

# **From welfare to farewell: the European social-ecological state beyond economic growth**

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Working Paper 2021.04

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European Trade Union Institute

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## **Abstract**

This working paper is intended to shed light on a pressing issue: the apparent growth-dependency of European welfare states at a time of weak growth prospects and strong criticisms of growth. Indeed, while the notion of going beyond GDP growth is gaining momentum in the European Union, as elsewhere, and seems rational and desirable to a growing number of citizens and policymakers, it might not be feasible. Highlighting a new ‘welfare-growth-transition trilemma’, I first show how European welfare states in the twentieth century were based on a social-economic alliance that was largely blind to mounting environmental challenges that were likely to undermine their financial sustainability. I then explore the link, too often taken for granted, between GDP growth, human well-being and social progress (focusing on employment, inequality and health), and review empirical evidence supporting the growth-dependency of the welfare state hypothesis (focusing on health care and pensions), reaching the conclusion that these relations appear fragile. I then question the need for additional growth in the perspective of climate transition and offer two alternative strategies: progressive social-ecological taxation and social savings induced by environmental policy. I finally insist on the need to turn the welfare state into a ‘social-ecological state’ in the face of the growing human impact of climate change and to develop social-ecological protection (focusing on old age and heatwaves).

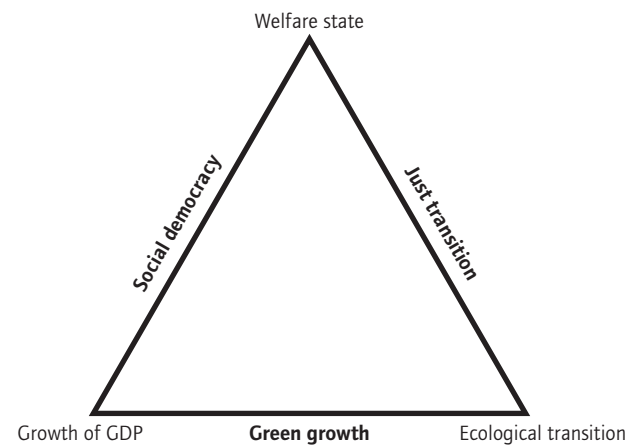
## Introduction: facing a new trilemma, choosing our future

*'We do not have policies about the weather because, as yet, we are powerless to do anything about the weather.'*  
Richard Titmuss, 1976

Under the combined effects of the meteoric acceleration of our ecological crises and growing concerns about politically disruptive social inequality, two agendas for reflection and reform have gained momentum in the civil, academic and political spheres over the past decade in the European Union and beyond. The first agenda attempts to articulate environmental challenges with social issues (Gough 2017; Laurent 2020). The second aims at going beyond economic growth as a collective horizon (Raworth 2012; Laurent 2021a). Two tasks stand before us regarding both these agendas: first, ensuring that they converge from the theoretical and empirical standpoints; second, embedding them in new policies and institutions so that they can succeed. The two tasks thus lead to one question: can we build a social-ecological transition beyond growth, analytically and practically?

This paper argues that we can. Its point of departure is the new trilemma (or 'impossible trinity') that has materialised at the beginning of the twenty-first century, with the welfare state, economic growth and ecological transition as vertices (Figure 1). This paper explores the two futures this trilemma outlines for European countries, starting with a look back at the history of the relationship between growth and the welfare state.

Figure 1 The welfare-growth-transition trilemma



Note: pick two vertices, only two.  
Source: author

**Reading: one past, two futures**

'**Social democracy**' denotes the social-economic alliance characteristic of the post-war decades in Western European countries, where social policy and economic growth went hand in hand without consideration for environmental degradation (at least until the early 1970s): economic growth stabilises the welfare state but without regard for the biosphere's destabilisation.

'**Green growth**' uses ecological transition as a means to increase GDP growth, thought to be a source of trickle-down prosperity. In this scenario, ecosystems continue to be heavily damaged at least in the medium term and this degradation gradually renders welfare states financially unsustainable because of the resulting human health degradation: the welfare state is destabilised and eventually derailed by the pursuit of growth.

'**Just transition**' puts the mutualisation and equalisation power of the welfare state at the service of ecological transition, building a social-ecological transition that combines sustainability and justice, abandons GDP growth as a collective horizon and focuses on policies that simultaneously reduce natural resource consumption and social inequality.



# 1. The European welfare state without economic growth, the early beginnings

Lindert (2004) has masterfully captured the core political economy of the welfare state, whose birth in Europe at the end of the nineteenth century resulted from two main developments: (i) the political expansion of national fiscal capacity spurred by the increasingly loud ‘voices’ of citizens demanding social transfers; and (ii) the economic aim of self-financing, whereby rising social spending fostered labour productivity, which allowed economic efficiency to support social justice.

## 1.1 Political dynamic: enhancing fiscal capacity in response to deepening democracy

As Lindert points out, the public investment in human development democratised by social protection (born in Bismarck’s Germany in 1883 out of the imperative of collective welfare spelled out in 1881<sup>1</sup>) had been hindered for centuries by authoritarian and elite governments that used national resources largely for private gains (for instance, increasing their life expectancy).

Numerous authors have shown that the shock of the ‘first globalisation’ from the 1870s onwards accelerated the advent of the welfare state: by increasing economic vulnerabilities, globalisation in turn reinforced demands for collective protection (according to the so-called ‘compensation’ theory). The less fortunate classes under industrial capitalism used their political participation to obtain from the ruling classes income transfers at a time when their market income was becoming more volatile because of the expansion of global capitalism. Extensive political participation thus gradually led to the expansion of social spending. In this sense, the birth and development of the welfare state is a symptom of democracy.<sup>2</sup>

- 
1. Kaiser Wilhelm I’s Royal Proclamation on Social Policy of 17 November 1881 recognises ‘a legitimate claim to a greater degree of state welfare’, available at: [https://ghdi.ghi-dc.org/sub\\_document.cfm?document\\_id=1808&language=english](https://ghdi.ghi-dc.org/sub_document.cfm?document_id=1808&language=english)
  2. Social protection was preceded by a paternalistic social system by means of which elite governments endeavoured to keep the ‘voiceless’ close to the poverty line, allowing them to maintain mere subsistence from their work, while at the same time preventing them from rising socially, which made it possible to stabilise industrial societies for a time.

Indeed, as Lindert shows, the expansion of political participation contributed decisively to the development of social transfers from 1880 on. The capillary development of the welfare state in European nations is indeed measurable: between 1880 and 1935, no fewer than 24 European countries adopted laws on accidents at work and schemes covering old age, with 20 countries adopting laws on health insurance and 15 countries adopting laws on unemployment insurance. It was not until the post-war period that the welfare state would really take off financially, however, with public social spending exceeding 10 per cent of national wealth for European countries, 10 times what it was in the early twentieth century (this average rate had doubled by 1980, before stabilising at around 25 per cent in the 2000s).

If globalisation was the economic catalyst of the welfare state, the Second World War appears to have been its political accelerator, as evidenced by the text adopted by the General Conference of the International Labour Organization on 10 May 1944, known as the ‘Declaration of Philadelphia’, which proclaims that ‘lasting peace can only be established on the basis of social justice’. Two months beforehand, in occupied France, the National Council of the Resistance (CNR) vowed to enact ‘a comprehensive social security plan, aimed at ensuring all citizens the means of existence’ after liberation. The Treaty of Rome (1957) affirms in a similar vein the essential link between progress and peace.

The European welfare state, birthed by globalisation and strengthened by the solidarity born from the ordeals of war, is the child of public power and social justice. Not only was economic growth low and unstable at both key moments of its advent (the late nineteenth century and the post-war years), but this very instability fostered its advent.

## **1.2 Economic dynamic: productivity enhancing and self-financing**

Moreover, the idea that economic growth ‘allowed’ the development of the welfare state by financing social protection is an anachronistic way of understanding its economic logic. As Lindert shows convincingly, economies of scale made it possible to reduce considerably the administrative cost of the welfare state, thereby producing a colossal benefit in terms of human development. The welfare state ended up being a very good deal for European taxpayers.

This is what Lindert calls the ‘free lunch paradox’: in most public economics textbooks, standard models teach that taxes and transfers lead to net welfare losses and weaken economic growth. Careful study of available data reveals, however, that social spending is not negatively correlated with either the level of GDP per capita, or its growth rate. On the contrary, the welfare state represents a net economic benefit for the societies that are fortunate enough to be able to embrace it. Nordic countries, which can be found at the top of

virtually all development rankings, embody the economic and social triumph of the welfare state in the twentieth century.

If the growth of social spending does not reduce growth of private incomes, it is because the governments that govern welfare states calibrate the taxes and transfers that they know are potentially 'distorting' in order to minimise their impact on the economy. The countries that have chosen high levels of social spending have also chosen levies that cause low net losses and their governments are careful not to generate excessive disincentive effects in terms of work or production. On the other hand, labour productivity has been spurred and not dampened by social spending.

All in all, in the long run, the net effect of the welfare state on economic growth turns out to be zero, which is to say that the colossal human well-being generated by the welfare state costs essentially nothing in terms of GDP. Having said that, GDP, as its inventor Simon Kuznets made clear a century ago, is a very poor measure of human well-being.

The economic narrative according to which the welfare state is a luxury that only growth-rich societies can afford can thus be turned upside down: the welfare state has been the backbone of developed economies in the past 70 years, especially European ones, and a major source of economic growth for more than a century. Nevertheless, the European welfare state has gradually developed a growth dependency.

## 2. The eco-social paradigm of social democracy

Hirvilammi (2020) recently highlighted the intellectual genealogy of the institutional interweaving of economic growth and the welfare state, insisting on Gunnar Myrdal's seminal contribution. Myrdal is indeed a key reference here: born in 1898, the year of the first law on the French welfare state, engineer and architect of Swedish social protection, he is also one of the (pre-Keynesian) inventors of macroeconomics and probably the most influential European institutionalist economist.

His theory of the 'virtuous circle' is aimed precisely at formalising the coupling of economic growth and social protection in post-war Western Europe, namely the eco-social paradigm sustaining what became known as social democracy. The circle is 'virtuous' because of two feedback nodes: full employment and education and training policies, on one hand; wage levels and labour productivity, on the other. The social-economic synergy is cumulative: economic growth fuelled by the increase in labour productivity and employment in turn feeds social progress by reducing inequalities and extending social protection to all stages and domains of the economic life cycle (education, housing, employment, pensions). Attitudes and behaviours (political trust, aspirations to social progress and so on) propagate structural dynamics.

Hirvilammi notes that what could be called the old social-economic alliance, emblematic of the third quarter of the twentieth century, was destabilised in the final quarter by the rise of neoliberalism (Myrdal shared his 'Nobel Prize' in economics<sup>3</sup> with Hayek in 1974, on the cusp of those two eras). But the most important point that she rightly emphasises is that these increasingly destabilised interactions between economic growth and social protection played out in a closed circuit, without regard for the biosphere, even as human systems were gradually becoming – visibly – unsustainable.

Myrdal himself attempted to dispel the illusions of GDP and growth. In a text that Hirvilammi does not refer to, he writes: 'I have become convinced that we must finally recognise and prepare for the fact that there are limits to a growth whose constituent parts all follow an exponential curve. We need to consider taking large-scale government planning actions to defend our environment' (Myrdal 1973). With these words, Myrdal appears to evolve

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3. Actually the "Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel".

from being the founding father of the fuelled-growth welfare state to being a pioneer of the social-ecological state.

Before arriving at this point, let's consider the contemporary decoupling of growth, employment and income that corrupted the 'virtuous circle' of social democracy.

### **3. Growth, income and employment: the double decoupling**

The co-dependency between the welfare state and growth (as envisioned by Myrdal) is mediated by two key linkages: the node between GDP growth and employment and the node between GDP growth and income.

The *first node* is supposed to guarantee that, when GDP grows, so does employment, allowing social contributions to increase and social policy to be properly financed. Two benefits are claimed here: the first, direct, through employment, which increases well-being; the second, indirect, through social contributions generated by employment (especially important for contributive-retributive Bismarckian systems).

Typical of the centrality these two nodes still have in theory is the affirmation according to which ‘Economic growth, as an attribute of market capitalism, has structural properties – it is needed to stabilise modern societies as it provides employment, public sector provision through tax revenues, rising wages, and hence social stability’ (Büchs and Koch 2019).

The alleged iron relationship between GDP growth and employment comes from the work of Okun (1970), associating variations in real GDP growth with variations in the unemployment rate, which was later labelled a ‘law’. While this ‘law’ has been empirically invalidated for at least 20 years (Lee 2000), it persists as a myth.

Of course, employment enters into the calculation of GDP: real GDP can be broken down into labour productivity (real GDP/total hours worked), average hours worked per employed worker, employment rate (total employment/labour force), labour force participation rate (labour force/population) and total population.

From this identity, one can infer the ‘employment intensity of growth’ (how much employment growth results from 1 percentage point of economic growth). One of the most influential empirical studies on this topic shows that for every 1 percentage point of additional GDP growth, total employment grew between 0.3 and 0.38 percentage points between 1991 and 2003. This implies that around two-thirds of economic growth achieved during this period can be attributed to gains in productivity, while one-third resulted from increased labour supply (Kapsos 2005).

This empirical reality forms the background of an already outdated narrative for European and, more broadly, OECD countries: increasing labour productivity led to both high growth and low employment, with a decline in labour shares as a result. Two main policy solutions were offered and sometimes implemented to counter this trend: sharing income and sharing labour, while keeping the objective of growing GDP.

But the US economy shows that this story has recently become more complicated. From 1950 to 1980, median household income, GDP per capita, private employment and labour productivity were roughly aligned. From the late 1980s on, GDP per capita and labour productivity continued to grow strongly, while private employment grew at a lesser pace, but median household income stagnated: workers continued to produce wealth, but no longer received fair benefits, while GDP per capita gave the illusion of an average rise in living standards.<sup>4</sup> From 2000 on, the story changes again, with private employment stagnating along with median income, while GDP per capita and labour productivity continue to grow until the 'Great Recession'. Then the story changes once more over the past decade or so, with productivity stagnating, GDP per capita growing, fuelled by finance, tech and 'cheap full employment' with lagging wages and a drop in life expectancy. At the same time, in the EU, stagnating productivity and low employment have led to only moderate growth. Overall, the correlation between GDP growth and employment rate has amounted to a meagre 0.34 since 2012 for the 37 OECD countries.<sup>5</sup>

The case study of Germany within the OECD group leads to even more puzzling observations. Germany has been widely considered the European success story when it comes to employment and growth for at least the past thirty years. What has been described as 'the longest and strongest employment upswing in the past 50 years' in Germany, with employment rising 'by 1.2% per year (compared to 0.1% between 1993 and 2005) to a record level of 85.5% of the potential labour force (2005: 76.5%)' between 2006 and 2018, was accompanied by a decline in real GDP (Klinger and Weber 2020).

This absolute decoupling is also true for the euro area as a whole, with real GDP growing and employment declining, for instance between 2002 and 2005 or between 2010 and 2012 (Botelho and Dias da Silva 2019). It is even more pronounced for the EU28: the largest increase in employment rate of the past two decades (which occurred between 2013 and 2019, from 64 per cent to 69.3 per cent) happened while GDP growth was moderate, at around 2 per cent, and going through ups and downs<sup>6</sup>).

To summarise, while the old narrative focused on the quality of economic growth, a new narrative is needed on the necessity of economic growth.

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4. Erik Brynjolfsson and Andrew McAfee, Why the Middle Class is Shrinking, *Harvard Business Review*, 5 November 2015.

5. OECD (2020).

6. When GDP growth was at its two-decade peak, between 2006 and 2007, the employment rate was around 65 per cent.

‘Economists have yet to discover ways to manage the macro-economy in which GDP is delinked from recorded employment’ (Dasgupta 2021). This decoupling is an empirical reality.

The *second node* is supposed to guarantee that, when GDP grows, so does household income, again ensuring that taxation revenues ‘finance’ social policy. This is especially important for Beveridgean models, in which universal coverage is achieved via taxes and not contributions.

The disconnect between GDP and household income is as strong as the disconnect between GDP and employment: the correlation between GDP and household income over the past ten years for the 37 OECD countries is 0.37.<sup>7</sup>

There are at least two contemporary issues here: inequality that prevents national income growth from translating into household income growth; tax and social competition, which capture and divert a substantial amount of national income and prevent taxation of more mobile tax bases (such as corporate profits and high incomes), which are counted as contributing to GDP but do not in fact contribute to social policy (captive tax bases ending up financing the welfare state). There is thus a disconnect between national income and personal income, as well as between GDP and fiscal capacity.

The US economy has become the poster child for the first disconnect: US GDP multiplied by three between 1993 and 2018, but 85 per cent of gains were captured by the richest 10 per cent. European countries on average suffer less from inequality, but the disconnect between national income and personal income is still very substantial: the income shares of the top 10 per cent have increased in all European regions in the past forty years, including in the most equal region of Northern Europe, where it has increased from around 22 to around 29 per cent<sup>8</sup> (stronger than in Western Europe, where the increase was from 27 to 32 per cent).

As for tax and social competition, it is a European problem, if not a European invention. The EU is the region of the world where it is most exacerbated (according to KPMG data, corporate taxation in the EU, at 20.79 per cent on average, is the world’s lowest, below Asia at 20.96 per cent, the Americas at 27.33 per cent and Africa at 27.97 per cent). More generally, it is no longer clear that GDP growth is still a good indicator of states’ fiscal capacity: the financialisation of GDP, the optimisation and tax evasion of income, however recorded as contributing to GDP, the regressivity of many European tax systems, the disconnection between GDP and household income, among other things, argue for the use of finer indicators of fiscal capacity.

The double decoupling of GDP, employment and income is thus obvious, which means in straightforward terms that increasing GDP no longer appears to be

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7. Again, see OECD (2020).

8. Source: WID.



an efficient strategy to increase income and employment. In other words, even for elementary dimensions of economic well-being, such as employment and income, we should question growth as a human development strategy.

More fundamentally, it is important to understand that GDP and its growth only superficially embody the wealth of nations but are not its root cause. The central ‘indicator’ for Adam Smith was not GDP but labour productivity, from which economic growth partly results but whose increase draws a distinct public policy horizon. Public health and education policies appear to be priorities for increasing labour productivity, while they are marginalised in current economic systems obsessed with GDP growth based on the expansion of finance, the digital sector and fossil fuels, and which account very poorly for the quality of education and health. Going beyond growth is first and foremost an attempt to go beyond economic appearances and illusions.

Let us also remember that the major goal of increasing labour productivity is not enrichment but to enable people to avoid spending their lives working. It allows the volume of working hours to be reduced at a constant standard of living, which frees human life from the burden of labour. The goal of labour productivity is therefore human well-being, not growth, which appears as a by-product of human well-being.

Moreover, we should give credit to the opposite hypothesis that is usually suggested in relation to the remarkable increase in living standards in twentieth century Europe. It is the even more remarkable increase in health conditions and educational attainments that supported the increase in labour productivity and ultimately that of GDP per capita. GDP thus appears retrospectively and not only prospectively as a superficial indicator of human development with regard to these deep determinants.

Data compiled by Prados de la Escosura (2015) suggest that, for all countries of the world, human development made significant progress between 1870 and 2007, its average level rising from 0.076 to 0.460, an increase of a factor of six. But these data also show that improvements in health and education explain 85 per cent of the increase in the human development index in the past 140 years, both for OECD and European countries and for the rest of the world (Table 1 and Figure 2).

Table 1 Annual average growth rate, 1870–2007 (%)

	Human Development Index	Contribution of life expectancy	Contribution of education	Contribution of GDP per capita
World	1.3	0.6	0.5	0.2
OECD	1.1	0.5	0.4	0.2
Non-OECD countries	1.7	0.7	0.8	0.2

Source: Prados de la Escosura (2015) and author’s calculations

Figure 2 Breakdown of human development progress for OECD countries, 1870–2007



Source: Prados de la Escosura (2015) and author's calculations

On the other hand, human development is tightly linked to the expansion of the welfare state. The most humanly developed countries in the world are those that were able to invest early in their welfare state.

To summarise, the real underlying indicators of human development are labour productivity, health and education and they are fostered by the welfare state, not by economic growth, which in fact *they* sustain.

This is true structurally in the long term, as well as for short-term horizons in which European economies had to face macroeconomic adverse shocks, such as the ‘Great Recession’ in 2009–2010 and the Covid-19 pandemic in 2020–2021, in which the welfare state maintained incomes<sup>9</sup> and income and employment,<sup>10</sup> respectively, while growth had vanished. Let’s explore further whether the welfare state really needs economic growth.

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9. While for all OECD countries, market income fell by 1.9 per cent per year between 2007 and 2011, transfers and taxes made a positive contribution of 1.4 per cent, making it possible to limit the decline in their disposable income to 0.5 per cent per year. The welfare state has thus reduced to one quarter, on average, the negative effect of the Great Recession on European households (Laurent 2019).

10. As the INSEE (French statistical agency) data indicate, even though growth collapsed by 19 per cent in the second quarter of 2020 under the effect of one of the most severe lockdowns in the world, both salaried employment and household income were maintained relatively well (each showing a decrease of around 2 per cent).

## 4. Does the welfare state need growth?

There are two main pathways to building a welfare state beyond growth:<sup>11</sup> searching for alternative purposes or for alternative means of financing.

The second pathway is the hardest. Shouldn't GDP at least grow if we want to prevent our social model, especially in the European Union, from collapsing? A number of voices are thus concerned by the social consequences of the existing exhaustion of growth, not to mention accelerating its exhaustion by design. If they agree that growth might no longer be desirable, they worry that it might still be necessary. This legitimate concern, heard in particular in trade union circles in Europe and the United States, needs to be addressed.

First, as we have seen, economic growth today is disconnected from employment and income, two key benefits that have been at the heart of social struggles in Europe for the past two centuries. Trickle-down economics has become rather 'dribble down' or even 'fickle'-down economics.

More importantly, growth in fact plays a marginal role in stabilising social policies compared with socio-demographic structural parameters. The level of social spending and the sustainability of social policy in fact depend on labour productivity, household income, sharing of added value, demography and occupational behaviour, among other things. We must therefore act directly on these parameters if we really want to stabilise social policies in the long term. The future of pension systems is of critical interest here, as they alone represented close to 13 per cent of the EU's GDP in 2018 (almost half of total social protection expenditure in the EU).

As a recent comparative report notes (French Retirement Orientation Council-COR 2020), however:

'The level and evolution of the share of pension expenditure in GDP depends on demographic (in particular the age structure) and economic (labour productivity, sharing of value added and employment rate) contexts of which they are part. They also depend on the rules specific to each of the pension systems (in particular the retirement age which determines the rate of retirees among the elderly population and the rules for calculating pensions).'

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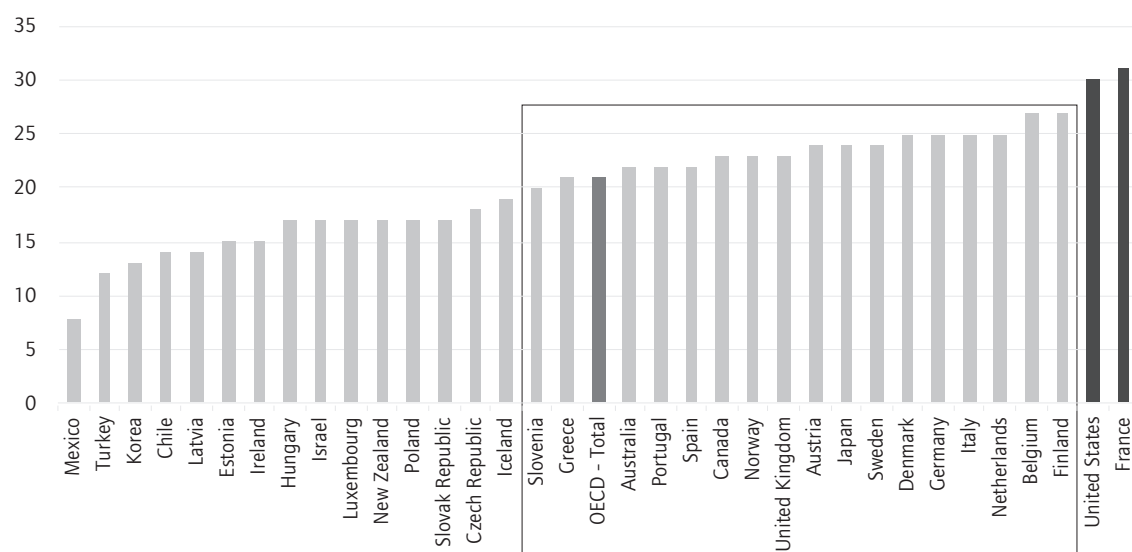
11. For a survey of trade-offs attached to post-growth welfare states, see Corlet Walker *et al.* 2021.

These parameters and rules, which correspond to principles of justice, are much more decisive than GDP growth for the future of pension systems.

Even when only the ‘economic context’ (which the COR distinguishes from ‘demographic factors’ and ‘system rules’) is being considered, the authors note that ‘The economic context which conditions the long-term sustainability of a pension system is a reflection of labour productivity, employment rates and the sharing of wealth in the different countries studied.’

More generally, the view according to which growth is ultimately what allows countries to ‘afford’ the welfare state relies on a misunderstanding: no country can escape social risks and the cost of social policy. Some countries mutualise that risk, others do not, which makes those risks much more costly, as illustrated by the US case, which is second in the OECD only to France when net social spending is measured (Figure 3).

Figure 3 Net total social expenditure (% of GDP), 2017



Reading: total net social spending takes into account public and private social expenditure and also includes the effect of direct taxes (income tax and social security contributions), indirect taxation of consumption on cash benefits, as well as tax breaks for social purposes.

Source: OECD

The 17 OECD countries, with GDP per capita levels ranging from 34,000 to 59,900 dollars (\$) (and widely different real GDP growth performance during the past two decades) are all between 20 and 25 per cent of net social spending in relation to GDP. The two top spending countries, France and the United States, are very close to 30 per cent, but are very different in terms of GDP per capita and, even more, real growth performance. Yet, France is able to sustain a more widespread, efficient and fair social policy than in the United States with considerably less growth.

The real difference between France and the United States is the same as between the latter and the rest of the OECD: the share of private social spending, whose inefficiency largely explains why the United States has by far the highest share of national income spent on health care, at 17 per cent of GDP in 2019, or twice the OECD average, with significantly poorer health performance, for instance.

The economic efficiency at the heart of the welfare state expansion alluded to in the first section of this paper is on full display here: by correcting social inequalities, by mutualising risks, by increasing labour productivity through the development of health and education, the welfare state allows considerable savings. Of what financial order? We can precisely quantify the economic cost of the non-pooling of health spending in the United States at 8 percentage points of GDP. This is what separates the cost of the American health system from that of other OECD countries, in other words \$1,700 billion (1.5 trillion euros).

Moreover, the welfare state acts to reduce the need for economic growth, which is reciprocally a substitute for social policies. The reason why the United States structurally needs much more income growth than European states is linked to the level of inequality in the country (the highest earners capturing most of the growth, so that more is needed for the others) and the weakness of social protections (the very high cost of health and education, because of their private nature, requires higher wages). There is therefore no sense in comparing growth rates (and living standards) in the United States and in the European Union without correcting these two 'growth traps', or of envying Americans' income level without comparing it with their level of spending on health and education.

The effect of the Covid-19 pandemic in the United States indeed offers a striking illustration of the difference between growth, well-being and productivity. Healthcare production in the United States today represents around \$3 trillion, more than the entire French economy, making it arguably the largest industry in the world economy. The economic inefficiency of the American health care system is obvious: it costs twice as much on average as in comparable countries, with significantly worse results (life expectancy, infant mortality, preventable deaths, etc.). It is precisely its inefficiency that explains why it is so costly (inefficiency which resulted in a decline in life expectancy between 2014 and 2017 under the effect of the opioid crisis, fuelled by the greed of pharmaceutical companies, and by a loss of 1.15 years under the effects of Covid-19, wiping out ten and a half years of gains in life expectancy in 2020<sup>12</sup>). Life expectancy is higher in most OECD countries than in the United States, including in countries such as Greece, which spend less than half on health care.

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12. Andrasfay and Goldman (2021).

As much as the American health system fuels economic growth, it also weakens Americans' health and therefore ultimately the productivity of their labour: it will therefore end up exhausting the sources of long-term economic growth, namely population and its productivity. The focus of the Biden administration on a re-foundation strategy, relying on an extensive definition of infrastructure (including, rightly, social infrastructure, such as education and health care), marks a radical departure from the trickle-down economics strategy of the Trump administration, which resulted in toxic growth fuelled by inequality and corporate profits.

The real question is therefore not whether social policy can be sustained with less or even no GDP growth, but whether growth policies themselves are sustainable and even economically rational, given that they can lead to exhaustion of the two long-term growth determinants, which are labour productivity and population.

In light of the Covid-19 pandemic, it is even clearer that economic growth needs the welfare state more than vice versa. But don't we need additional growth to finance the ecological transition?

## 5. The perilous illusion of 'green growth'

The question raised in the previous section regarding social policy can be extended to the ecological transition: do we not need additional national income to finance the investments necessary for the ecological transformation of productive systems throughout the world ('ecological modernisation'), starting with their urgent and vitally important decarbonisation? Do we not need 'green growth'? The short answer is 'no'.

First, given the current global energy mix (80 per cent fossil fuels, the same as 40 years ago) and existing global warming (1.2 degrees in 2020), each additional unit of GDP growth results in increasingly costly damage to the biosphere and therefore to human well-being, so that growth may simply not have time to become green: its exponential ecological cost will cancel and then reverse its expected gains before they can even materialise.

More precisely, the stronger the growth, the faster greenhouse gas emissions will need to come down, which is tantamount to complicating an already rather complicated task. Managing climate transition with GDP as a compass is like trying to grab hold of an object with your hands while continuing to push it further away with your foot.

The Kaya identity (1990) helps us to understand this reality empirically by breaking down the components of the growth rate of energy-related greenhouse gas emissions as the sum of the population growth rate and per capita GDP growth, on one hand, and de-growth of energy intensity and carbon intensity on the other; in other words, between what can be labelled 'accelerators' and 'decelerators' of climate change.

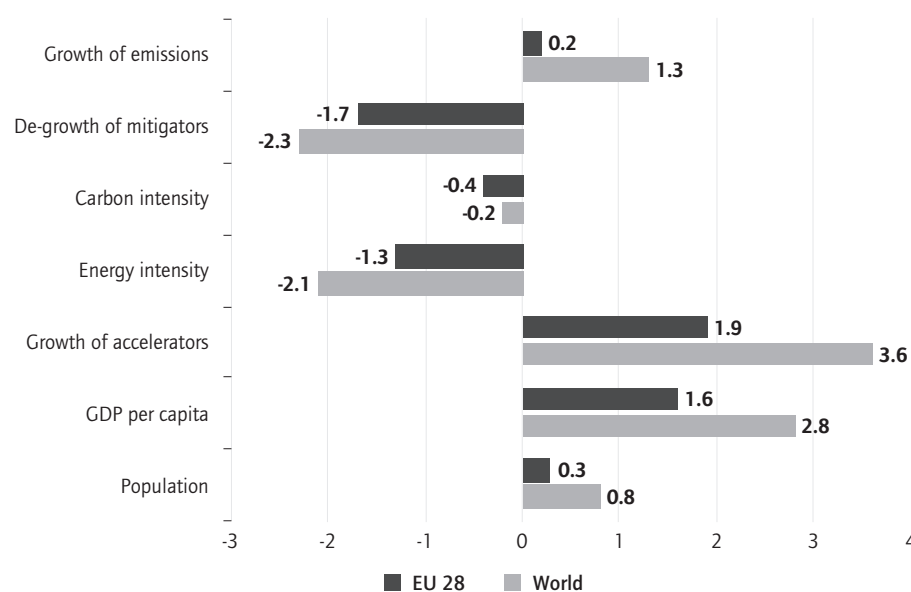
According to Peters *et al.* (2017), if the EU has managed to lower its emissions over the past 25 years, it is mostly thanks to decreased GDP growth: when GDP growth was strong between 1995 and 2005, emissions hardly budged, with GDP growth cancelling progress in energy and carbon efficiency. These two factors have remained more or less stable from 2005 onwards, but GDP growth has substantially declined, allowing for an overall decrease of emissions over the period.

Looking forward, the effort required by the Green Deal appears considerable: between 1990 and 2008, European emissions fell by 11 per cent, then additionally by 15 per cent between 2008 and 2017, but half of this decrease was achieved between 2008 and 2009 because of the Great Recession and the

resulting fall in GDP. Against this backdrop, the Green Deal aims at bringing down the annual rate of emission reduction from  $-0.7$  per cent per year over the past 25 years (outside recession periods) to approximately  $-4.3$  per cent per year from 2020 and until 2050. Any GDP growth during these decades will mean an even sharper drop in emissions.

In 2017 the US Energy Agency conducted a forecasting exercise aimed at quantifying the respective dynamics of each of the Kaya factors. For the world, it concludes that emissions are likely to continue to rise, mostly because of growth in income per capita, while climate science tells us that they should peak in 2020 and then sharply decline to reach zero emissions in 2050 in order to avoid catastrophic climate change beyond 2 degrees of warming (Figure 4).

Figure 4 Kaya identity factors, 2010–2040, world and EU (% per year)



Source: EIA, authors' calculations

The EU is following a similar path: income per capita is the main accelerator of climate change. Without a substantial inflexion in growth rates, there is no chance that the Green Deal targets can be met, but more importantly, climate disaster is very much on the horizon. It does not mean that decreasing GDP is the only solution to the climate emergency, but it does imply that increasing it further rather than decreasing the volume of natural resources consumed in the EU (including carbon) is not compatible with the EU's own goals.

This brings us to the difference between efficiency and policies of moderation. There is a world of difference between aiming at moderation in energy, carbon or more generally material consumption (decreasing the volume of natural resources consumed) and aiming at energy, carbon or material efficiency



(for instance, mitigating climate change by reducing the energy intensity of growth). This is the difference that separates the absolute from the relative: while the first indicators accept biophysical realities as constraints, the second ignore them using GDP growth, which acts as a screen placed in front of the ecological challenge.

The 2018 data from the Global Carbon Project show that while annual CO<sub>2</sub> emissions have doubled in volume, pushed by global GDP growth, since 1970, the carbon intensity of GDP has been halved, from 650 grammes of CO<sub>2</sub> per dollar in 1970 to just over 300 in 2018: the illusion of carbon efficiency is perfect. It is also, ultimately, deadly: human health will not withstand climate disaster. Likewise, there has in fact been no decoupling of GDP and material footprint since 1970, globally or at the European level (Laurent 2021c).

Hence there is a paradox regarding the concept of decoupling: the actual decoupling of growth from employment and household income remains unacknowledged, while the illusory decoupling of growth from environmental damage is affirmed, contrary to all evidence.

Rather than aiming for ‘zero net emissions’ (a concept that relies heavily on virtual technological breakthroughs), the EU, like other major carbon emitters, could more realistically aim for ‘zero net growth’, compensating the phasing out of high-emissions sectors by developing moderation in carbon consumption. In fact, energy transition models based on moderation demonstrate that one can completely disregard GDP in assessing significant job creation or the considerable gains in human well-being (especially health) associated with total decarbonisation of the French or the world economy.<sup>13</sup>

Economic growth appears destabilising rather than stabilising for the welfare state, undermining its financial stability through the progressively unbearable cost of ecosystem collapse to human health. A new social-ecological alliance is needed in the twenty-first century.

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**13.** See the Negawatt scenarios for France and studies published by Mark Jacobson at Stanford University for the United States and the world.

## 6. A new social-ecological alliance for a new century

Times have changed since Richard Titmuss wrote the words used as the opening quotation of this paper. Human domination on Earth has developed to such a point that we are now the agents of the storms, droughts and floods that affect and sometimes ravage human communities all over the planet because of climate change and more generally the ecological crises for which we are responsible. The Anthropocene (or better, ‘Growthocene’, cf. infra) is, in the geological as in the meteorological sense, ‘on our watch’. But conversely we have power over the social consequences of ecological crises we have set in motion.

As Barr (2020) reminds us, we would not need social protection in a world characterised by pure competition and perfect information, especially perfectly rational private insurance behaviour, complete markets and a perfectly fair distribution of economic resources. In all other cases – that is, in the real world – the welfare state is indispensable. If, as Nicholas Stern (2008) put it, climate change ‘represents the biggest market failure the world has seen’, the welfare state is the biggest market failure ‘fixer’ the world has seen.

Remarkably, and too rarely underlined, ecology emerged at the end of the nineteenth century as a domain of knowledge only a few years before the emergence of social protection as public policy (the welfare state was born in 1883 with the law on accidents at work introduced by German Chancellor Bismarck to ‘buy off’ German workers who might otherwise have been tempted by socialism, while in 1868 Ernst Haeckel defined ecology as the science of the relations between living organisms and their organic and inorganic environment).

After the Second World War in the United Kingdom, at a time when the welfare state was greatly expanding thanks to pioneering figures such as William Beveridge, scholars rediscovered the importance of environmental factors in the health of populations (known since Hippocrates), a link that was at the origin of the hygienist policies of the eighteenth and nineteenth centuries, but which had gradually come to be neglected by the first half of the twentieth century. Social policy, highlighted as an academic discipline by Richard Titmuss, was extended as a public domain to environmental issues, most notably by François Laffite, one of Titmuss’ co-authors.

Laffite (Titmuss and Laffite 1963) implicitly conceptualised social-ecological policy when he defined social policy as a policy of the local environment, encompassing not only social conditions of life (family, work, leisure), but also access to environmental amenities, control of urban pollution and all the environmental factors likely to influence the well-being of individuals. In doing so, he extended the realm of protection granted by the welfare state (and before the welfare state, by the state) from civil to social to social-ecological.

An emerging field of ‘the sustainable welfare state’ is now developing, as evidenced by a recent special issue of the journal *Sustainability* (Hirvilammi and Koch 2020) and the survey by Corlet Walker *et al.* (2021), which extend the pioneering work of James Meadowcroft, Ian Gough and others on the link between social policies and climate change (Gough *et al.* 2008). Social-ecological analyses and policies are gaining ground.

A word on etymology – never a trivial topic – is needed here. In the emerging literature on social-ecological analysis and policy, the term ‘eco-social state’ is sometimes found (see, for instance, Koch and Fritz 2014). Eco-social could refer to ‘economic-social’ or ‘ecological-social’, however, given the meaning and historical use of the Greek *oikos* (meaning ‘household’) by Aristotle and Xenophon to define economics, well before it was used to define ecology. For this reason, social-ecological state<sup>14</sup> seems a preferable concept (Laurent 2014). The core mission of this metamorphosed welfare state should be to sustain the social-ecological transition beyond growth.

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14. For a detailed definition of the three functions of the social-ecological state, see Laurent (2021b).

## 7. A social-ecological transition beyond growth: three strategies

Could we imagine a social-ecological transition free from growth? The short answer is: certainly. A preliminary question that far exceeds the scope of this paper might be the following: do we need to end/abolish/destroy/exit capitalism first before any post-growth prospect becomes realistic?

First, ending capitalism is not just hard to realise but also to theorise: there is not a single capitalism, rather a variety of capitalisms co-exist in time and space. On the other hand, economic growth is measured the same way everywhere and going beyond growth has a clear meaning, implying practical institutional steps: erasing GDP from the definition of public policies (and hopefully imaginaries) and replacing it with well-being metrics.

This is all the more necessary as the destruction of the biosphere corresponds to the advent of GDP and growth as collective horizons, not to the advent of capitalism. This is contrary to the ‘Capitalocene’ hypothesis. The Great Acceleration body of empirical work locates the fundamental biospheric disruption post-1945, after GDP became the common currency of development at Bretton Woods in 1944. The Anthropocene is actually the ‘Growthocene’. In 1944, global GDP was 8 trillion dollars. It reached 30 trillion in 1975, rising to 60 trillion at the end of the 1990s and exceeding 100 trillion in the mid-2000s. At each threshold crossed, the ecological damage exploded: destruction of biodiversity, degradation of ecosystems, overconsumption of natural resources and of course climate change. On this front, although the damage to the biosphere before 1944 was not negligible, it was insignificant compared with what has occurred since: cumulative CO<sub>2</sub> emissions amounted to 200 billion tonnes before 1944 and 1,300 billion today (15 per cent as against 85 per cent of the total).

Finally, post-growth and post-capitalism appear to be two different horizons (in other words, the alleged consubstantial nature of capitalism and growth deserves a closer look). Some countries are ‘growthist’ but not capitalist, such as China (the most unsustainable country in economic history), while others, while remaining capitalist, have seen growth almost disappear, such as Japan. Finally, a number of capitalist countries increasingly govern themselves on the basis of well-being indicators (such as New Zealand and Finland). A reconciliation of post-growth and post-capitalism horizons through a welfare state perspective might not be impossible, however: going beyond growth means going beyond the most ecologically destructive form of capitalism in its history.

The key question of this paper remains: how to sustain the social-ecological transition beyond growth without growth? At least three strategies can be implemented to achieve this goal.

In the short term, a first strategy consists of mobilising the reservoir of economic inequalities to foster transition by introducing, at constant GDP, socially compensated progressive ecological taxes based on two tax bases: wealth and CO<sub>2</sub> consumption.

By taxing wealth, past unequal growth would be taxed without the need for additional growth. Likewise, the considerable savings accumulated in the EU by the richest earners during the Covid-19 crisis can be directed towards social-ecological policies or public investments in moderation of energy consumption without the need to increase national income to finance these public investments.

But governments can also choose to directly ‘tax inequality’, that is to say, design and enact progressive social-ecological taxation based on income levels and/or carbon footprints. But, as the ‘*Gilets jaunes*’ protests in France in 2018 show, these taxes should be designed carefully. Environmental taxation is indeed a case in point of an ecological policy that can lead to aggravating injustices by claiming to correct them. Transition must be just or it will just not be. However, designing and implementing just transition taxation policies is simple, inexpensive and independent of growth (see, for the case of France, Berry and Laurent 2019). These policies must start by drastically reducing fossil fuel subsidies to free up considerable resources without additional growth, then tax fossil fuel consumption, then redistribute revenues to compensate vulnerable households based on income and location.

From this first perspective, the political economy of the social-ecological transition is straightforward: while the cost of non-transition is mostly borne by the poorest, the cost of transition should be borne mainly by the richest.

A second strategy would be to finance the social-ecological transition through savings in social spending achieved through ambitious environmental policies aimed at improving human well-being, via health improvement.<sup>15</sup> The Covid-19 pandemic provides indeed a striking illustration of the nexus between preserving the environment, preserving health and preserving the economy that the EU should learn from (see Box).

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15. Apergis *et al.* (2020) find that a ‘1% increase in CO<sub>2</sub> emissions increased health expenditure by 2.5%’, while the WHO has shown that 12 per cent of all deaths in OECD Europe can be attributed to preventable environmental conditions.

### The Covid test

For all the talk about health–economy trade-offs since the Covid pandemic hit, statistical reality has been stubborn: there has been no trade-off between the economy and health since March 2020: either countries have preserved both, or they have hurt both. A recent Molinari Institute Report\* shows that France is the very counter-model of the health–economic double penalty.

But this analysis lacks a third dimension. The real choice of public policy in the face of the pandemic risk opposes, in theory, physiological health to psychological health (integrating the issue of education): emergency lockdown policies implemented to avoid hundreds of thousands of deaths in the EU are policies of de-socialisation which came at an exorbitant cost for well-being, starting with mental health and happiness, which depend on social life and social bonds.

However, here too, the notion of trade-off proves to be misleading. Let's consider for the twenty countries most affected by the pandemic between March 2020 and March 2021 (in terms of deaths per capita) three health indicators: deaths per capita, infections per capita and the severity of lockdown policies, assessed on a scale of 0 to 100. This last indicator is used here as a measure of imposed de-socialisation and, as a consequence, of deterioration in mental health and happiness (Table 2).

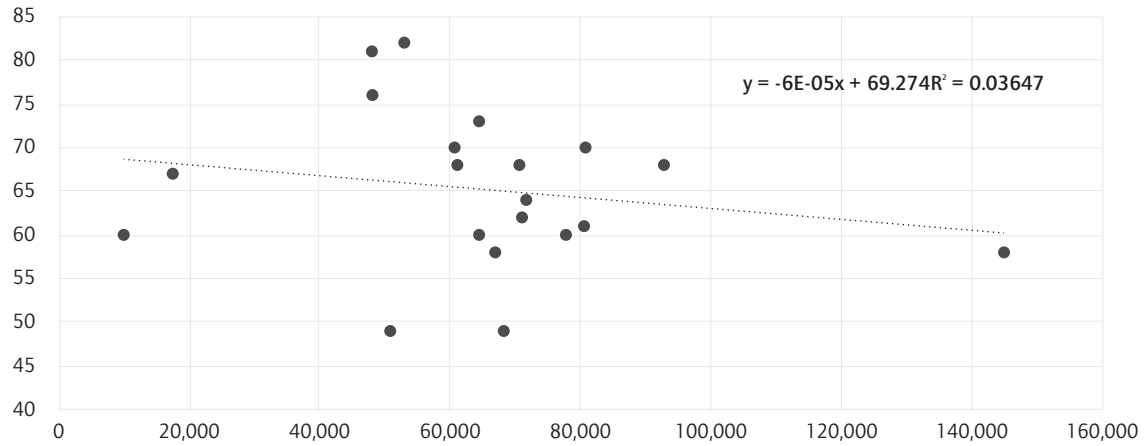
\* Philippe and Marques (2021).

Table 2 Three health indicators of the Covid crisis, March 2020–March 2021

	Cumulative deaths per capita	Cumulative infections per capita	Average stringency index
Czech Republic	253	144,915	58
Hungary	220	71,010	62
Belgium	203	77,742	60
Slovenia	197	9,934	60
Bulgaria	192	50,803	49
UK	191	64,429	73
Italy	183	60,671	70
Slovakia	183	66,899	58
United States	170	92,767	68
Peru	165	47,991	81
Portugal	164	80,745	70
Spain	162	70,602	68
Mexico	162	17,455	67
Brazil	158	61,089	68
Croatia	147	68,211	49
Poland	144	64,432	60
France	144	71,656	64
Sweden	133	80,520	61
Colombia	129	48,075	76
Argentina	126	52,958	82

Source: JHU and Oxford Stringency Index, author's calculations

Figure 5 Number of infections vs stringency index for the 20 most affected countries



Source: JHU and Oxford Stringency Index, author's calculations

We can distinguish two levels of interpretation of these data. Globally, the surprise comes from the overrepresentation of two groups of countries which together represent 60 per cent of the total: on one hand, countries of central and eastern Europe (that seemed largely to have escaped the first wave of Covid); on the other hand, South America countries, whose first wave was only postponed.

For the EU, Covid is like an alarm: two-thirds of the most affected countries are EU members, which means that their high exposure via globalisation (which is largely 'Europeanisation') was not buffered by their health policy responses.

France presents an interesting chiasm between deaths per capita and infections per capita: the country is in sixteenth position according to the first indicator but in sixth position according to the second. This means in particular that France has managed to significantly reduce its infection-to-death ratio, which was among the highest in the world during the first wave. The gap between these two indicators can be interpreted as the gap between the chronic ineffectiveness of health policies in containing infections and the cumulative effectiveness of the health care system in containing their lethality.

More fundamentally, an apparent paradox is emerging: countries which have repressed freedoms the most severely have nevertheless only marginally succeeded in containing infections and deaths (Figure 5), although lockdown policies have proven to be particularly effective in breaking successive waves of the Covid pandemic across the world. This paradox is explained by the timing of containment policies: the countries that were most affected in terms of physiological health were those that allowed infections to explode (inevitably followed by an acceleration of deaths) before having to brutally restrict freedoms, inflicting a double health penalty (physiological and psychological) and also an economic penalty on their populations. France is thus ranked eleventh in the world in terms of the severity of its containment policies, but it was still unable to contain rampant infections during each of the three waves.

In the analysis they offer of their own data for the twelve months from March 2020 to March 2021, the Oxford researchers (Thomas Hale *et al.* 2021) designate six countries that proved unable to design an effective and coherent strategy against

Covid-19 and therefore were tossed from one wave to the other: the United States, the United Kingdom, South Africa, Iran, Brazil and France. We can choose to call them the 'zero strategy Covid' countries (as opposed to the 'zero Covid strategy' countries). Conversely, researchers have highlighted the health and economic successes of countries markedly less well endowed in health care capacities, such as Mongolia, Thailand and Senegal. New Zealand is also worthy of note: its containment policy severity index was 60 per cent lower than that of France since the start of the pandemic, while its per capita mortality has been 300 times lower.

Not only is there no trade-off between health and economics, but there is also no trade-off between mental health and biological health. This is an essential lesson for the future: health, well-being and social cooperation form a whole, so that health-environment policy must become the core of any economy aiming at well-being (Laurent *et al.* 2021).

In this regard, it is high time to shift the debate from the cost of transition to the cost of non-transition and to move from cost-benefit analysis to co-benefits analysis. Curbing air pollution, which could save 500,000 lives per year in the EU, has immediate effects on reducing social spending here and now and in the face of future ecological shocks, such as the Covid crisis.<sup>16</sup> The same applies to noise and its immediate effects on cardiovascular pathologies or food quality and its immediate effects on physiological and psychological health (obesity and diabetes also play a key role in health vulnerability in Europe). When all co-benefits are taken into account, the switch to renewable energies would lead to savings of around fifteen times the cost of their deployment.<sup>17</sup>

The social-ecological transition is a long-term issue but the 'social savings' it will trigger could be immediate and all the greater, the earlier ambitious social-ecological policy is enacted. In fact, a virtuous social-ecological loop without growth could materialise: cutting fossil fuel subsidies and implementing progressive social-ecological taxes could be used to finance de-carbonisation investments, leading to improvements in human health, savings in social spending and additional resources that could be allocated to social-ecological transition, among other things.

A third and last strategy would be to build a robust social-ecological protection system to complement existing social protection.

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**16.** Air pollution resulting from the use of fossil fuels is playing a key role in the health vulnerability of Europeans facing Covid-19, and mitigating air pollution in European cities would bring a key health co-benefit, namely reducing the risk of co-morbidity in the face of multiple ecological shocks, such as respiratory diseases, but also heat waves, which are becoming more frequent and intense on the continent. Researchers have found that 'particulate air pollution contributed to ~15 per cent of Covid-19 mortality worldwide, and 19 per cent in Europe; globally, ~50–60 per cent of the attributable, anthropogenic fraction is related to fossil fuel use, up to 70–80 percent in Europe' (Laurent *et al.* 2021).

**17.** Source: IRENA.



## 8. Building social-ecological protection: the case of old age and heatwaves<sup>18</sup>

Two realities are colliding in the European Union to form a clear and present social-ecological threat: an ageing isolated population and more frequent and intense heatwaves (Laurent 2021c).

According to EU statistics on income and living conditions (EU-SILC), some 13.4 per cent of households in the EU28 were composed of a single person aged 65 or over in 2013. The population and housing census allows a more detailed analysis: 28.5 per cent of the EU28 population aged 65 and over were living alone in 2011.

At the same time, according to EEA forecasts, under the RCP8.5 scenario, extreme heat waves (much stronger than either the 2003 or the 2010 heat waves) are projected to occur as often as every two years on the continent in the second half of the twenty-first century (the projected frequency of heat waves is greatest in southern and south-eastern Europe).

France, especially the east and southeast of the country, happens to be at the crossroads of these two risk factors: the share of isolated elderly people is as high as in some northern European countries, but the latter are not so exposed, while some southern European countries are even more exposed than France, but less sensitive because they have lower share of isolated elderly people.

The combination of exposure and sensitivity was on full display during what remains the most deadly natural disaster to have affected the EU since 1900, the 2003 heatwave, which killed some 70,000 people in a matter of days. Around 15,000 French people died, as the country was highly exposed to extreme temperatures and part of its population highly sensitive (90 per cent of victims were above 65 years old; see Robine *et al.* 2008).

According to the Climate Vulnerability Index 2020,<sup>19</sup> France scores 33, which ranks it fifteenth among the most vulnerable countries in the world, mainly because of human losses, which taken separately rank it eighth in the world (per capita), by far the most affected European country. These figures are

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<sup>18</sup>. This part draws on Laurent (2021d).

<sup>19</sup>. The Global Climate Risk Index 2020 – Who Suffers Most from Extreme Weather Events? Weather-Related Loss Events in 2018 and 1999 to 2018, David Eckstein, Vera Künzel, Laura Schäfer, Maik Winges.

confirmed by the estimates of the European Environment Agency, which records nearly 25,000 victims linked to catastrophic events in France over the period 1980–2019, far ahead of Germany (11,000), or the United Kingdom (3,500).

In fact, according to data collected by EM-DAT, France experienced 180 disasters listed as ‘natural’ between 1900 and 2020, or one and a half per year, on average. Some 94 of these events – or more than half – have occurred over the past 20 years, which have seen on average nearly five disasters per year.

A closer look at these events assessed on the human losses and economic cost they have generated reveals that 80 per cent of the deadliest and most costly disasters since 1900 have occurred since 1999. The six deadliest disasters are all heat waves, as is the most costly.

In recent times, Météo France data show that heat waves are becoming more frequent and increasingly intense in France. There were 41 national heat-wave episodes between 1970 and 2016, including the exceptionally intense episode from 2 to 17 August 2003; two high intensity episodes in June and July 2019; and high intensity episodes from 24 July to 8 August 2018, from 22 July to 4 August 1947, from 9 to 31 July 1983 and from 10 to 30 July 2006. Some 70 per cent of the most intense local heat-waves episode occurred after 2003.

Increasing mortality has accompanied these events. Data from Santé Publique France show that over the past five years alone, the health impact of heat waves has been considerable: during the summer period, excess mortality was 18 per cent in 2015, 13 per cent in 2016, 5 per cent in 2017, 15 per cent in 2018, 9 per cent in 2019 and 18 per cent in 2020 (1,924 and 1,462 excess deaths, respectively, were observed during the 2020 and 2019 summers, with the age group over 75 years’ old being the most affected). Projections from Météo France indicate that more intense heatwaves are among the most predictable climate risks France faces in future decades. Two zones of climatic vulnerability appear clearly: the south-east and the three large metropolises of Paris, Lyon and Bordeaux. The ‘urban heat island’ effect in these cities intensifies heat waves by 1.5 to 2 degrees on average.

In fact, the French authorities have not remained idle in the face of this mounting danger. But their efforts are still insufficient. The 2003 heat wave marked a turning point, with the government taking two major decisions: the implementation of a National Heatwave Plan and the decision to create a new ‘dependency’ risk and branch of the social security system (which eventually became law in 2020).

But these steps would be greatly enhanced by a bold and consistent social-ecological protection strategy. First by revamping the National Heatwave Plan (extending the alert system, upgrading the local vulnerable people registers and so on); second by creating a new insurable risk, ‘vulnerability’ (combining exposure and sensitivity to ecological shocks). A hybrid regime could be

created, in which private insurance would better cover the material risk of the heat wave, while the state covered the health risks. Oddly enough, in order to find inspiration for integrating environmental risk in health insurance, the EU should look to the United States: the small town of Libby (Montana), with around 2,500 inhabitants, has managed to be covered by universal health insurance following asbestos pollution (Section 1881A of the Social Security Act), paving the way for social-ecological protection.

One could also imagine a European extension of national social-ecological protection, with a reinsurance system set up at the European Union level or with a guaranteed minimum for the most modest European households, which would come together with national regimes within the framework of the Just Transition mechanisms of the European Green Deal.

While between 1980 and 1999 the overall cost of storms, floods, heatwaves, cold waves, droughts and forest fires totalled €175 billion in the EU, they amounted to €245 billion between 2000 and 2019, close to one and a half times more. We know for certain that these costs are going to increase much further in coming years. Of these losses today, at best, private insurance covers 25 per cent, on average, in EU countries (60 per cent at best), largely for wealthy households.

Ecological crises are a social risk threatening Europeans' lives and livelihoods, especially the most vulnerable: close to 100,000 Europeans have died because of these increasingly violent ecological shocks in the past four decades, while many more have been driven into poverty or precariousness by losing their homes, property and social networks.

It is reasonable to think that we are facing at least two or three decades of ecological shocks because of the destabilisation of the biosphere in the past six decades. These human losses are going to skyrocket if we do not build adequate collective social-ecological protections. Those social-ecological risks should be pooled in order to reduce their economic cost and social injustice using the same institution that has proven so successful in fostering human development for a century in Europe and so strategic in the face of the Covid crisis. This is the welfare state, which should evolve into a social-ecological state.

## Conclusion: the challenge of going beyond growth without growth

For those who want to do away with growth, perhaps the least time-consuming option is to wait for its natural death. The decline in growth rates in much of the OECD over the past 30 years, and even now in emerging China and India, is an empirical fact. But this option is not viable: as with fossil fuels, growth extraction techniques become more and more destructive as scarcity increases, as the case of France in the past 15 years makes clear: labour laws, tax justice, health and environmental ambition were all mutilated and diluted in the name of an ever elusive ‘return of growth’ (*le retour de la croissance*).

The fact that growth is declining, and even plummeting with the Great Recession of 2009 and the ‘deep recession’ of 2020,<sup>20</sup> makes it harder to go beyond growth because it is taken to justify its never-ending pursuit. Growth is a perilous mythology as much as it is a destructive reality.

But while it is now clear that the rise of GDP in recent decades has obscured the progress of well-being around the world, as well as the viability of the biosphere, it is just as apparent that the decline of growth in 2020 has also obscured the magnitude of the well-being crises of loss of educational opportunities, life expectancy decline and desocialisation. The return of growth will not fix these crises and it will accelerate the destruction of the biosphere.

In the EU, as elsewhere, we must dislodge growth from our institutions, as well as from our imaginaries and engage in a ‘well-being transition’. The need for and desirability of this has never been so strong, nor has our ability to achieve it.<sup>21</sup>

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**20.** There has been a temptation in economic circles to contrast the two recessions, ten years apart: that of 2009 was caused by the mismanagement of the financial markets, while that of 2020 was generated by lockdown policies imposed for health purposes. The first was endogenous, the second exogenous. This is mistaken: the 2020 crisis of the economic system was triggered by the unsustainability of economies sapping their very foundations by destroying ecosystems and the biodiversity that underpin them. The difference between the two crises is that the first was a more superficial economic crisis, while the second is a deep one. The response to this crisis must be as deep as its causes.

**21.** On all these points, see Laurent (2021a).

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