

AISSEC *Topics*

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Poverty trends in Luxembourg 1985-2023

Alessio Fusco and Philippe Van Kerm

“You study poverty in Luxembourg? So, you think anyone is in poverty in the richest EU country?” “Yes. Because poverty is *relative*.” Over the last forty years, Luxembourg has experienced sustained economic and population growth. According to estimation based on the Luxembourg Income Study, average real disposable income expressed in 2022 prices rose from €25,000 in 1985 to €51,500 in 2023 – an average annual growth rate of 1.97%.

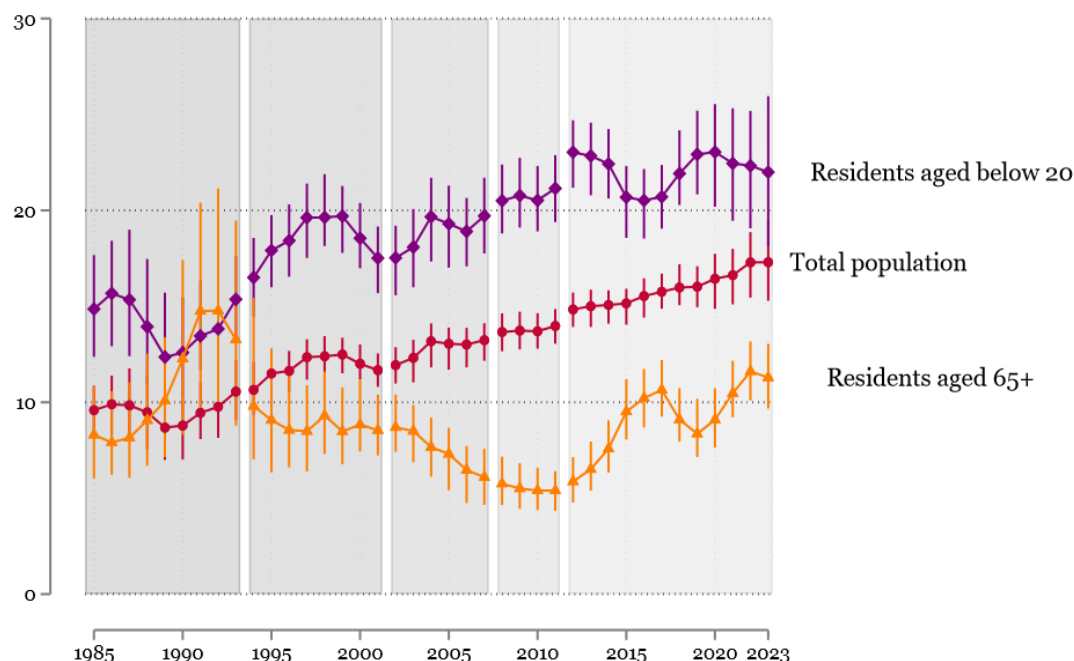
Yet the latest national statistics on poverty show that 18.1% of the population is ‘at risk of poverty’ (STATEC, 2025). And the rate is on an upward trend – up from, e.g., 14.5% in 2010 and 16.4% in 2017. While Luxembourg has largely achieved in its resident population the UN’s Sustainable Development Goals (SDG) 1.1 of “eradicating extreme poverty by 2030 for all people everywhere” currently measured as people living on less than \$2.15 a day, achieving SDG 1.2 “to reduce by 2030 at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions” appears utopian.

Key to SDG 1.2 is the *according to national definitions* clause. The “at-risk-of-poverty” indicator – or poverty rate, for short – is defined as the percentage of the population living in households whose annual disposable income is below 60% of the national median. Reducing relative poverty therefore not just requires growth in low incomes, it requires that incomes at the bottom grow *faster* than incomes around the middle of the distribution. This is what is needed for the country to meet its SDG 1.2 target.

How much poverty is there and has it changed?

Figure1 presents estimates of the evolution of the poverty rate in Luxembourg from 1985 to 2023 based on the series compiled in LIS. The figure shows the aggregate poverty rate and poverty rates among individuals under age 20, and among individuals aged at least 65. These estimates confirm the upward trend documented in official statistics and indicate an increase from 9.5% in 1985 to 17.3% in 2023 – almost a doubling of the share of the population in (relative) poverty. These estimates are in line with those found in other EU countries.

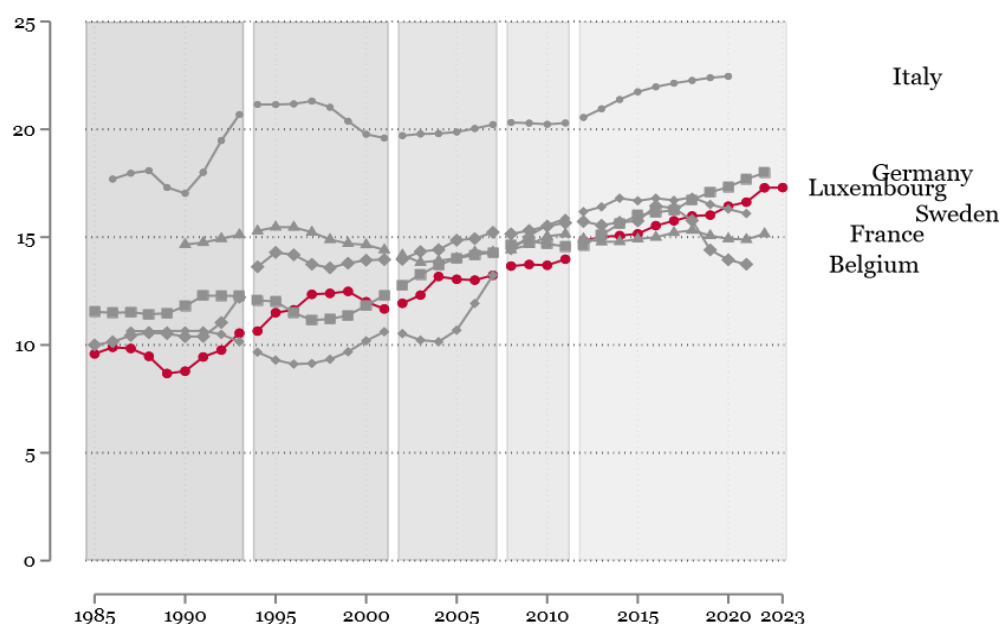
Figure 1. Trends in poverty rates – aggregate for selected age groups



Note: Here and in all subsequent figures, we show 3-year moving averages of each estimate to smooth out transitory variations and focus on long-term trends.

Figure 2 compares Luxembourg's poverty rates to those of five selected European countries – neighboring Belgium, France and Germany as well as a Scandinavian country (Sweden) and a Mediterranean country (Italy). By 2023, Luxembourg has the third highest poverty rate in this group. What is notable is the steeper increase in poverty rates relative to neighboring and other EU countries over the 40 years period. None of the five countries compared experienced an increase of poverty as large as Luxembourg's.

Figure 2. Trends in poverty rates in Luxembourg and selected EU countries



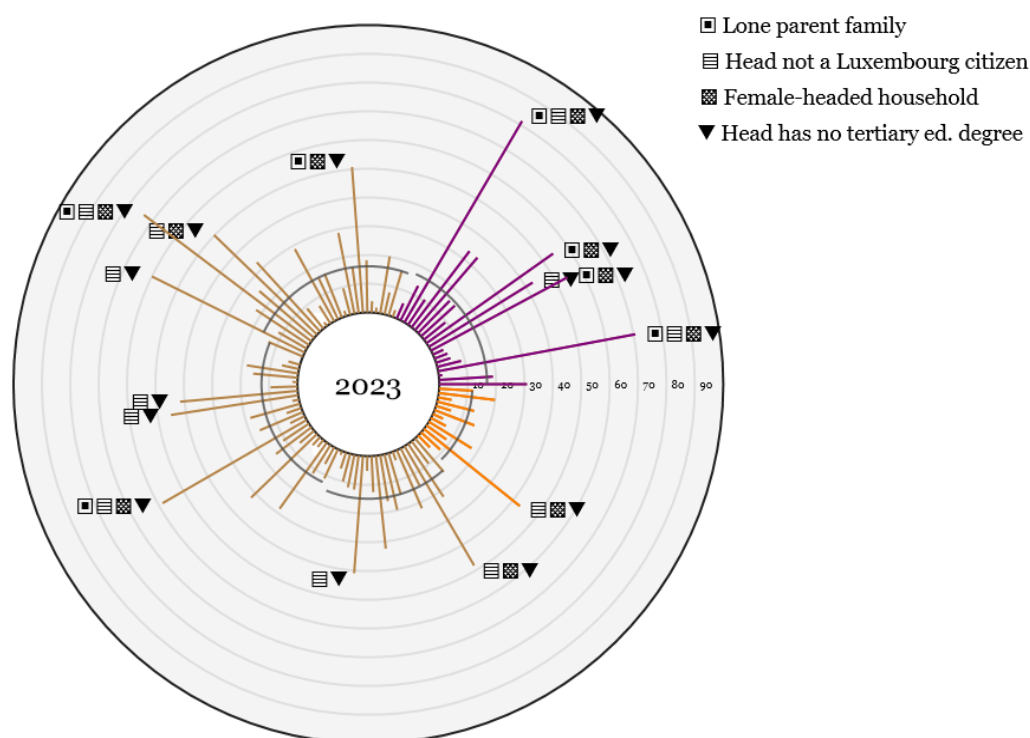
The age profile of poverty

Poverty rates among children and teenagers have been systematically higher than poverty rates in the overall population. Estimates are around or above 20% since about 2008 and the onset of the Great Recession. In our comparison group of six countries, only Italy has higher poverty rates for residents aged below 20. By contrast, the situation of the elderly improved during the 1990s, and despite a recent uptick, their poverty rate in 2023 had declined to approximately 11%, half the rate observed among the younger age group. The relative improvement among the elderly is not atypical. France also experienced low levels of elderly poverty rates, and many countries observed stagnating or declining elderly poverty – but Luxembourg exhibit the lowest rate of elderly poverty in most years.

The diversity of poverty risks

While poverty rates vary by age group, age is certainly not the main or most important driver of poverty risks. Variations in poverty risks *within* age groups are large – much larger than variations *between* age groups. Figure 3 illustrates the diversity of poverty risks across population subgroups defined by combinations of age, of household structure, and of sex, education, nationality and age of the household head. The diagram shows estimates of poverty risks for 103 groups formed by combinations of these characteristics. Estimates of poverty risks were derived using a machine learning predictor (random forest). Following up on our age-based perspective, groups are bundled by age: the purple spikes show poverty risks for groups involving children and teenagers, orange spikes are risks for groups involving residents aged at least 65, and brown spikes are for residents aged 20–34, 35–49, and 50–64. We highlight key attributes of the groups that have a poverty risk higher than 250% of the national average.

Figure 3. Diversity of poverty risks

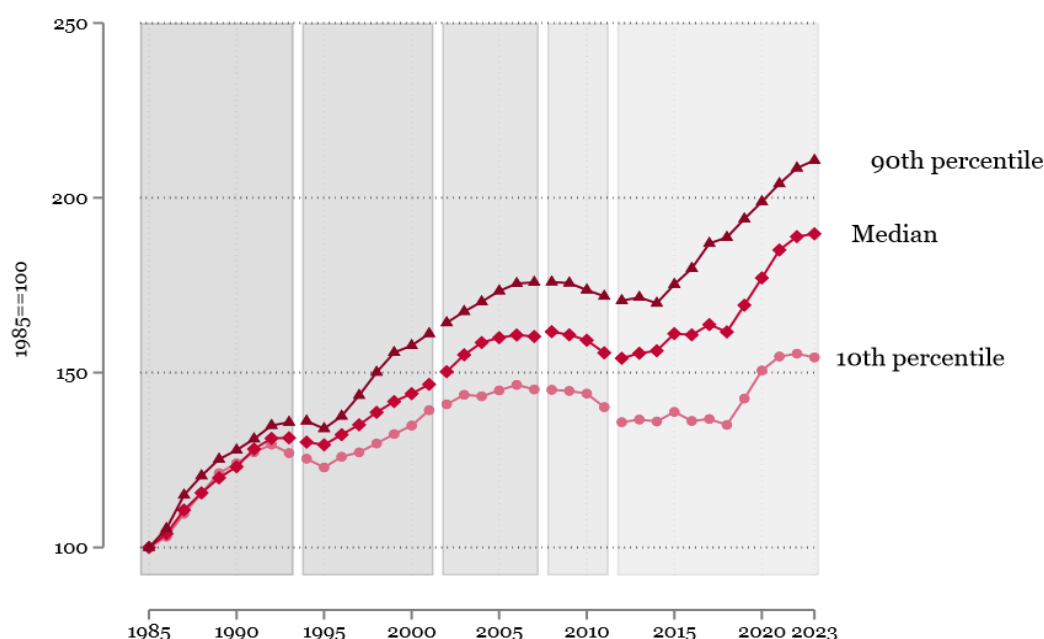


Many combinations of attributes are associated with low poverty risks while others have estimated risks close to 75%. Groups facing risks above 250% of the average are found in all age groups. There is consistency in the profile of the high-risk group: all the households that are part of the high-risk group are headed by a person without tertiary education. Not having Luxembourg citizenship is also a common attribute of high-risk groups. In the youngest age group, high risks additionally concern children in female-headed, lone parent households.

The race between median and low incomes

The increase in relative poverty reflects the fact that incomes at the lower end of the distribution have not kept pace with those at the top. This widening gap is evident in the evolution of income percentiles in Figure 4, which shows faster growth in the upper decile compared to the lower one. While the bottom decile increased by a remarkable 50 percent since 1985, the median increased by 90 percent and the upper percentile increased by 110 percent over the same period.

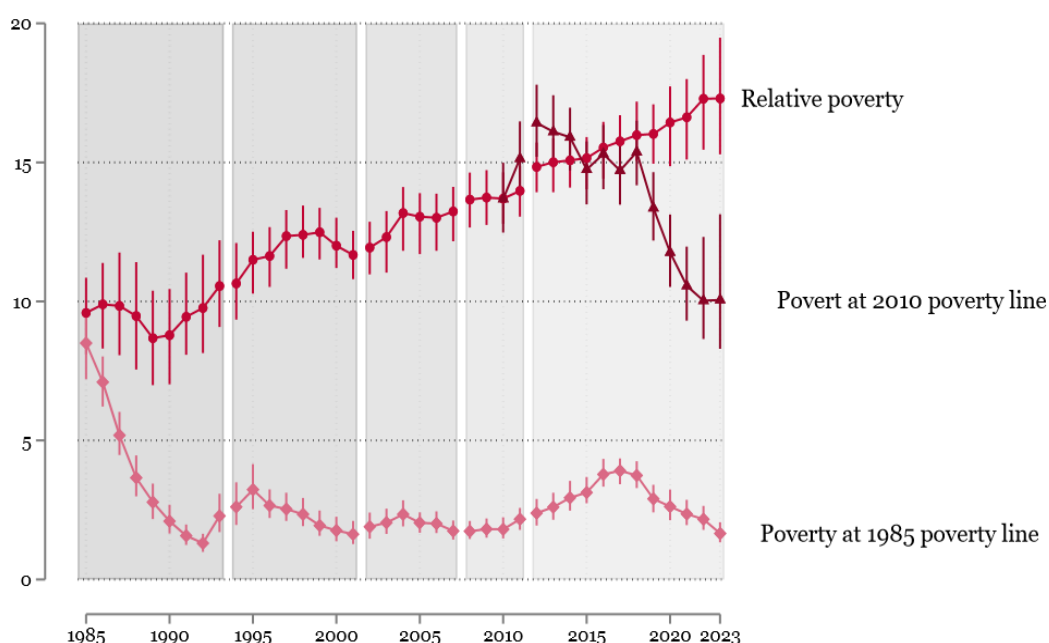
Figure 4. Evolution of low, middle and upper percentiles of the income distribution



A simple simulation illustrates how rising median living standards – and consequently of poverty threshold – have been driving the growth in relative poverty. In Figure 5, the *relative poverty* line (circles) replicates the trend shown in Figure 1. The *1985 poverty* line (diamonds) represents a counterfactual scenario in which the poverty threshold is anchored to the 1985 median income and adjusted only for inflation afterwards. The *2010 poverty* line (triangles), diverging from the relative poverty line in 2010, shows the evolution of poverty if the threshold had been frozen in 2010 and similarly adjusted for inflation.

Under the 1985-anchored scenario, the poverty rate would have declined sharply. Anchoring to threshold to the 2010 median would also yield a lower poverty rate. The 2010-anchored poverty rate briefly exceeded the observed relative poverty rate in 2012–2013, when the median temporarily fell following the Great Recession. This episode illustrates how volatile relative poverty measures can be during downturns. By 2023, only 10% of the population falls below the 2010-anchored threshold, well below the contemporaneous poverty rate.

Figure 5. Trends in relative poverty rates with actual and counterfactual poverty lines anchored at their 1985 and 2010 levels



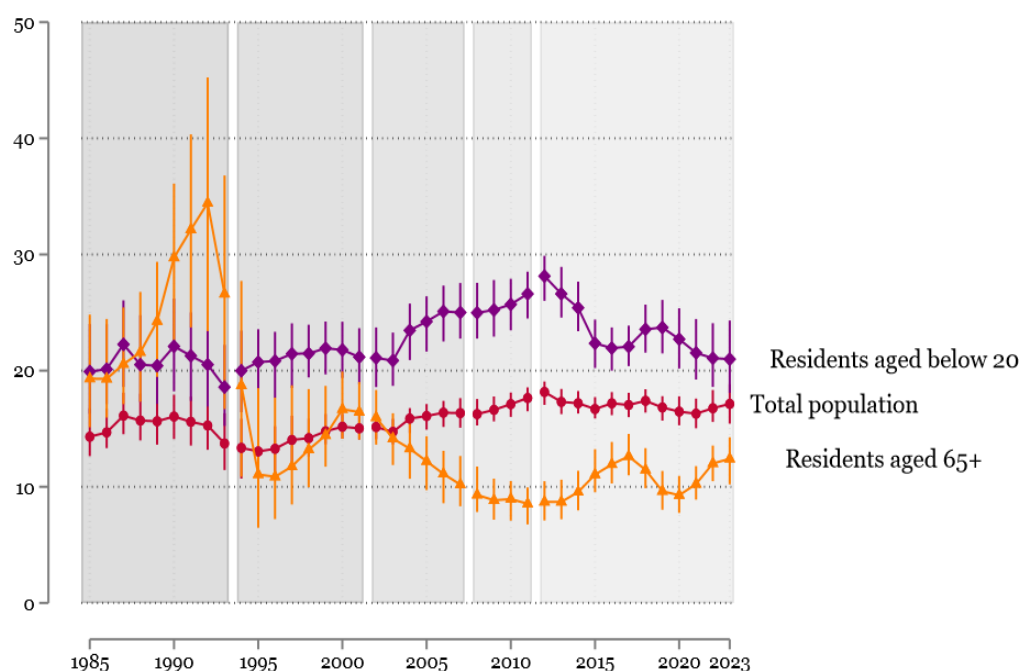
A changing population

Between 1985 and 2023, households have become smaller: the share of individuals living alone has increased by 11 percentage points (pp.), and the share living in couples without children by 7pp. The share of individuals living in a female-headed household has risen by 24pp. There has been an increase of 22pp. in the share of individuals living in a household whose head does not have Luxembourgish citizenship, while the share living in a household whose head has no tertiary education has fallen by 43pp. Some attributes associated with higher poverty have increased, but at the same time attributes related to low poverty have also increased, notably the prevalence of tertiary education. So, on balance, what is the weight of the change in the population structure on the overall trends in poverty?

To try and answer this question, we re-estimated measures of poverty under a scenario in which the population shares were fixed at the values observed in 2020. Those results are displayed in Figure 6. The increase over time in poverty rates would have been much smaller had the population structure not changed. In the absence of population change, there would have been hardly any increase in the

total population poverty rate from the 1990s through to the current period. The poverty rate among young people would also have largely been flat, barring an uptick in 2010. The decline in the poverty risk of the elderly residents is still observed despite the evolution of the population structure. Clearly, the change in the composition of the population has been a key mechanical driver of the evolution of relative income poverty.

Figure 6. Counterfactual poverty rates at fixed 2020 population composition



Envoi

Examination of the LIS series for Luxembourg confirms that sharp increases in indicators of (relative) poverty and sustained growth in living standards can coexist. The doubling of the poverty rate between 1985 and 2023 does not depict a deterioration of the absolute living standards of the low-income population, but instead a race between the bottom and the middle – a race that the bottom tends to lose. The evolution is also fueled by large demographic change. Underlying the trends are however persistently large differences in poverty risks across population groups, with children and lone-parent families particularly exposed.

Reference

STATEC (2025), *Rapport Travail et Cohésion Sociale*, STATEC, Luxembourg.

This contribution previously appeared on <https://www.lisdatacenter.org/newsletter/>

<https://www.lisdatacenter.org/newsletter/nl-2025-36-im-5/>

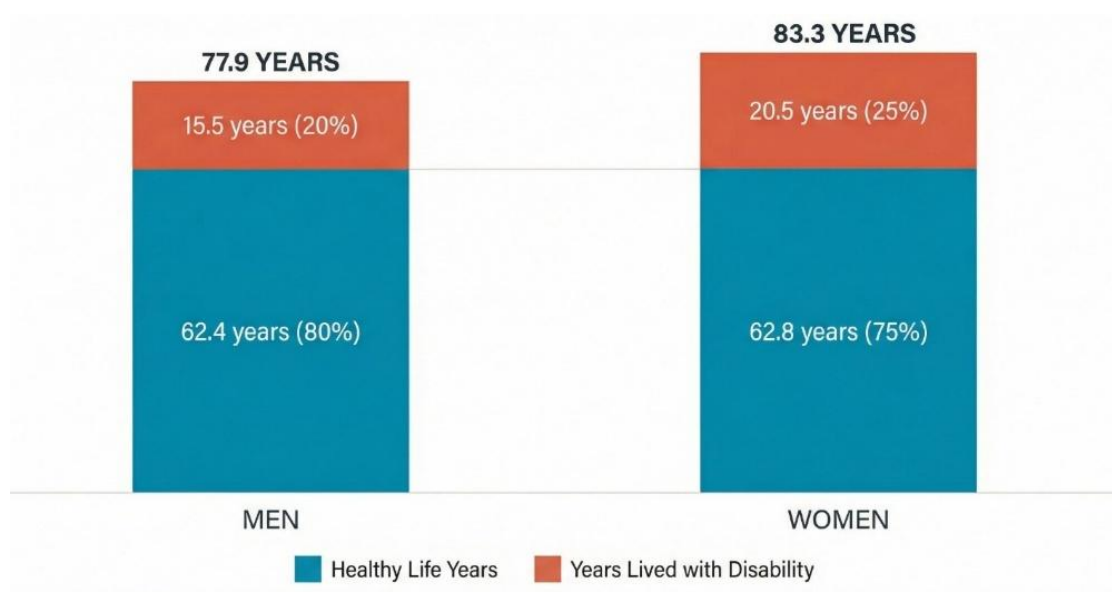
Liberal Reforms and Health Gender Gap in the EU

Matteo Migheli

From the 1980s onwards, the Washington Consensus brought about a wave of liberal reforms also in Europe. Since then, the institutions of the European Union have adopted a series of policies aimed at promoting and safeguarding competition in the internal market, including through the privatisation of state-owned assets. At the same time, the issue of gender inequalities has become increasingly central to the European agenda, and individual countries have progressively introduced measures designed to reduce existing disparities in the labour market, access to top positions, and so forth.

Even though women's life expectancy (83.3 years) in the EU tends to exceed that of men (77.9 years), women spend a greater number of years than men in poor health. The number of healthy life years is broadly the same for males (62.4) and females (62.8), as in Figure 1 below. One of the main causes of this phenomenon lies in health inequalities that arise prior to old age and that are reflected in individuals' health conditions over the course of later life.

Figure 1. Life expectancy and healthy life years, by gender in the EU



Source: Author's elaborations on Eurostat (2022) data.

The wave of liberal reforms, together with the measures introduced to enhance gender equality in the labour market, has produced a variety of outcomes. On the one hand, liberal reforms reduce collective bargaining, which the literature has always found to increase female employment. On the other hand, the introduction of gender quotas has increased the number of women in top positions, therefore helping to shape more gender-equal hiring and promotion policies (although equality in these fields is far from being reached). All this, however, has come at a cost, partly reflected in increased gender inequality in terms of health, insofar as these reforms have not been accompanied by compensatory instruments addressing a range of factors that will be discussed below.

An analysis of data on gender differences produced by the European Institute for Gender Equality (EIGE) and of the Economic Freedom Index calculated by the Fraser Institute makes it possible to assess how, over the past 25 years, the liberal policies adopted by EU countries have influenced gender inequality in health-related outcomes across several sub-domains. In particular, EIGE provides gender equality indices for the European Union covering various aspects of social and individual life. One of these concerns health, which is assessed in terms of i) subjective conditions, ii) behaviour, and iii) access to necessary healthcare. Specifically, the indicators considered by EIGE include life expectancy, healthy life years, and self-perceived health for the first dimension; engagement in regular physical activity and the consumption of tobacco and alcohol for the second; and, finally, the presence of unmet medical needs for the third. The index evaluates the situation of men and women separately, on a scale from 0 (very poor conditions) to 100 (ideal conditions). The difference between the two values obtained this way makes it possible to identify the presence of gender inequality. Table 1 below reports the gender differences, calculated by subtracting men's scores from women's scores. A value different from zero therefore indicates the presence of inequality: when the value is *negative*, inequality *favours men*; when it is *positive*, it *favours women*.

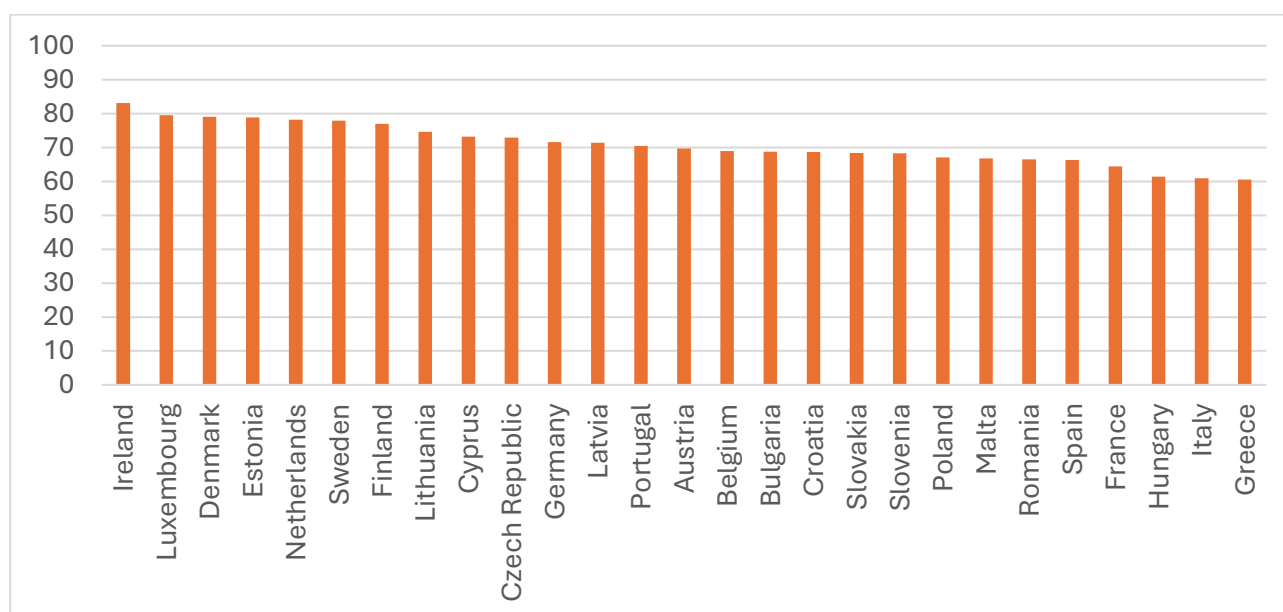
Table 1. Gender differences in health in the EU: descriptive statistics

	2013				2022			
	Mean	Standard deviation	Minimum	Maximum	Mean	Standard deviation	Minimum	Maximum
Perceived health	-2.957	1.483	-5.700 (Portugal)	0.300 (Croatia)	-2.574	1.339	-5.200 (Latvia)	-0.600 (Ireland)
Life expectancy	3.221	0.931	2.000 (Sweden)	5.650 (Lithuania)	2.919	0.931	1.700 (Netherlands)	5.000 (Lithuania)
Healthy life years	0.529	0.964	-1.300 (Portugal)	2.450 (Lithuania)	0.556	0.913	-1.400 (Netherlands)	2.100 (Bulgaria)
No smoke, no alcohol	10.627	3.755	6.180 (Austria)	20.010 (Lithuania)	9.937	3.542	4.730 (Spain)	19.600 (Romania)
Physical activity	-2.175	2.148	-5.090 (Spain)	4.520 (Denmark)	-1.956	1.950	-4.910 (Slovakia)	3.240 (Denmark)
No unmet needs	-0.457	0.688	-2.200 (Romania)	0.800 (Spain)	-0.400	0.700	-2.300 (Estonia)	1.100 (Denmark)

Source: author's calculations on EIGE data.

In turn, starting from 1975, the Fraser Institute has computed the Economic Freedom Index (EFI) for all countries worldwide, assessing them across several dimensions. Five areas are considered: i) the size of government in the economy, ii) the strength of the legal and judicial system (rule of law), iii) domestic monetary stability, iv) openness to international trade and the free movement of people, and v) domestic market regulation, especially in the labour market. Figure 2 below provides the ranking of the European countries in terms of the EFI.

Figure 2. Economic freedom in the EU, year 2025



Source: Author's elaboration on data from The Heritage Foundation, available at <https://www.heritage.org/>

The combined use of the two indices described above allows an assessment of how the evolution of (liberal) policies within the European Union has affected gender inequality in health and helps to suggest possible interpretations of the observed patterns. The data analysis indeed shows that in countries experiencing the largest increases in economic freedom—namely those adhering most to liberal policies—gender inequality in health has increased in some of the domains considered, while it has decreased in others. The most significant results concern life expectancy, self-perceived health, physical activity, and unmet healthcare needs, which hold, on average, for the EU countries. With regard to life expectancy, the net effect appears to be a reduction in inequality, to which all five areas considered by the Economic Freedom Index contribute (albeit to a different extent). In particular, reducing market regulation and the direct presence of the state in the economy seems to narrow the gap in life expectancy between men and women. Given that women generally enjoy an advantage over men in this respect, reductions in public expenditure (the main indicator of state intervention in the economy) appear to affect women more adversely—or to benefit them less—than men. Indeed, where reliance on private healthcare increases, women (who on average earn lower

labour incomes than men) may face greater difficulties in accessing care. The key interpretative factor thus appears to lie in wage inequalities, which current policies have not yet sufficiently addressed.

Greater freedom of international trade has a similar effect in terms of unmet healthcare needs, plausibly because it facilitates access to better medical devices. By contrast, reduced regulation of domestic markets and a stronger judicial system have the opposite effect, namely an increase in inequality in unmet healthcare needs. One possible explanation for this phenomenon (which nevertheless requires further investigation) may be linked to differential access to legal and institutional protections.

Finally, greater freedom of trade in goods and services increases inequality in the consumption of health-damaging substances (alcohol and tobacco), whereas a more efficient judicial system reduces it. The former effect appears to be driven by greater availability of alcohol and tobacco at lower prices, as these goods are less burdened by import restrictions. The latter effect, by contrast, may stem from more effective enforcement of information requirements concerning the health risks associated with alcohol and tobacco consumption, as well as from sanctions for alcohol-related behaviours (e.g. driving under the influence). This is likely to induce both men and women to consume smaller quantities, disproportionately reducing demand among heavier consumers and leading to a convergence of consumption towards lower levels.

For a correct interpretation of these results, it is important to bear in mind that they concern inequalities, which may either increase or decrease when individuals of one gender benefit from—or are adversely affected by—reforms to a greater or lesser extent than those of the other gender. This means that a reduction in inequality may be accompanied by an improvement in individuals' conditions, but also by their deterioration (or by an improvement for one gender alongside a deterioration for the other). In other words, the analysis does not address absolute levels of health, but only differences between men and women in the levels of the dimensions considered.

These findings do not imply that reforms aimed at increasing competition (in the markets of goods, services, and labour) and increasing openness to foreign trade are inherently detrimental; indeed, they have increased women's employment and career opportunities, facilitated international flows of trade, capital and people, and, as shown, partially reduced gender inequalities in health. However, such reforms need to be accompanied by measures that compensate for potentially negative side effects. For instance, one reason why liberalisation may widen gender inequality in health is that women, despite having greater access to the labour market and to senior positions than in less liberal economies, continue to bear primary responsibility for childcare and eldercare. This results in time compression and a significant reduction in free/leisure time (as documented in the literature), worsening women's health conditions relative to those of men.

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