



## Welfare and Distributional Impact of Soaring Prices in Europe

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### Introduction

The outbreak of the COVID-19 crisis at the beginning of 2020 and the start of the war in Ukraine two years later resulted in a record surge of prices around the globe. The average inflation rate across Europe during this period rose at an unprecedented rate since the 1980's, with an increase in prices equivalent to 10 years prices growth over this period (Figure 1). Price growth was predominately driven by increases in fuels as a result of the Ukraine conflict, although most goods and services have seen price growth, especially food. Price inflation has been impacted by a number of other macro-economic changes including the impact of BREXIT, supply chain constraints post COVID-19 and an accumulation of building house price pressures since the recovery from the *financial* crisis of 2008-2009. In particular, we note that the price growth varies substantially across countries, reflecting different consumption patterns, mitigating policies and import origins. Eastern European countries tend to have the highest price growth, while the Nordics have the lowest price growth.

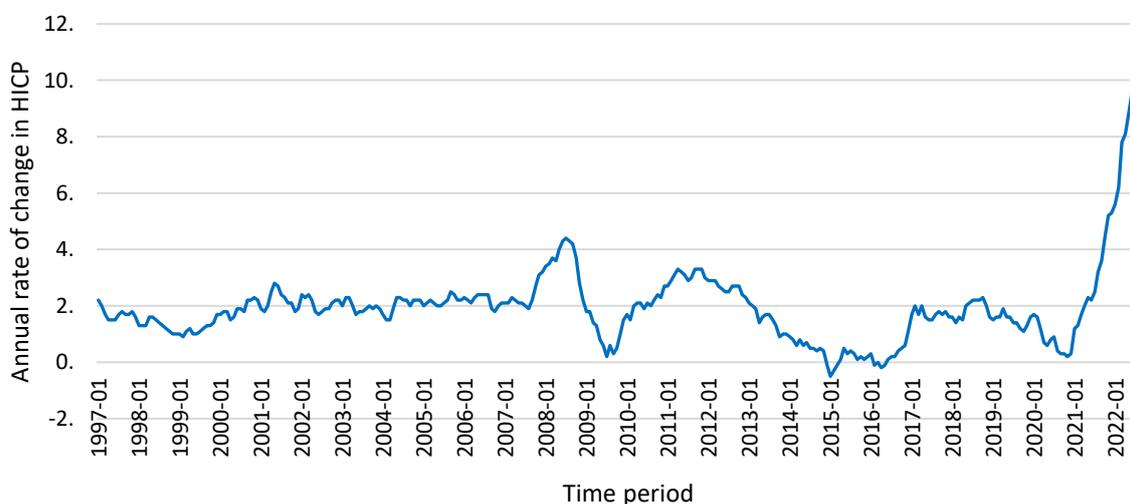
As these price changes affect different groups differently in different countries, we attempt to understand the differential impact of these changes across the income distribution comparatively across several European countries since the start of the *cost of living* crisis in early-2021 and mid-2022. We choose a subset of countries with different inflation experiences in the EU and with different welfare policies to address the *cost of living* crisis: Finland, Hungary, Ireland, Lithuania, Luxembourg, and Portugal. The comparative angle demonstrates to what extent the distributional and welfare consequences of inflation originating from the same energy crisis differ across countries with different consumption patterns, different levels of dependency on energy imports, and different welfare systems.

The *comparative advantage* of this paper lies in combining a detailed decomposition of the impact of inflation with welfare changes measured using the compensating variation and equivalent incomes in a cross-national comparative perspective in relation to the *cost of living* crisis.

### Methodology and data

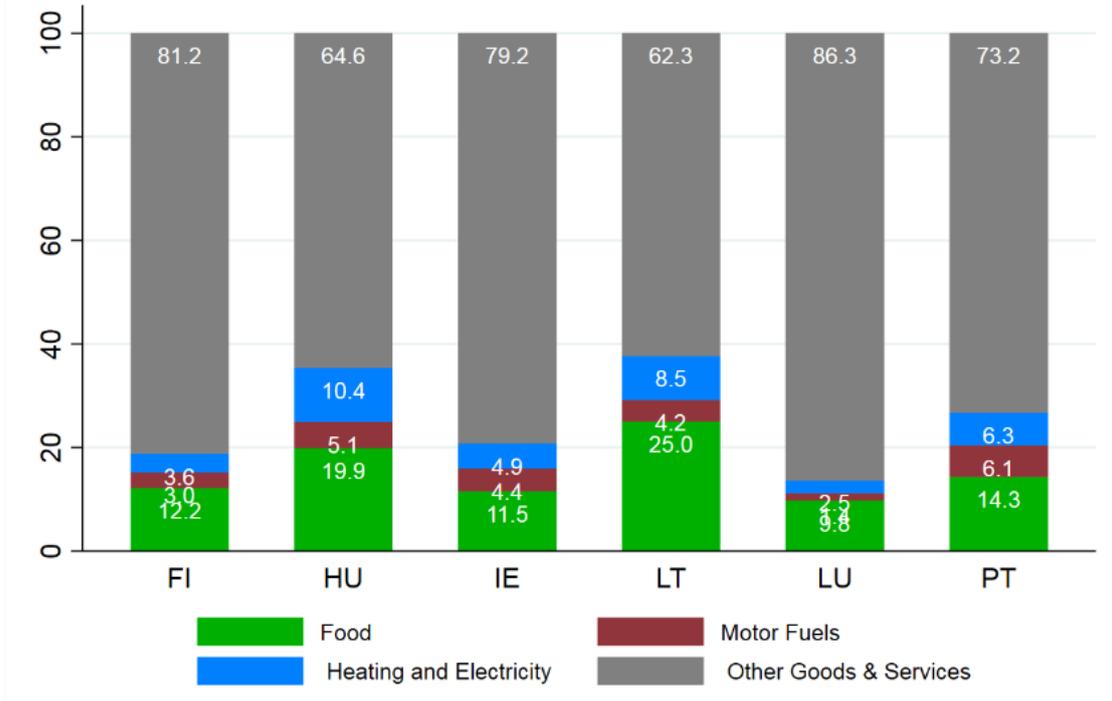
We propose two methodological innovations. First, in evaluating the distributional impact of inflation, we go beyond existing studies and adapt a technique usually applied to assess progressivity/regressivity of tax-benefit systems. Building upon Pfähler (1990), we examine the interaction between the inflation rates of different commodity groups and the structure of expenditure in determining the overall levels of progressivity or regressivity of inflation in each country and assess its drivers by components. Second, in evaluating the welfare impact of price changes we build upon Creedy (2000) and O'Donoghue (2021) and develop a comparative microsimulation infrastructure aimed to obtain a money-metric measure of the change in welfare experienced by individuals due to price changes across Europe. We examine the way compensating variations resulting from price changes vary with household income. The approach consists of estimating a demand system to model household expenditure patterns on groups of goods in each country, estimate income and price elasticities and assess consumer welfare comparatively across Europe. We use the latest expenditure information from the Household Budget Survey (HBS) and price changes published by EUROSTAT, taking as reference the prices from 2021 April.

Figure 1. Year-to-year average inflation rate in the European Union



Source: Eurostat (accessed on 24 October 2022).

Figure 2. Aggregate Budget Shares



**Distributional impact of inflation**

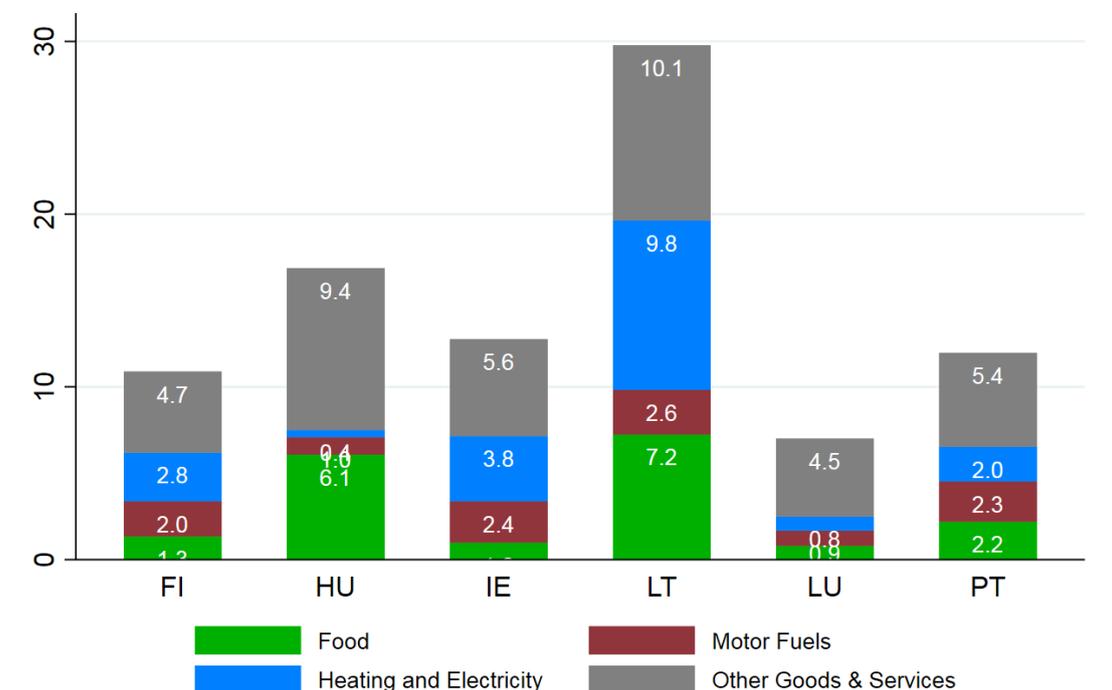
The impact of inflation depends on the combination of good-specific price increases and budget shares. Figure 2 shows the budget shares of the main commodity sub-components for the average household across the six countries. Typically, budget shares for necessities such as food, domestic fuels and electricity are higher in poorer countries such as Lithuania, Hungary and Portugal. Combined with a higher price growth in these necessities, this has resulted in higher inflation in poorer countries, with very significant cross-country variability.

In Figure 3 we report inflation in July 2022 for the average household, built on both the budget shares and good commodity price change.

Headline inflation was the highest in Lithuania and Hungary, and the lowest in Luxembourg.

The drivers of inflation vary across countries, with increases in energy and food prices being the main drivers of cross-national differences. Rising food prices contributed much more significantly towards inflation in Hungary (6.1 %) and Lithuania (7.2 %) relative to Luxembourg (0.9 %). Food prices have increased rapidly in Hungary and particularly for bread, dairy products and some meat products (Hungarian CSO, 2022). The contribution of increasing food prices towards overall CPI inflation is largest in the case of Lithuania (7.2 %) where rising prices for bread and dairy products are contributing heavily (Statistics Lithuania, 2022a).

Figure 3. Estimated inflation by main sub-components



The largest contribution towards inflation in Lithuania emerges from heating and electricity, contributing to a 9.8% increase. Lithuania has experienced high inflation previously during the 2007/2008 commodity price spike. However, the inflation rate in the region of 30% has not occurred since the transition to independence in the early 1990s.

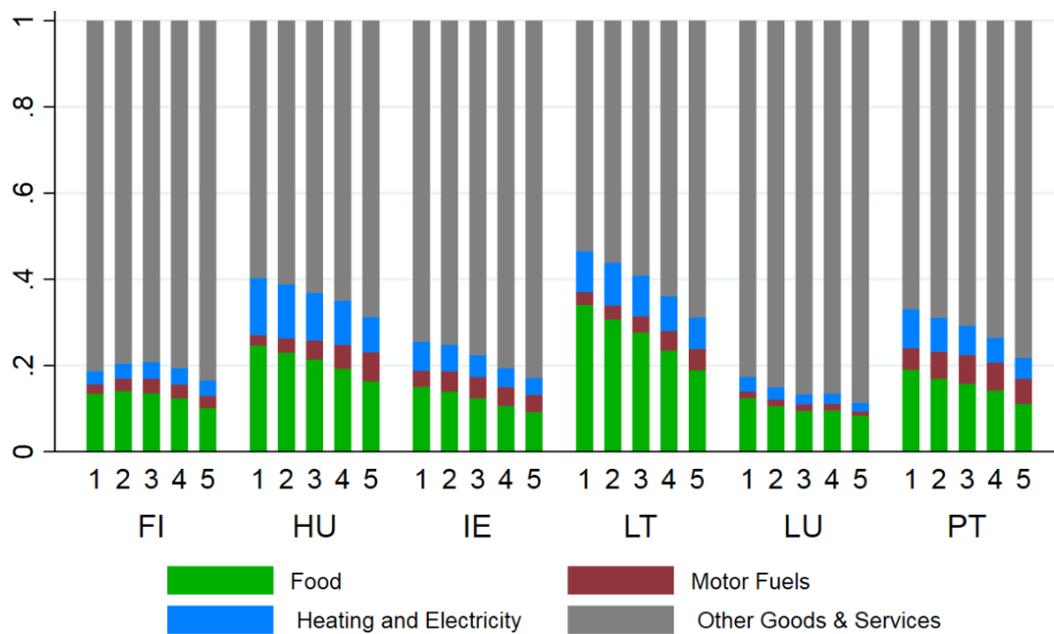
In all six countries, rising prices are very evident for other goods and services with these expenditures raising inflation by a minimum of 4.5% (Luxembourg) and a maximum of 10.1% in Lithuania.

The composition of expenditure across the income distribution (quintiles) within each country (Figure 4) varies substantially; shares of food and energy (necessities) are higher for low-income households and decline with income. Thus, large swings in necessity prices will affect low-income households more than higher income households.

They also have a reduced ability to tap into savings, as shown in Figure 5, which illustrates the expenditure and savings shares in household income. We find a lower gradient, both in levels and distributional pattern in richer countries (Finland and Luxembourg), which also have similar shares of heating along the distribution. Budget shares for motor fuels tend to increase with income and this is most evident in Hungary.

Figure 6 shows inflation in July 2022 relative to April 2021 along quintiles of household disposable income, built up from main commodity sub-components. The distributional impact varies across countries. We find a regressive impact of inflation in Lithuania and Ireland, a progressive impact in Finland, and a relatively flat effect in the other countries. We find a regressive impact of food inflation in most countries, however more pronounced in Hungary and Lithuania,

**Figure 4. Budget Shares of expenditure components across equivalised disposable income quintiles**



**Figure 5. Budget and savings shares in household income across equivalised disposable income quintiles**

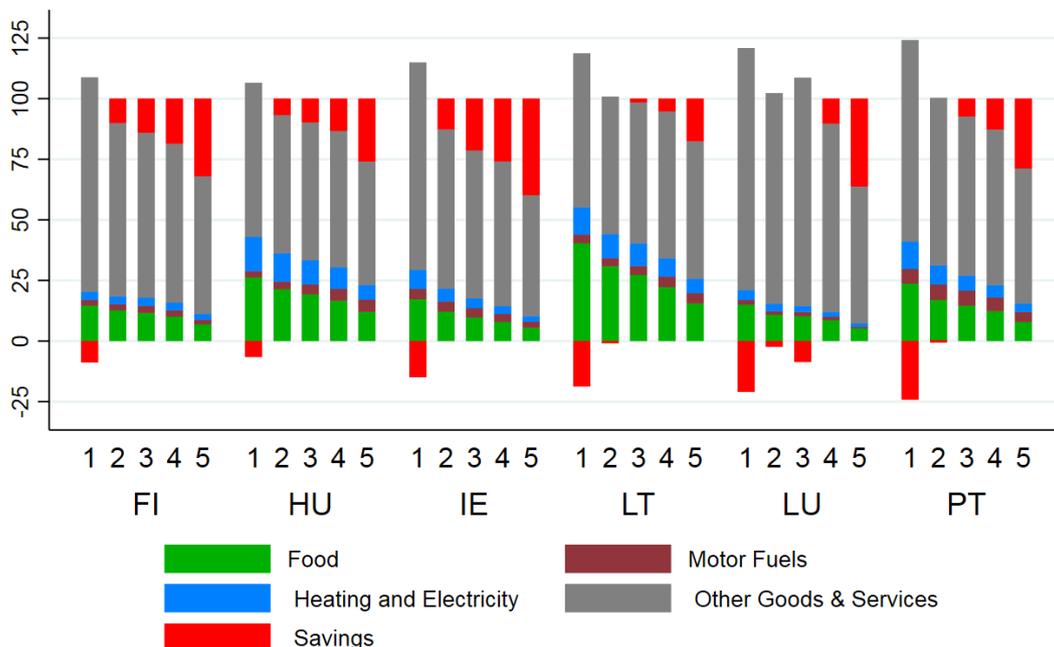
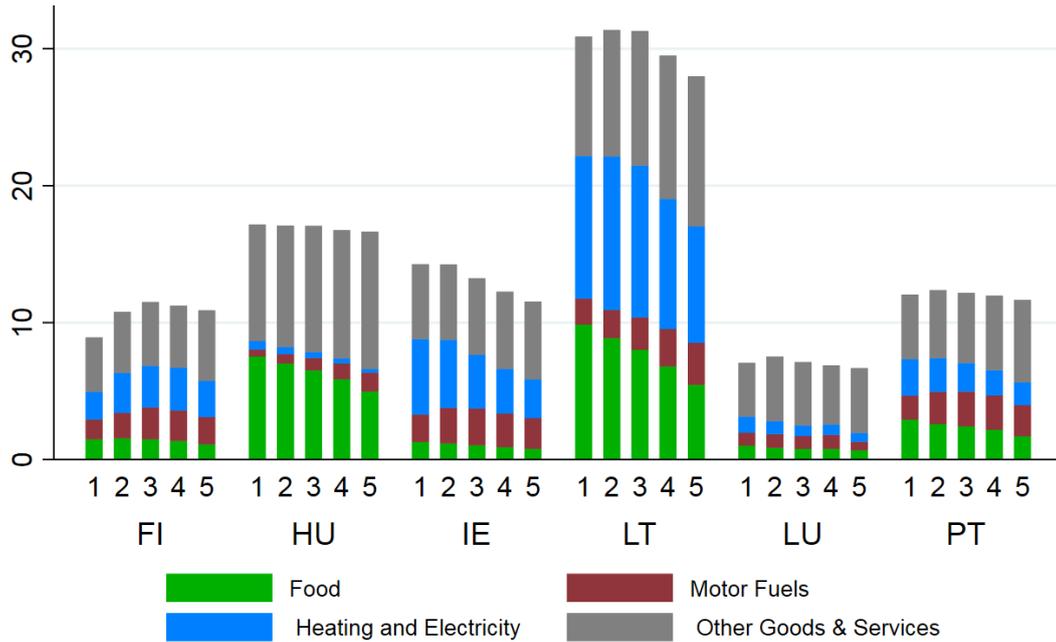


Figure 6. Distributional impact of inflation across equivalised disposable income quintiles



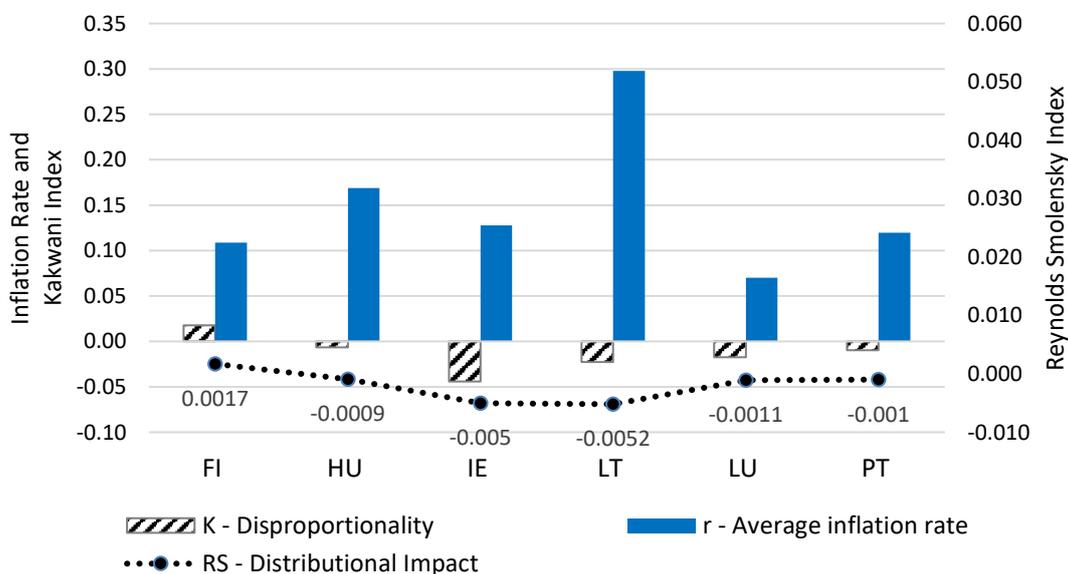
meaning a larger percentage of inflation is driven by food for low-income households than for high-income households. For heating and electricity, we find a regressive impact, more pronounced in Lithuania and Ireland, which recorded higher price increases than the other countries: in Lithuania, liquid and solid fuels increased by 91% and 137%, gas by 103% and electricity by 72%; in Ireland liquid and solid fuels increased by 72% and 34%, gas by 62% and electricity by 42%.

We find a low impact of heating and electricity in Hungary, which is surprising given the large shares in consumption. A closer look at price changes, however, reveals that the price of energy changed little in Hungary compared with the other countries. For example, the price of electricity stagnated, gas increased by 0.9%, and liquid and solid fuels increased by 11%. These differences may be influenced by policy decisions with price capping and reductions in indirect taxation having direct effects on inflation indices. This contrasts with the influence of *ex-post* subsidies, which may have no direct impact on inflation.

In Finland, the distributional pattern of energy inflation is inverted-U shaped, which can be explained by the composition of the energy basket and the price changes: the bottom of the distribution has higher shares of electricity in home heating, whereas the top has higher shares in liquid fuels. The price of liquid fuels, which are cheaper than electricity, increase by 99%, whereas for electricity the price increased by 34%. Thus, in Finland, the bottom of the distribution was less affected because it relies more on electricity, which increased much less compared with liquid fuels. Luxembourg has a much smaller inflation impact compared to Finland, despite having similar expenditure shares. This is due to lower price increases in Luxembourg, where liquid fuels increased by 36% and electricity by 2.6%. Gas and solid fuel prices increased by similar amounts in both countries (29-48%).

For motor fuels, we find a progressive inflation impact, except in Luxembourg where the effect is homogenous except the top quintile

Figure 7. Overall distributive effect, disproportionality and average inflation rate



(lower). For other goods and services, we find a progressive impact, except in Ireland where the pattern is flat along the distribution of income.

The Reynolds-Smolensky index (RS) confirms that inflation had a *progressive impact* (higher at the top) in Finland and a *regressive impact* in the other countries (Figure 7). The strongest *regressive impacts* are found in Lithuania and Ireland, followed by Luxembourg, Portugal and Hungary. These result from the interplay between the average inflation rate and the progression of inflation along the income distribution (or the disproportionality effect of price changes captured by the Kakwani index).

There is no “one size fits all” explanation. Similarly high levels of regressivity of inflation (Lithuania and Ireland) are driven by different levels of disproportionality and inflation rate: Lithuania records the highest average inflation, but has a moderate distributional impact due to a smaller disproportionality compared to Ireland, which has a much lower inflation rate. The same holds for Luxembourg, Hungary and Portugal: similar regressive impacts of inflation result from different driving factors.

**Welfare losses of inflation**

Figure 8 illustrates welfare losses measured by the compensating variation relative to total initial expenditure for households along quintiles of household equivalised disposable income. The compensating variation measures the monetary compensation that households should receive in order to maintain their initial well-being (utility) after the price increases. The welfare losses follow the same distributional pattern of inflation in Figure 6. The richer the country, the lower the welfare loss. In general, losses are greater at the bottom than at the top in Lithuania and Ireland, lower at the bottom than at the top in Finland and similar across quintiles in the other countries. The behavioural response has very limited effects on welfare in all six countries. This is expected given that the highest price changes are recorded for necessities (energy and food), leaving little space for household to adjust their consumption.

The welfare changes for the whole population are aggregated using the social welfare function associated with the equally distributed equivalent income. The decomposition of the welfare losses into their efficiency and equity components in Figure 9, reveal that the main driver of the welfare loss was the decrease in efficiency (decrease in mean equivalent income). The small changes in consumption inequality reveal that price increases affected all households, with a similar relative impact. In Ireland and Lithuania, the drop in welfare due to the increase on inequality was larger, consistent with the larger losses found for low-income households than for high-income households.

**Key lessons**

Budget shares for necessities such as food, domestic fuels and electricity are higher in poorer countries. Combined with a higher price growth in these necessities, this has resulted in higher inflation in poorer countries.

There is significant cross-country variability in the impact of inflation. Lithuania has the highest contribution toward inflation from food and fuels. Hungary is exceptional with the second highest food inflation, but the lowest fuel price inflation due to the price cap.

The most regressive inflation is found in Lithuania and Ireland. In Finland, inflation is progressive, driven by heating, motor fuels and other goods and services. The drivers of the regressive impact vary across countries: food and heating in Hungary; food, heating and electricity in Lithuania and Portugal; food, heating, electricity and motor fuels in Ireland and Luxembourg.

There is no “one size fits all” explanation: similar levels of regressivity of inflation can result from a different interplay between the level and the disproportionality of inflation along the income distribution. It would be useful in further work to consider the policy drivers of these differences, such as mitigation measures: for example, price caps on fuels, subsidies for services such as public transport, social transfers, technological changes to electricity production and trade policy decisions in relation to the sourcing of fossil fuels.

**Figure 8. Relative changes in welfare measured by the compensating variation by equivalised disposable income quintile**

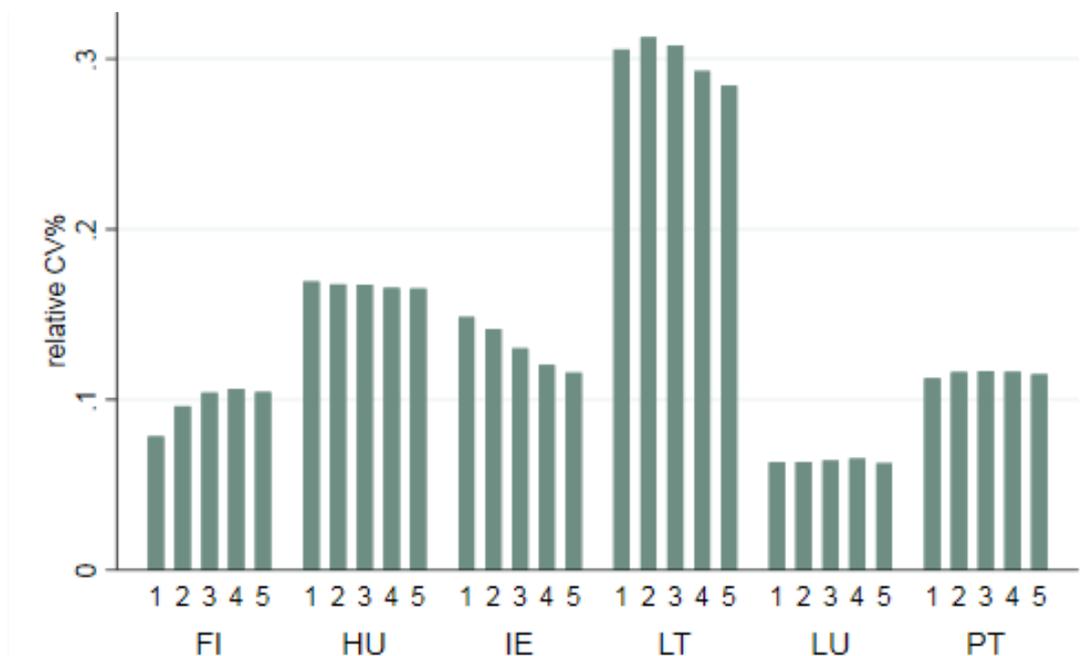
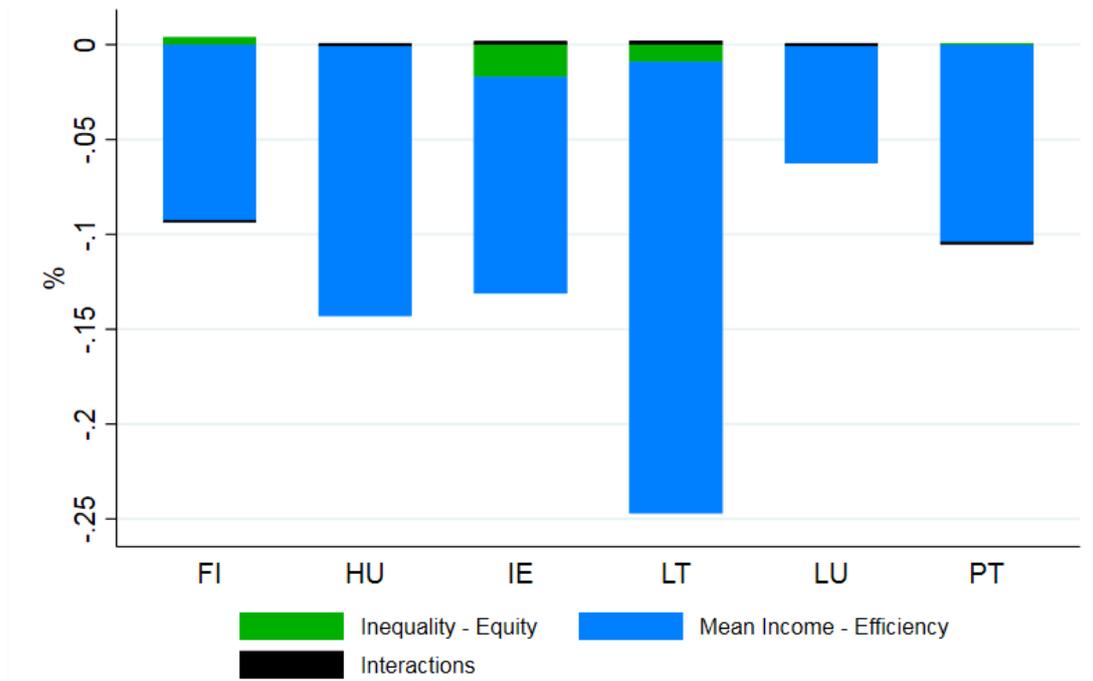


Figure 9. Decomposition of the welfare changes - drivers of welfare change: equity and efficiency



The change in social welfare is driven by the direct impact of price changes rather than the change in inequality, reflecting the relatively flat impact of the price changes. Overall, the behavioural component is relatively small due to the preponderance of necessities in the goods with the highest price changes.

Richer households have higher savings rates, with the bottom of the distribution having low or even negative savings rates. As a result, richer households can maintain expenditure levels by reducing savings or by tapping into accumulated savings. Poorer households have less capacity to absorb the price changes and therefore are more likely to have to reduce their expenditure volume than richer households.

Central Banks are responding to the inflationary environment by increasing interest rates. It is likely that these responses will affect households in different ways. The resulting lower expenditure and investment is likely to hit the middle of the distribution hardest, where many service sector and construction sector jobs are located. Higher interest rates on mortgages will increase housing costs, which will have a higher impact in the middle of the distribution, where savings rates are lower. Meanwhile the top of the distribution with higher capital incomes are likely to gain, while those with fixed incomes, and thus less able to manage exceptional price increases, at the bottom of the distribution will gain through a more stable price environment.

Looking back to recent crises (O'Donoghue et al., 2022), we know that a solidarity-focused policy response during the COVID-19 crisis protected living standards and enhanced trust in institutions in many countries. This was facilitated by lower interest rates from ECB. An austerity-focused response during the *financial* crisis saw the poorest lose and a reduced trust in government. With rising interest rates and cost of debt, the pressures during the current *cost of living* crisis is starting to look more like the *financial* crisis. There is a need therefore, to focus on maintaining living standards of the poorest and the squeezed middle, who as we saw during the *financial* crisis reduced expenditure when under financial strain with consequential public trust implications.

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### Three Tales of Gender Equality in a Post-Industrial World

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#### Introduction

In recent decades, women’s economic independence has grown significantly due to higher levels of education, increased participation in the workforce, and a higher number of female-led households. In light of this reality, one might ask whether this increase in independence has been translated into a better economic position in society, and especially as women in developed economies still confront higher poverty rates, face persistent gender pay gaps, and are in a more vulnerable economic position than men. In addition, the benefits of economic independence may not be equally distributed among all women, and may vary depending on their position in the income distribution.

Extensive literature has covered the topic of women’s entrance into the labour market (Goldin, 2006; Esping-Andersen, 2009; Fernández, 2013), as well as the impact of female employment on income inequality (Nieuwenhuis et al., 2017) and household poverty (Nieuwenhuis et al., 2016). However, little is known about the overall effect of increased female labour force participation on women’s economic position, which is defined throughout this analysis as the disposable household income that women have access to.

#### Descriptive trends: women’s economic position has only increased for some

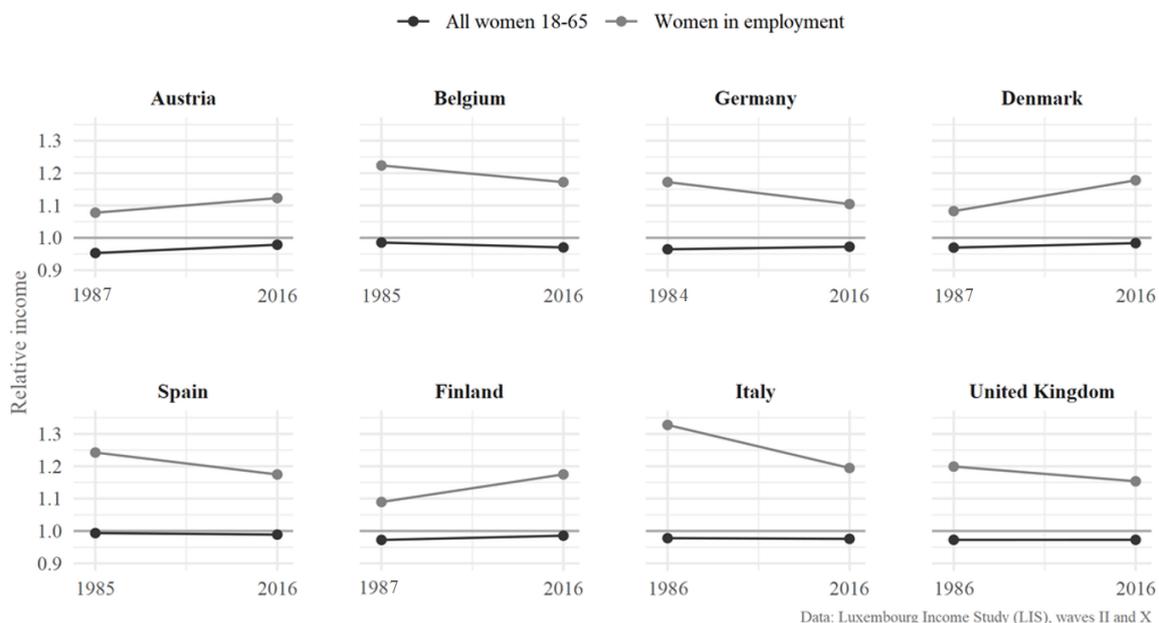
A first step to improve the understanding of the evolution in the economic position of women in the last few decades can be found in Figure 1. Here, the economic position of women is captured by relative disposable household income, a ratio between disposable household income equalized by household size, and the average equalised disposable income of the population at that point in time, so that the value for a person at the average will be 1. This measure provides a way to compare the economic position of women to the average across the population.

Using a relative measure of income has two essential advantages. First, it makes individuals comparable in a context of important geographical and country variation, minimising the noise coming from different economic contexts. Second, it manages to capture women’s economic position in relation to the rest of the population, providing information both on living standards and on the spread of the income distribution. In addition, the analysis focuses on household instead of individual income, to account for the fact that individual income is commonly complemented (or complements) the income of other household members. In this line, despite the measurement limitations of household income as an indicator of economic wellbeing, such as the fact that income may not be shared equally across household members, it can still be considered as the best indicator one can have of economic wellbeing when compared to other alternatives (Canberra Group, 2011).

This article uses data from the *Luxembourg Income Study (LIS) Database*. LIS data offers standardised income and socio-economic data for a large sample of developed economies and is the income database that allows to cross-nationally compare countries further back in time. The analysis looks at eight Western European countries which cover the four welfare state regimes: Nordic (Denmark and Finland), Continental (Austria, Germany and Belgium), Anglo-Saxon (United Kingdom) and Southern (Spain and Italy). Data comes from waves II (around 1985) and wave X (2016).

Overall, despite increased economic independence, women as a group show minimal variation in the evolution of their economic position compared to the average of the population, with the economic position of working-age women not having changed significantly since the 1980s. The relative disposable household income of women is consistently below the average for the population, although it is close to the mean. There are some cross-country differences, with modest improvements in Austria, Denmark, and Finland. However, on

Figure 1. Economic position of all women and women in employment



average, it does not appear that increased labour force participation has had a strong effect on women's relative household income. For employed women, the relative (equivalised) household income shows more variation across countries. Again, only Austria, Denmark, and Finland have seen an increase, while in other countries, working women's relative household income is lower than it was in the 1980s.

There are a number of explanations for these trends that can be derived from the literature. First, they can be related to overall trends in the labour market, including the fact that careers have become less stable, and male earnings have declined (Binder and Bound, 2019; Juhn, 1992; Moffitt, 2012; Abraham and Kearney, 2020). Secondly, women still face important barriers in the labour market, such as persistent gender pay gaps, vertical and horizontal segregation into less paid positions or high rates of precarity (Sigle-Rushton and Waldfogel, 2007; Goldin, 2014; Blau and Kahn, 2017).

But what happens when shifting the analysis away from the average female? Figure 2 breaks down the changes in relative (equivalised) household income of women to focus on the bottom and top 20% of the income distribution between 1985 and 2016. A first look at the data suggests that the apparent stability seen in Figure 1 hides significant variation among women. While the living standards of the women at the top 20% of the income distribution have increased, those of women at the bottom have gone down, suggesting that overall stillness hides an increase in inequality.

The data indicate that women at the bottom 20% of the income distribution have seen a decline in their economic position in all countries except Denmark. In contrast, women at the top 20% of the income distribution have generally improved their position, with the exception of Italy (country specific trends are further discussed in the [working paper](#)). This opposing evolution in economic positions followed by women at different extremes of the income distribution can be seen as an indicator of the emergence of winners and losers of the economic independence among women.

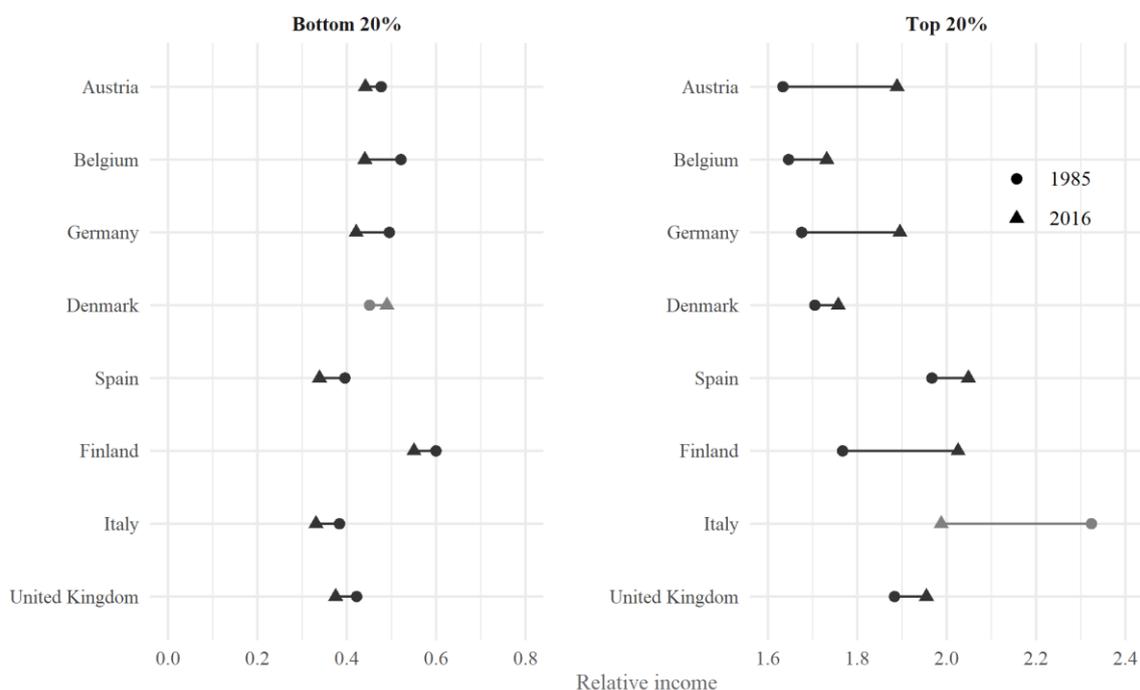
**The role of changing family structures**

What explains the divergent trends in the economic position of women at the different ends of the income distribution? To answer this question, the next step of the analysis uses a RIF regression approach to Oaxaca-Blinder decomposition (Firpo et al., 2009; Oaxaca, 1973). This approach compares each country with itself in the past, looking at the mean, the 20th, and the 80th percentiles of the income distribution. In essence, using a decomposition approach allows us to determine which changes in women's economic position are due to changes in the composition of the group (such as increased employment and higher education or changing family structures) and which are due to changes in the effect of specific variables (for example, the effect of employment on relative (eq.) household income may differ in the 1980s than in 2016).

Figure 3 shows the "endowment" effects of the decomposition, this is, the changes explained by changes in the composition of the group, broken down by predictor variables. It should be noted that the effects of family types should be read as a difference from the baseline category, which is, in this case, low educated women with children out of employment living in male breadwinner family structures.

Two main points can be derived from this figure. First, the results show a positive effect of employment in all countries except the Nordic countries. This is likely because female employment was already high in Finland and Denmark in the 1980s, so the data indicate that women are better off in terms of relative income when they have higher employment rates. Second, the results also highlight the importance of family structures for women's economic position. In five out of six countries, the increase in the share of single mothers has made women worse off. At the same time, the increasing share of dual-earner families has improved the relative position of women in all countries. However, these family structures are not evenly distributed across the income distribution. Single mothers are concentrated at the bottom of the distribution, with 45% at risk of poverty in the EU

**Figure 2. Economic position of women across the income distribution**



Data: Luxembourg Income Study (LIS), waves II and X

Figure 3: RIF decomposition endowment effects

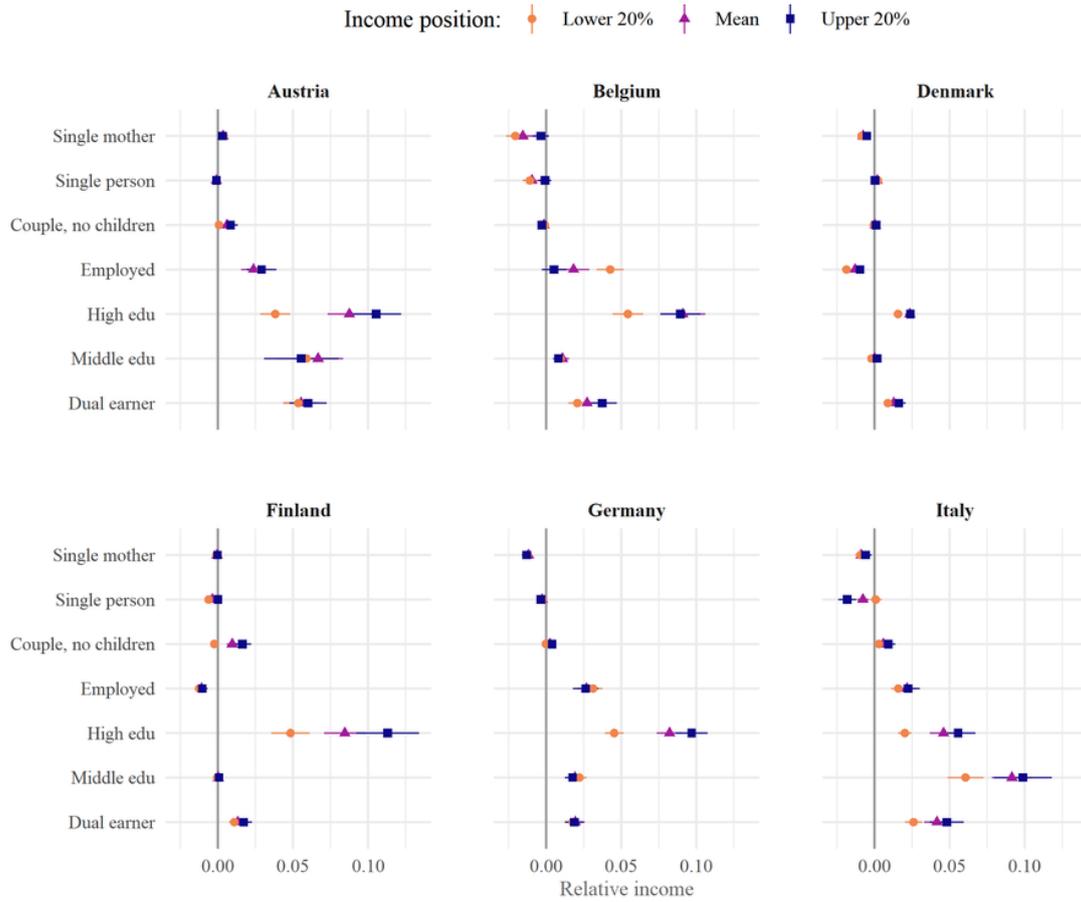
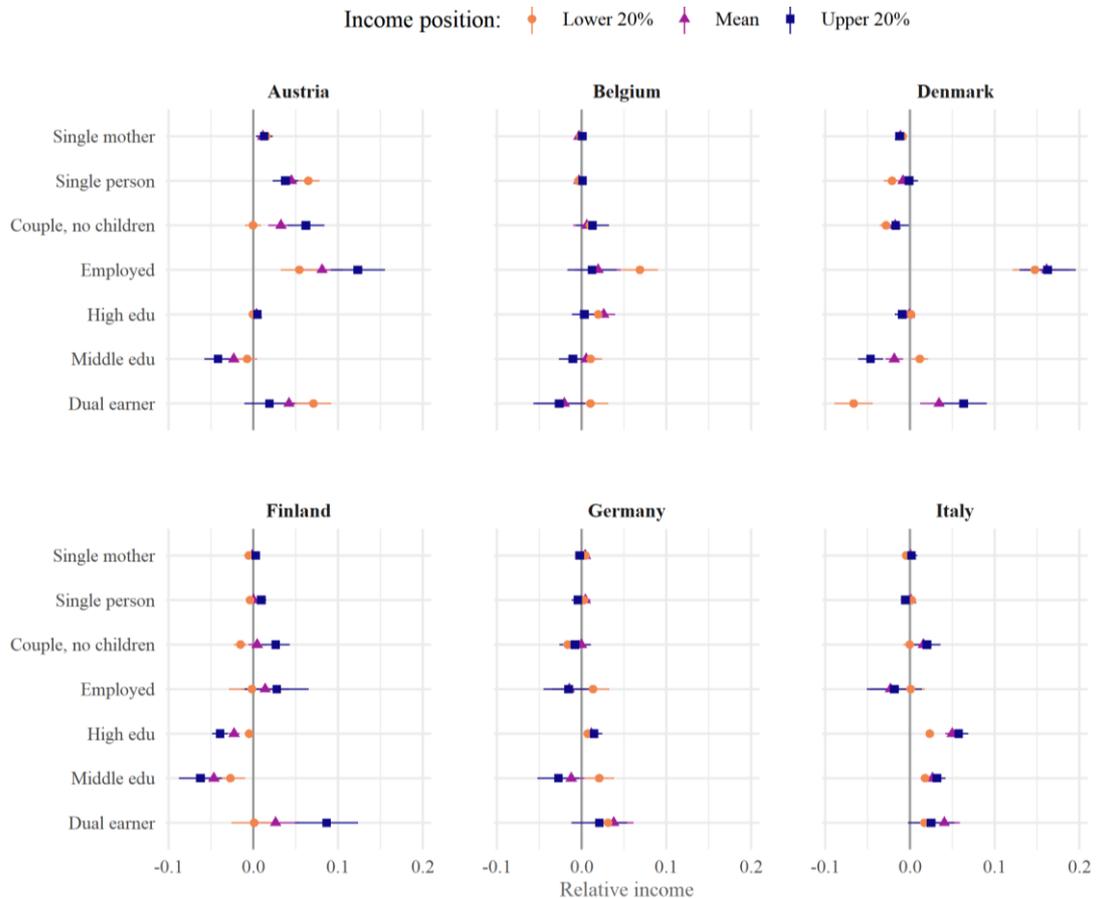


Figure 4: RIF decomposition coefficient effects



(Eurostat, 2018), while dual-earner families generally fare better than

(Eurostat, 2018), while dual-earner families generally fare better than other types of households in developed countries (Nieuwenhuis et al., 2016). The analysis suggests that changes in family structures are having a disequalising effect among women and may be a reason for the decline in the economic position of women at the bottom of the income distribution in recent decades.

As a last step in the analysis, Figure 4 shows the “coefficient” effects of the decomposition, that refer to the degree to which the effects of the independent variables have significantly changed from the 1980s to 2016.

Although not shown in the figure due to large differences with other effects, it is important to note the role of the intercept, which has a negative sign in all countries (see the working paper). This means that male breadwinner families are worse off today than they were in the 1980s, and that effects that appear to be zero in the figure also have negative outcomes for women when the intercept is taken into account. This is the case for the single mother category, which is close to zero in all countries, but has a negative change in effect when added to the intercept.

Overall, it seems that what is hindering the translation of increased economic independence into higher living standards is the negative impact of certain family structures on women's economic position. This is seen in the negative change in coefficients for being part of a single mother, male breadwinner, or single earner household in all countries. Once again, this suggests that economic emancipation may have different effects for women depending on the type of family they live in and their position in the income distribution.

### Concluding remarks

The main goal of this analysis has been to show that economic independence has had a very different effect on women depending on their position at the income distribution. In particular, the results just presented show the emergence of three different stories. A story of emancipation for women at the top 20% of the income distribution, who have seen an increase in their living standards during the last decades. A story of compensation for women at the middle of the distribution, who manage to compensate with their household income. And a story of undelivered promises for women at the bottom 20%, who, despite increasing economic independence, have seen a deterioration of their living standards.

The decomposition analysis shows that both employment and higher education levels entail an improvement in women's economic position. However, the effect of this relationship is mediated by changing family structures that create winners and losers. Notably, economic independence seems to ameliorate the relative position of women in dual-earner couples while worsening the living standards of single mothers. The unequal distribution of these family structures

across the income distribution raises important concerns for inequality among women.

The relevance of this analysis is twofold. First, it has shown that despite the increase in female labour force participation, women as a group have not seen an improvement in their economic position in society, as measured by disposable household income. Second, it has shown the importance of going beyond aggregate indicators, as the apparent stability of living standards hides important differences among women depending on the extreme of the income distribution a woman belongs to.

From a policy perspective, results highlight the need to take a multidimensional approach to social policy design. While the overall income position of women has remained relatively stable from the 1980s, women who are part of specific groups such as low-skilled workers, working mothers, single mothers or low educated women may require more targeted policy action.

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**3rd (LIS)<sup>2</sup>ER Workshop on Policies to Fight Inequality - Inflation, Energy Prices and Tax Policy: Effects on Consumption and Welfare**

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Philippe Van Kerm , (Luxemburg Institute of Socio-economic Research (LISER) / University of Luxembourg)

During the recovery from the Covid crisis and subsequently magnified by the Ukraine war, inflation has recently reached levels that have not been seen in many industrialized countries for decades. Spikes in energy prices, notably, raised concern about the livelihoods of families living on a tight budget. Memories of the ‘yellow vest’ movement which grew out of frustration with earlier rises in fuel prices testify of the potential social and political upheavals related to the evolution of the costs of living. While the current surge in inflation may or may not be short-lived, addressing climate change is likely to impact energy prices in the long run and the distributive impacts of price variations and green taxation will determine the social acceptability and success of the transition. Against this backdrop, the 2022 (LIS)<sup>2</sup>ER workshop on policies to fight inequality – organized annually by the LIS Cross-national Data Center and LISER - aimed to offer a forum to discuss novel research and the policy implications of differential consumption patterns across the income distribution and the distributive impacts of differential exposure to price variations and environmental taxation.

On day one, Davide Villani (EC Joint Research Centre, Seville) kicked off by providing extensive insights into “The uneven impact of inflation across European households”. In his presentation “Pro-rich inflation, redistribution and CO2 emissions”, Eren Gürer (Middle East Technical University) integrated the two workshop themes. Thereafter, four presentations by Peter Levell (Institute for Fiscal Studies, London), Jules Linden (LISER), Gerlinde Verbist (University of Antwerp) and Claudia Kettner-Marx (WIFO, Vienna) tackled the income- and wealth-dependent distribution of household greenhouse gas emissions and the inequality implications of carbon pricing and ecological tax reform. Day two turned the focus back to inflation in Europe. Denisa Sologon (LISER) demonstrated the “Welfare and distributional impact of soaring prices in Europe” while Nicola Curci (Bank of Italy), Sylvérie Herbert (Banque de France) and Clodomiro Ferreira (Bank of Spain) provided country-specific evidence for Italy, France and Spain respectively.

Among the take-home messages from the workshop, here are some of the most salient ones.

First, different households have clearly been exposed to different inflation rates, depending on their position in the income distribution. Since food, housing and energy are among the consumption categories experiencing the highest price increases since 2021, poorer households suffered more from inflation than richer ones. Current inflation thus exhibits a regressive nature in almost all European countries, but few Nordic countries, where the energy price has been contained by a reduction in excises and where expenditure patterns vary less by income. As a consequence, inflation has had a real disequalising effect, an effect partly attenuated by (temporary) fiscal policies.

However, these fiscal policies appear to partially contradict the goal of reducing CO2 emissions. The energy footprint is unevenly distributed in the population as well, with the rich consuming more

energy for transport and recreation, but at the same time adopting more energy saving technologies. The overall impact in terms of national consumption and dependency from non-renewable sources is thus ambiguous. If carbon taxes are likely to be regressive for reasons mentioned above, policy makers are to consider rebating tax revenues in a progressive way in order to make the green transition fairer from a socio-economic point of view. Being able to target the neediest groups in the population seemed urgent to many participants in the workshop.

A second methodological contribution emerging from the papers presented at the workshop is the value of using microsimulation models for policy analysis of price and tax system changes. Various speakers made use of consumption surveys linked to either income or wealth surveys. While this obviously relies on strong assumptions, still it is suggestive of potential developments to statistical offices and researchers alike.

A third point underlying the discussion and still remaining in the background is that inflation can become a cumulative process in a spiral of wage and profit increases, as experienced during the 70s and the 80s. The contributions to the conference took the price increase as an unexpected shock, analysed through static models. However, had the price rise to continue, then indexation is likely to show up in the future policy agenda of many countries (Belgium and Luxemburg being notable exceptions, since automatic wage indexation is still in place). Yet, the increased labour market flexibilization adopted by various European countries (like Germany and Italy) has weakened the unions’ ability to protect the purchasing power of workers. Hence, while it may be difficult for monetary policy to address distributive concerns and fiscal policy could be of help in the short run, the strengthening of labour market institutions could be an important policy tool so as to prevent the revival of strikes and protests against inflation in the long run and to secure a peaceful socio-ecological transition.

While the third (LIS)<sup>2</sup>ER workshop has provided fresh views on the spurt of inflation that recently hit OECD countries, and linked these with insights from research on the unequal impact of environmental policy, issues which still have to be tackled have been revealed. While the differential consumption patterns and, relatedly, the unequal inflation exposure of households along the income distribution were well established, only one presentation by Clodomiro Ferreira showed that surging prices have to be considered from the perspective of household balance sheets as well. Moreover, the distribution between capital and labour has been touched upon only parenthetically. Still, enterprises – and particularly companies with market power - had until now more room to adapt, and were able to raise prices beyond energy costs. We hope that the fruitful discussions throughout the (LIS)<sup>2</sup>ER workshop will spur further research which provides pointers for policy considering the various dimensions of inequality.

## Data News / Data Release Schedule



### LIS is happy to announce the following data updates:

**Ireland** – Addition of the **IE19** data point to the **LIS Database** (1 new and 2 revised).

**United Kingdom** – Further annualisation backwards in time from 1968 to 1993 and minor revision of the overall series of the **LIS Database** (21 new and 32 revised).

**United Kingdom** – Addition of one new data point (**UK19**) to the **LWS Database** (1 new and 6 revised).

**Luxembourg** – Revision of the Luxembourgish **LWS Series**.

### Data Releases and Revisions– Luxembourg Income Study (LIS)

#### Ireland

LIS has added one more data point **IE19** (Wave XI) to the LIS Database. The dataset is based on the Survey on Income and Living Conditions / EU-SILC, and received from Ireland’s **Central Statistics Office (CSO)**. In addition, **IE18** has been reviewed, with variables *edmom\_c*, *eddad\_c*, *migrat\_c* and *immigr\_c* now being available. **IE10** was also slightly revised with variable *age* now including new-borns (previously started from 1 year-olds). As a result, all the counters based on *age* are impacted (variable *ageyoch* and to a lesser degree variables *nhhmem65*, *nhhmem17*, *nhhmem65*, and *nhhmem13*).

#### United Kingdom

Twenty-one new datasets have been added to the British series to the **LIS Database**, which makes the series fully annual from **UK68** to **UK20**. For this update, the latest version of the Family Expenditure Survey (FES) as carried by the Department of Employment (DE) until 1988 and the Central Statistical Office (CSO) afterwards was used. Variable *marital* (marital status) has been reviewed for consistency in the series **UK94-UK20**.

### Data Releases and Revisions– Luxembourg Wealth Study (LWS)

#### United Kingdom

LIS has added one more data point **UK19** (Wave XI) to the LWS Database. The dataset is based on the **Wealth and Assets Survey (WAS)** provided by **Office for National Statistics (ONS)**. The six WAS earlier data points (**UK07**, **UK09**, **UK11**, **UK13**, **UK15**, **UK17**) have been reviewed for consistency in variable *marital*.

### Data Revisions– Luxembourg Wealth Study (LWS)

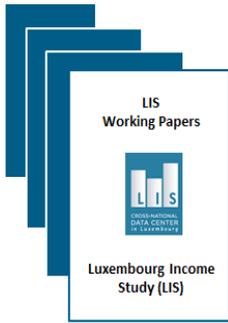
#### Luxembourg

Revision of the Luxembourgish LWS Series (**LU10**, **LU14**, and **LU18**) in the section ‘assets acquired in the past’ where variables *piw1/4* (from whom inheritance/gift received (1/4)) and *ppy* (year of purchase of principal residence) are now available. The whole section has been slightly reworked.

### LIS/LWS Data Release Schedule

	Spring 2023	Summer 2023
<b>LIS Database</b>		
Belgium		BE18/19/20
Canada	Annual data CA81-CA95	
Ireland	IE20	
Luxembourg	Annual data LU85-LU20	
Mexico		MX20
Spain	ES93-ES19	
Taiwan		TW17/TW18/TW19
Uruguay	UY20	
Vietnam		VN/01/03
<b>LWS Database</b>		
Colombia		CO10-CO18
Mexico	MX19	
Uruguay		UY12

## Working Papers &amp; Publications



Focus on **Heterogeneity in Macroeconomics: The Compositional Inequality Perspective** [🔗](#) LIS WP No. 848 by Marco Ranaldi (University College London / International Inequality Institute, LSE / Stone Center on Socio-Economic Inequality, CUNY) and Elisa Palagi (Scuola Superiore Sant'Anna, Pisa)

This work presents a framework to jointly study individuals' heterogeneity in terms of their capital and labor endowments (endowment heterogeneity) and of their saving and consumption behaviors (behavioral heterogeneity), from an empirical perspective. By adopting a newly developed synthetic measure of compositional inequality, this work classifies more than 20 economies across over two decades on the basis of their heterogeneity characteristics. Modern economies are far from being characterized by agents with same propensities to save and consume and same endowments (Representative Agent systems), or by the existence of rich capital-abundant savers and poor hand-to-mouth consumers (Kaldorian systems). Our framework and results are discussed in light of the heterogeneity assumptions underlying several types of macroeconomic models with heterogeneous agents (Kaldorian, TANK & HANK, OLG, and ABM models). A negative relationship between behavioral heterogeneity and the economy's saving rate is also documented.

### LIS working papers series

LIS working papers series - No. 848 [🔗](#)

**Heterogeneity in Macroeconomics: The Compositional Inequality Perspective**

by Marco Ranaldi, Elisa Palagi

LIS working papers series - No. 849 [🔗](#)

**Three Tales of Gender Equality in a Post-Industrial World**

by Ariane Aumaitre

## News, Events and Updates

### (LIS)<sup>2</sup>ER Workshop on: “Inflation, energy prices and tax policy: Effects on consumption and welfare”, 1-2 December 2022

LIS Cross-national Data Center and LISER convened the third international scientific workshop in the realm of the (LIS)<sup>2</sup>ER initiative on “Inflation, energy prices and tax policy: Effects on consumption and welfare”.

The workshop took place from Thursday 1st December (mid-day) through Friday 2nd December (mid-afternoon) in the Maison des Sciences Humaines, in Esch-Belval. It consisted of 10 invited academic presentations. A connected policy roundtable took place on Friday 2nd December, early afternoon.

The workshop programme is available [here](#).

Please find below the list of presentations of the workshop sessions:

- **The uneven impact of inflation across European households: who is paying more?** *Davide Villani (EC Joint Research Centre, Seville)*
- **Pro-rich inflation, redistribution and CO2 emissions** by *Eren Gürer (Middle East Technical University)*
- **Environmental policy and the energy crisis in the UK** by *Peter Levell (Institute for Fiscal Studies, London)*
- **Decomposing the distributional impact of EU-wide carbon taxation – Comparing the role of energy expenditure, asset ownership and carbon intensity across 6 EU countries** by *Jules Linden (LISER)*
- **Balancing Social and Ecological Goals: Redistributive Options for Carbon Pricing in an Ecological Tax Reform** by *Claudia Kettner-Marx (WIFO, Vienna)*
- **Welfare and distributional impact of soaring prices in Europe** by *Denisa Sologon (LISER)*
- **The Redistributive Effects of Inflation and Government Interventions: a microsimulation analysis for Italy** by *Nicola Curci (Bank of Italy)*
- **Measuring and comparing consumption inequality between France and the US** by *Sylvérie Herbert (Banque de France)*
- **The Heterogeneous Impact of Inflation on Households’ Balance Sheets** by *Clodomiro Ferreira (Bank of Spain)*

### Public issuance of GAO report on older household income, wealth, and survival

On October 17, 2022, the **U.S. Government Accountability Office (GAO)** publicly released its report on “Older Households: Comparison of Income, Wealth, and Survival in the United States with Selected Countries”. The report heavily uses the Luxembourg Wealth Study Database to compare U.S. distributions of income and wealth trends with Canada, Germany, and the United Kingdom.

The report can be accessed through this [link](#).

### LIS workshops

LIS has been invited to give mini-introductory workshops on the LIS and LWS Databases by different universities as follows:

LIS was invited by the Political Science Department in Bologna University to deliver a mini workshop on the usage of the LIS Database. The workshop was held on the 18-19 October, it included around 20 Master’s students who were introduced to the LIS Database, the variables’ structure, the usage of the LISSY system, and potential research areas.

Similarly, LIS was invited by the Department of Political Science and International Studies at the Universidad Torcuato Di Tella, Argentina to hold an introductory virtual workshop. The workshop was held virtually on the 12<sup>th</sup> of November and was attended by 23 students and faculty members. The workshop included lectures and hands-on applications on the usage of the LIS Database through the LIS remote-execution System “LISSY”.

On the 16<sup>th</sup> of November, LIS gave an introductory workshop on the LWS Database at the Conference on Wealth Inequality and Intergenerational Mobility organized by the Research Institute Economics of Inequality, Vienna University of Economics and Business. The workshop introduced participants to the harmonised wealth microdata from Luxembourg Wealth Study (LWS) Database. The workshop included lectures and empirical exercises using Stata software. All the exercises were performed via the LIS remote-execution system LISSY that allows researchers to submit statistical programs to obtain results based on the LWS microdata. The workshop was attended by 17 participants.

### LIS team participation in conferences

- On October 5<sup>th</sup>, Teresa Munzi has given a presentation on “Inequality and income redistribution in Mali” at the Income inequality in Mali Conference organized by Centre d’Etudes et de Réflexion au Mali (CERM), and the Institut National de la Statistique du Mali (INSTAT), and the Agence Française de Développement (AFD).
- On November 10<sup>th</sup>, Teresa Munzi has attended the **World Bank IARIW TNBS conference**. During the pre-conference training, she has given a session on “The challenges of harmonising income data from middle and low income countries”. In addition, during the conference, she has also discussed two papers: “The mitigating role of tax and benefit rescue packages for poverty and inequality in Africa amid the COVID 19 pandemic”, and “Recall Bias Revisited: Measuring Farm Labor with Mixed Mode Surveys and Multiple Imputation”.
- On the 8<sup>th</sup> of December, Teresa Munzi gave a presentation on “**Methodological approaches on how to measure risk of poverty with income and wealth**” at the UNECE Group of Experts on Measuring Poverty and Inequality and Workshop. The presentation, which has been prepared by several colleagues at LIS, explored how income, assets, and debt can be measured by various indicators in a multidimensional setting.

## The Third Lee Rainwater Memorial Lecture was delivered on September 29, 2022

Orlando Patterson, the John Cowles Professor of Sociology at Harvard University, delivered the Third Lee Rainwater Memorial Lecture at Harvard University. His lecture – *Slavery and Genocide: Jamaica, the South, and the Sociology of Evil, 1650-1830* – was presented in Harvard’s William James Hall on September 29, 2022. Janet Gornick introduced the public lecture and, at a post-lecture dinner, Tim Smeeding offered remarks about Lee’s long career and their joint work at LIS. The Rainwater family attended.

## 2) Two edited collections focused on inequality and low income were published in November 2022, both with involvement of the Stone Center and extensive use of the LIS data

- **Measuring and Understanding the Distribution and Intra/Inter-Generational Mobility of Income and Wealth** was published by University of Chicago Press (NBER Series) in November. The new book – edited by **Raj Chetty, John Friedman, Janet Gornick, Barry Johnson, and Arthur Kennickell** – includes 23 studies presented in five sections: income inequality, wealth inequality, mobility, mitigating

inequality, and distributional national accounts. Contributing authors include Stone Center Senior Scholars Janet Gornick, Branko Milanovic, and Salvatore Morelli, and other long-time members of the LIS community, including Richard Tonkin, Pirmin Fessler, and David Johnson.

- **Single-Parent Families and Public Policy: Evidence from High-Income Countries**, a volume of *The ANNALS of the American Academy of Political and Social Science*, was published in November. The volume – edited by Janet Gornick, Laurie Maldonado, and Amanda Sheely – includes 11 new empirical studies, plus introductory and concluding chapters by the three editors and a commentary by Isabel Sawhill. Contributing authors include several LIS data users, including Regina Baker, David Brady, Ive Marx, Zachary Parolin, Mia Hakovirta, Laura Cuesta, Rense Nieuwenhuis, Susan Harkness, Salvatore Morelli, Brian Nolan, Juan Palomino, Philippe Van Kerm, and more. Note that eight articles are “green” (freely downloadable throughout December 2022) and six are “gold” (open access permanently). The volume was launched at a virtual event hosted by the Brookings Institution; more than 400 people registered in advance. The **video** is online.