	0.012
Partnered	0.155	0.151	0.004	0.145	0.137	0.008
Italy	Total	Within	Between	Total	Within	Between
Gender	0.193	0.191	0.002	0.178	0.176	0.002
Age	0.193	0.192	0.001	0.178	0.177	0.000
Education	0.193	0.183	0.010	0.178	0.173	0.005
Partnered	0.193	0.188	0.005	0.178	0.171	0.007
Spain	Total	Within	Between	Total	Within	Between
Gender	0.192	0.186	0.006	0.175	0.169	0.006
Age	0.192	0.185	0.008	0.175	0.170	0.005
Education	0.192	0.179	0.013	0.175	0.164	0.011
Partnered	0.192	0.188	0.005	0.175	0.174	0.001
Sweden	Total	Within	Between	Total	Within	Between
Gender	0.163	0.162	0.001	0.146	0.145	0.001
Age	0.163	0.161	0.002	0.146	0.146	0.000
Education	0.163	0.155	0.010	0.146	0.139	0.007
Partnered	0.163	0.160	0.003	0.146	0.137	0.009

Notes. These figures refer to the analysis sample from the COME-HERE survey. "Income" refers to equivalised disposable household monthly income in Euros and PPP.

Table 4: Half the square of the Coefficient of Variation (GE(2)) – Decomposition of Income Inequality

	January			September		
Whole Sample	Total	Within	Between	Total	Within	Between
Gender	0.192	0.189	0.003	0.181	0.177	0.004
Age	0.192	0.190	0.002	0.181	0.179	0.002
Education	0.192	0.182	0.010	0.181	0.172	0.009
Partnered	0.192	0.187	0.005	0.181	0.175	0.006
France	Total	Within	Between	Total	Within	Between
Gender	0.161	0.155	0.006	0.162	0.157	0.005
Age	0.161	0.157	0.004	0.162	0.158	0.004
Education	0.161	0.152	0.009	0.162	0.151	0.011
Partnered	0.161	0.153	0.008	0.162	0.153	0.009
Germany	Total	Within	Between	Total	Within	Between
Gender	0.170	0.167	0.003	0.160	0.157	0.003
Age	0.170	0.170	0.000	0.160	0.160	0.000
Education	0.170	0.157	0.013	0.160	0.147	0.013
Partnered	0.170	0.166	0.004	0.160	0.153	0.007
Italy	Total	Within	Between	Total	Within	Between
Gender	0.224	0.222	0.002	0.189	0.187	0.002
Age	0.224	0.224	0.000	0.189	0.189	0.000
Education	0.224	0.214	0.010	0.189	0.184	0.005
Partnered	0.224	0.219	0.005	0.189	0.183	0.006
Spain	Total	Within	Between	Total	Within	Between
Gender	0.211	0.205	0.006	0.193	0.187	0.006
Age	0.211	0.203	0.008	0.193	0.188	0.005
Education	0.211	0.198	0.013	0.193	0.182	0.011
Partnered	0.211	0.206	0.005	0.193	0.192	0.001
Sweden	Total	Within	Between	Total	Within	Between
Gender	0.176	0.175	0.001	0.152	0.151	0.001
Age	0.176	0.174	0.002	0.152	0.152	0.000
Education	0.176	0.166	0.010	0.152	0.145	0.007
Partnered	0.176	0.173	0.003	0.152	0.143	0.009

Notes. These figures refer to the analysis sample from the COME-HERE survey. "Income" refers to equivalised disposable household monthly income in Euros and PPP.

Appendix:

Table A1: Relative Income Inequality Indices in COME-HERE over 2020

Gini Coefficient	January	May	September
Total	0.322	0.329	0.314
France	0.294	0.299	0.293
Germany	0.302	0.296	0.290
Italy	0.336	0.349	0.328
Spain	0.339	0.345	0.323
Sweden	0.314	0.323	0.297
Theil Index	January	May	September
Total	0.174	0.180	0.166
France	0.147	0.152	0.146
Germany	0.155	0.150	0.145
Italy	0.193	0.203	0.178
Spain	0.192	0.198	0.175
Sweden	0.163	0.172	0.146
Mean Logarithmic Deviation	January	May	September
Total	0.194	0.202	0.185
France	0.161	0.167	0.156
Germany	0.172	0.165	0.158
Italy	0.207	0.222	0.201
Spain	0.216	0.220	0.194
Sweden	0.183	0.197	0.167
Half the Square of Coefficient of Variation			
Total	0.192	0.197	0.181
France	0.161	0.166	0.162
Germany	0.170	0.165	0.160
Italy	0.224	0.228	0.189
Spain	0.211	0.218	0.193
Sweden	0.176	0.182	0.152

Notes. These figures refer to the analysis sample from the COME-HERE survey. "Income" refers to equivalised disposable household monthly income in Euros and PPP.

Table A2: Absolute Income Inequality Indices in COME-HERE over 2020

Absolute Gini Coefficient	January	May	September
Total	755.8	746.5	731.3
France	727.5	751.2	746.6
Germany	775.0	746.1	742.1
Italy	685.0	654.1	637.9
Spain	746.4	751.7	731.2
Sweden	814.1	767.9	769.4
Variance	January	May	September
Total	2112741.4	2030748.7	1957516.2
France	1055804.7	1119110.9	1131451.9
Germany	1216652.3	1136665.9	1134185.9
Italy	837963.2	723345.8	644252.4
Spain	803781.6	813402.5	777638.0
Sweden	1596357.9	1391235.6	1380988.3
Kolm Index ($5*10^{-4}$)	January	May	September
Total	392.4	382.7	371.0
France	212.2	224.5	222.7
Germany	240.6	225.5	224.1
Italy	163.2	147.1	138.1
Spain	164.8	166.4	158.9
Sweden	314.9	282.7	286.5
Kolm Index (10^{-4})	January	May	September
Total	98.11	94.75	91.32
France	50.14	53.16	53.48
Germany	57.50	53.77	53.56
Italy	39.47	34.46	31.11
Spain	38.37	38.83	37.01
Sweden	75.51	66.34	66.32

Notes. These figures refer to the analysis sample from the COME-HERE survey. "Income" refers to equivalised disposable household monthly income in Euros and PPP.