

**The EU's Green Deal:
Bismarck's 'what is possible' versus
Thunberg's 'what is imperative'***

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Working Paper No. 117

March 11, 2020

ABSTRACT

The European Union's Green Deal, a €1 trillion, 10-year investment plan to reduce greenhouse gas emissions by 55% in 2030 (relative to 1990 levels), has been hailed as the first comprehensive plan to achieve climate neutrality at a continental scale. The Deal also constitutes the Union's new signature mission, providing it with a new *raison d'être* and a shared vision of green growth and prosperity for all. Because the stakes are high, a dispassionate, realistic look at the Green Deal is necessary to assess to what extent it reflects 'what is politically attainable' and to what degree it does 'what is required' in the face of continuous global warming. This paper considers the ambition, scale, substance and strategy of the Deal. It finds that the Green Deal falls short of 'what

* The author would like to thank Thomas Ferguson for extremely insightful comments and helpful suggestions to improve and strengthen the paper. The author is grateful to the Institute for New Economic Thinking for financial support (under individual grant #INO18-00015).

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is imperative’ but also of ‘what is politically possible’. By choosing to make the Green Deal dependent on global finance, the European Commission itself closes down all policy space for systemic change as well as for ambitious green macroeconomics and green industrial policies, which would enable achieving climate neutrality in a socially and economically inclusive manner. Hence, Otto von Bismarck would have been as unpersuaded by the Green Deal proposal as Greta Thunberg, who dismisses it as mere “empty words”.

<https://doi.org/10.36687/inetwp117>

JEL Codes: E60; H50; O52; Q54.

Keywords: European Green Deal; green finance; climate transition; green macroeconomics.

1. The European Union's 'man-on-the-moon' moment

The European Union (EU) has done it, or so it appears. Its “Green Deal”, an ambitious rethinking of the European economy, transport, building and energy sectors, unveiled by the European Commission in December 2019, has been hailed as the first comprehensive plan to achieve “climate-neutrality” at a continental scale. It involves a €1 trillion, 10-year investment plan to fund a drastic reduction of the EU’s greenhouse gas (GHG) emissions in 2030 by 55% compared with 1990 — and to realize zero (net) emissions or “climate neutrality” by 2050. The Green Deal has been launched as the new signature mission of the EU and framed as its new “growth strategy”, on the argument that the plan will allow GDP to continue to grow while greening and decarbonizing the economy. The ambitious investment program of €1 trillion is to be financed from leveraged public and private funds and to be channeled into making buildings and transport systems more energy and carbon efficient, and massively substituting renewable energy for fossil fuels. The European Investment Bank (EIB) will be turned into a “climate bank” by offering EU-backed (de-risked) loans to further the green agenda. Ursula von der Leyen, the president of the European Commission calls the Green Deal “Europe’s man-on-the-moon moment” and has outlined a detailed roadmap of more than 50 actions the EU will have to take over the next decade to reach its emissions goal. The first action is to create an EU “climate law” by March 2020 that explicitly commits member states to the 2050 net-zero-emissions target.

The Green Deal has received a mostly warm welcome. A majority of commentators see it as a courageous, bold and even visionary step in the right direction of a prosperous, socially inclusive and environmentally sustainable economy. [Jeffrey Sachs](#) hails it “a demonstration of European social democracy at work. A mixed economy, combining markets, government regulation, the public sector, and civil society, will pursue a mixed strategy, combining public goals, public and private investments, and public support” — which is a remarkable view, as social democratic parties hold only one-fifth of the shares in the European Parliament and only 9 of the 27 European Commissioners belong to social-democratic parties. [Jean Pisani-Ferry](#) calls the Green Deal the Union’s new defining mission, while [Mariana Mazzucato](#), more cautiously, writes that the deal *could* be the most important strategy shift in a generation, if EU leaders succeed in setting a new course for growth, climate change and inequality.

The deal has received a fair deal of criticism as well — predictably, business interests and center-right economists fear the Green Deal will cripple European industries, as the new rules will raise cost of production, the proposed carbon border tax will hurt international trade, and the EU’s moral grandstanding on a go-it-alone transition to a carbon-neutral economy will do nothing to stop global warming from accelerating. Perhaps surprisingly, strong critiques have been voiced by climate scientists, environmental activists and critical economists, to whom Europe’s Green Deal is not ambitious and transformative enough, offering too little, far too late — the Green Deal is a colossal exercise in greenwashing (in the words of [Yanis Varoufakis and David Adler](#)), misses the mark (according to [Greenpeace 2020](#)), and bypasses the poor and helps only the rich (as argued by [Daniela Gabor 2020b](#)). These critics are, in turn, accused of not offering constructive engagement with the Green Deal and, by burning down what is in essence a far-reaching reform of the EU policy orientation, they are accused of promoting fatalism and cynicism — obstructing what is, after all, a major step in the right direction.

Indeed, this is the dilemma: if Otto von Bismarck was right that “politics is the art of the possible, the attainable — the art of the next best”, then the Green Deal does constitute a major advance and all efforts should be concentrated on expanding what is “attainable”.

I am not so sure. First, all the evidence is telling us that ‘business-as-usual’ is over, as the climate emergency is building fast: on present trends, humanity will have exhausted the remaining global carbon budget, which has been estimated to equal to 360 GtCO_{2eq} if the world wishes to limit global warming to 1.5° Celsius (with a probability of 66%), in a decade. Either we act decisively, or we don’t — in which case we have to brace ourselves for the damage coming from runaway warming, and adaptation to climate change becomes a must. Half-hearted tinkering will not bring us anywhere. Second, and more specifically for the EU, Jean Pisani-Ferry is very right: the Green Deal is the new signature mission of the Union, its new *raison d’être*, and a failure to bring about a green and economically inclusive and just transformation of the EU economy cannot but give the project of European unification a fatal blow. In addition, a failure of this deal will discredit fiscal and industrial policy-making, vindicating the views of business interests and center-right economists that the Green Deal is just another incarnation of inefficient Big-Government Keynesianism. The stakes are high, therefore, and a dispassionate look at the Green Deal is needed.

If the Green Deal reflects what is currently attainable, and if we can reasonably foresee, on economic grounds, that it will not bring enough, then we now have to argue for an expansion of the (political and policy) space for change. So it is time for a constructive assessment of von der Leyen's promises in light of the climate reality.

2. Ambition and speed

Relative to what other big emitters (such as the U.S.) have agreed to do, the Green Deal GHG emission reduction target of 55% by 2030 (relative to 1990) is ambitious. The EU-27 take pride in the fact that they managed to reduce annual GHG emissions by 24% during 1990-2020, while growing real GDP by 61%. To put this in perspective: per capita GHG emissions in 2018 are 8.7 tCO_{2eq} in the EU compared to 20.3 tCO_{2eq} in the US. As is shown in Table 1, EU-27 GHG emissions declined by 1.35% per year, driven by energy efficiency growth (of 2% per year) and decarbonization (at a rate of 1.75% per year). This is without doubt an achievement, but one which has to be put in historical context.

From 1990 to 2018, EU-27 GHG emissions were reduced from GtCO_{2eq} 4.91 to GtCO_{2eq} 3.87. Around 40% of this decline (or GtCO_{2eq} 0.4) occurred during the 1990s following the collapse of carbon-intensive manufacturing industries in the new member states in Eastern Europe (see Figure 1A); this constituted a one-off 'gain' (in terms of carbon emission reduction), which will be difficult to repeat. As is shown in Figure 1A, GHG emissions in the 11 Eastern European member states have more or less remained constant (at GtCO_{2eq} 1) during 2000-18. Second, GHG emissions in Ireland, Greece, Italy, Spain and Portugal (IGISP) increased during 1990 and 2008 (by GtCO_{2eq} 2.3) but fell as a result of the Eurozone crisis (by GtCO_{2eq} 2.6 during 2008-14); GHG emissions of IGISP in 2018 are about the same (GtCO_{2eq} 1) in 1990 and 2018. Finally, it is true that GHG emissions declined in France, Germany and the other EU countries (by as much as 22% during 1990-2018, see Figure 1A), but a considerable part of this decline was due to the outsourcing and offshoring of (automotive) manufacturing (also to Eastern European member states). Hence, more than half of the fall in GHG emissions in the EU-27 during 1990-2018 must be attributed to historically contingent factors: the restructuring of Eastern Europe and the deep and prolonged recession in IGISP.

Figure 1A

Actual GHG emissions in the EU-27: 1990-2017

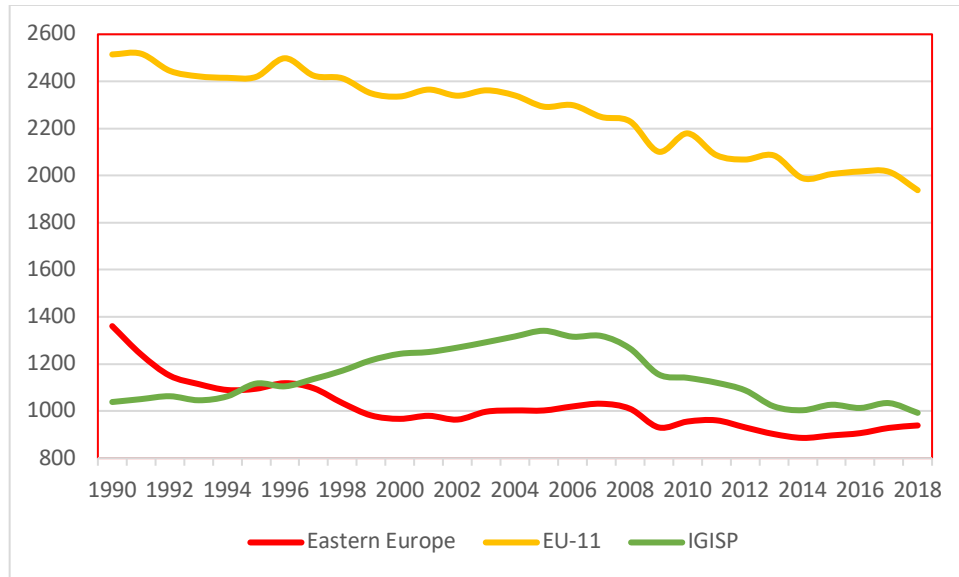
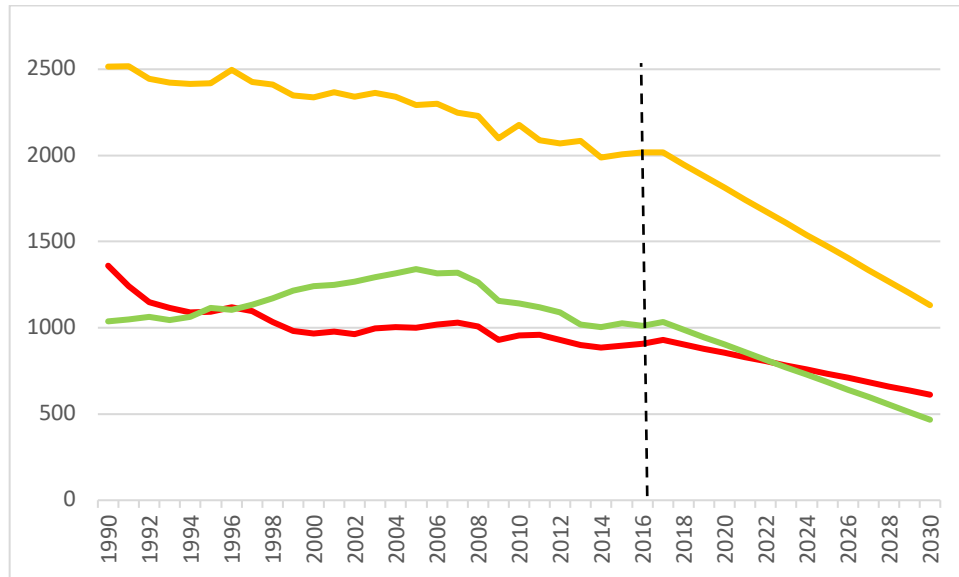


Figure 1B

Actual (1990-2017) and projected GHG emissions (2017-30) in the EU-27



Source: Eurostat database.

Notes: Eastern Europe: Bulgaria; Czechia; Estonia; Croatia; Latvia; Lithuania; Hungary; Poland; Romania; Slovenia; Slovakia. EU-11: Belgium; Denmark; Germany; France; Cyprus; Luxembourg; Malta; the Netherlands; Austria; Finland; Sweden. IGISP: Ireland; Greece; Italy; Spain; and Portugal.

Table 1

The E.U. Green Deal: GHG emission reduction targets for 2020-2030

Green Deal: official GHG emission reduction target = 55% by 2030 (relative to 1990 emissions)				
	EU-27 GHG Emissions	real GDP	energy intensity (of GDP)	carbon intensity (of energy use)
percentage change 2020-30 (contribution)	-41.0	+16.0 (+8.2)	-26.0 (-17.9)	-31.0 (-31.3)
average annual growth rate 2020-30	-5.2	+1.5	-3.0	-3.7
<i>what is necessary:</i> GHG emission reduction target = 65% by 2030 (relative to 1990 emissions)				
	EU-27 GHG Emissions	real GDP	energy intensity (of GDP)	carbon intensity (of energy use)
percentage change 2020-30 (contribution)	-55.0	+16.0 (+6.3)	-26.0 (-13.9)	-45.0 (-46.5)
average annual growth rate 2020-30	-7.5	+1.5	-3.0	-6.0
<i>actual performance:</i> 1990-2020				
	EU-27 GHG Emissions	real GDP	energy intensity (of GDP)	carbon intensity (of energy use)
percentage change 1990-2020 (contribution)	-24.0	+61.0 (+28.9)	-33.0 (-23.0)	-30.0 (-29.7)
average annual growth 1990-2020	-1.35	+2.4	-2.0	-1.75

Notes: The percentage change in GHG emissions during (say) 2020 and 2030, $\hat{E} = \frac{E_{2030} - E_{2020}}{E_{2020}}$, can be decomposed into contributions of real GDP change \hat{Y} , energy intensity change $\hat{\varepsilon}$, and carbon intensity change $\hat{\gamma}$, as follows:

$$\hat{E} = \frac{\varepsilon_{2030} \times \gamma_{2030}}{E_{2020}} \times \hat{Y} + \frac{Y_{2020} \times \gamma_{2030}}{E_{2020}} \times \hat{\varepsilon} + \frac{Y_{2020} \times \gamma_{2030}}{E_{2020}} \times \hat{\varepsilon} \frac{Y_{2020} \times \varepsilon_{2020}}{E_{2020}} \times \hat{\gamma}$$

where E_t = GHG emissions (in Mt CO_{2eq}) in year t ; Y_t = real GDP (in billions of euros in 2010 prices) in year t ; ε_t = energy intensity (= primary energy consumption in Mtoe per unit of GDP) in year t ; and γ_t = carbon intensity of energy use (GHG emissions in Mt CO_{2eq} per Mtoe of energy consumption) in year t . Using the Kaya growth identity ([Schröder and Storm 2018](#)), the average annual growth in GHG emissions can be decomposed into the sum of annual real GDP growth (the scale factor), energy intensity growth (which is the inverse of energy efficiency growth) and carbon intensity growth (which is the inverse of the rate of decarbonization).

Now, to achieve the Green Deal emission reduction target of 55% by 2030, GHG emissions by the EU-27 have to decline by as much as 5.2% per year during the next decade — three times faster than during 1990-2020. The future must be radically different from the past (see also [Schröder and Storm 2018](#)) — as is shown by Table 1 and Figure 1B. To make this work, and assuming that economic growth of the EU-27 will be 1.5% per year during the next decade, the EU members are supposed to step up energy efficiency growth to 3% per annum and more than double the pace of decarbonization (to 3.7%)

The ambition level is commendable, yet it still falls short of what is, according to climate science, needed to prevent the global mean temperature from rising above the safe threshold of 1.5° Celsius (with a probability of 66%). The sad truth is that the Green Deal is woefully insufficient. To see this, let us assume that all OECD countries (including Trump’s US) emulate the EU and reduce their emissions by 55% over the next decade — from more than 16.3 GtCO₂ in 2020 to 7.3 GtCO₂ in 2030. The cumulative carbon emissions during the next decade by the OECD countries alone would amount to around 124 GtCO₂. This would use up *one-third* of the remaining global carbon budget (consistent with limiting global warming to 1.5° Celsius with a probability of 66%). *One-sixth* of the global population (those living in the OECD area) will be usurping *one-third* of the remaining global carbon budget. This would leave not enough ‘carbon development space’ for the more than six billion people in the developing countries, which should be allocated a proportionally larger carbon budget than advanced economies.

The EU-27 have an obligation and the ability to do more. To contribute to keeping global warming below 1.5° Celsius, while maintaining adequate carbon space for the developing countries, the EU should aim for a reduction in GHG emissions of at least 65% by 2030 (as proposed by Greenpeace 2020). To do so, the EU-27 will have to raise the rate of decarbonization to a massive 6% per year (Table 1). Technically this may well be possible, but it requires a deep-rooted structural transformation toward 100% renewable energy of the EU as soon as possible — the ‘binding’ target of achieving a renewable energy share of final energy use of at least 32% in 2030 falls short of what is necessary.

3. Scale of the Green Deal

The European Commission estimates that the EU27 need €260 billion of green investments per year over the next decade to bring down GHG emissions by 40% in 2030. €260 billion amounts to around 2% of GDP of the EU27. The European Commission claims it will spend at least €100 billion on green investment per year (during 2020-2030), in the hope that this will trigger a ‘green investment wave’ by the private sector to make up for the remaining €160 billion. There are three problems with these numbers.

First, the current numbers do not take into account the new stricter target to reduce GHG emissions by 55% (and not 40%). The higher reduction target will undoubtedly require higher capital expenditures. If one assumes a linear relationship between decarbonization and investment, then the investment requirement for a 55% emission reduction target would roughly be around 3% of GDP (or €400 billion) each year. A more ambitious goal to cut GHG emissions by 65% in 2030 would require around 4.5% of GDP, more than € 600 billion, per annum. These higher numbers look more plausible than the €260 billion earmarked by Von der Leyen and co (Pisani-Ferry 2019; Claeys & Tagliapietra 2020; Agora Energiewende 2019). The Green Deal is under-funded.

Second, almost all of the public Green Deal funding is money reshuffled from existing EU funds (around €64 billion per year) or based on national co-financing (to the tune of €11.4 billion per year) or founded on promises to leverage private-sector capital (around €28 billion per annum) by taking away the risk for these investors, whose investments will be guaranteed by the EU budget. Table 2 presents the details. National co-financing is unlikely to involve additional spending (or stimulus), because member states have to stick to the deflationary straightjacket of the Stability and Growth Pact. Valdis Dombrovskis, the European Commissioner responsible for the Green Deal’s investment plan, has made it clear that [he does not want to loosen E.U. fiscal rules](#) in order to incentivize green investment by member states. The Green Deal will generate only € 1.1 billion per year in *new* expenditures by the European Commission under the Just Transition Mechanism (JTM). By way of comparison, the Von der Leyen Commission is about to take a decision to spend [€14 billion on 32 gas projects](#) which are “unnecessary” from an energy security point of view, facilitating a potential overinvestment in gas of tens of billions of euros ([Varoufakis and Adler 2020](#)).

Table 2

Green Deal: Sources of Funding, annual numbers

	euro billions	%- Share
increase in the E.U. budget share allocated to climate & environment	€ 50.3	19%
InvestEU (public and private funds) ¹	€ 27.9	4%
national co-financing	€ 11.4	10%
EU Emissions Trading Systems funds ²	€ 2.5	1%
Just Transition Mechanism (JTM) ³	€ 14.5	5%
sum total =	€ 106.6	40%
Private sector investment	€ 160.0	60%
Total investment	€ 266.6	100%

Source: Claeys & Tagliapietra (2020).

Notes: (1) These funds are to be mobilized by the European Investment Bank (EIB) and national development banks through the creation of a loan facility which (by the provision of an E.U. budget guarantee) *de-risks* selected clean investment projects that meet the eligibility criteria specified by the Commission. (2) The European Commission proposes to devote 20% of the revenues from auctioning of carbon emission permits under the E.U. Emissions Trading System (ETS) to the Green Deal budget. (3) The European Commission pledges € 7.5 billion in new spending for the period 2021-27; this comes down to € 1 billion per year; the rest of the money comes from the European Regional Development Fund, the European Social Fund+, co-financing by member states, and contributions from InvestEU and the EIB.

This reprogramming of already projected expenditures makes it a bit of a stretch to call the Green Deal a ‘growth strategy’, since most of the annual €260 billion green investment is either re-allocated spending (not adding anything to aggregate demand) or based on the ‘wishful thinking’ that the deal will spur €160 billion of additional (new) private-sector investment annually. Out of the €100 billion spent by the Commission, at most €25 billion constitutes *extra* investment per annum (*i.e.* mainly the funds mobilized through InvestEU, the EU-ETS, and €1 billion of JTM spending). If I cautiously assume that also only one quarter of the leveraged private investment (of €160 billion) constitutes additional (not just re-allocated) spending, the demand stimulus provided by the Green Deal would equal €65 billion per year. This would raise the investment-to-GDP ratio

of the EU27 from around 22% to 22.5% (in 2020). If I further assume that the fiscal multiplier takes a value of 1.2 for the EU27, the Green Deal would raise the rate of economic growth of the EU27 during 2020-2030 from 1.5% per year (as assumed in Table 1) to 2% per year (keeping all other factors constant). The growth stimulus is rather limited, therefore, but my estimate is still too optimistic, because it ignores the fact that the transition to a carbon-neutral economy will lead to massive disinvestment and ‘stranded assets’ (in fossil-fuel based industries) and the destruction of large numbers of jobs in extractive industries (coal mining), fossil-fuel energy-producing and manufacturing industries (such as automobiles). True, the Green Deal will be creating new jobs in renewable energy generation, housing stock renovation, public transportation, building and maintaining low-carbon energy infrastructures and in services (more on this below). But the transformation will be upsetting, massive and risky, and the slower the radical restructuring and the reallocation of labor across industries, and the larger the distributional impacts, the higher will be the overall transition costs and the more economic growth will be hurt. The European Commission underestimates the risks involved and takes too narrow a view of the distributional consequences of the Green Deal, which makes it look rather badly prepared to guide the process of structural transformation — and this is careless in view of the already low level of popular support for the climate transition.

4. Substance

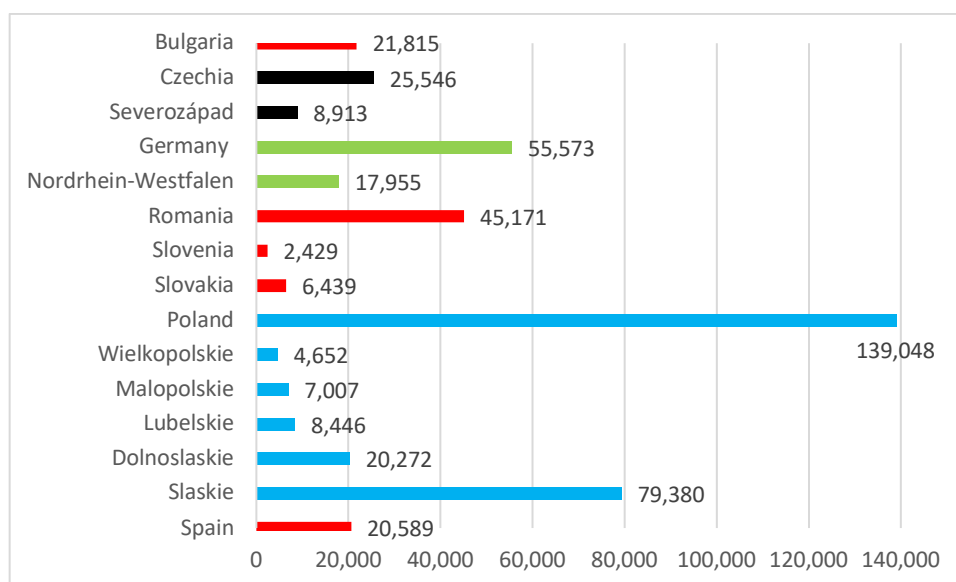
On paper the Green Deal looks impressive: it includes a ‘farm-to-fork’ sustainable agriculture strategy and plans for a carbon-neutral ‘circular economy’; it proposes to start a ‘renovation wave’ to improve energy efficiency of the building stock; it favors the rapid development of renewable energy generation; it proposes a carbon border tax on carbon-polluting foreign firms in an effort to provide space to EU firms to decarbonize; and it wants to reform the EU Emissions Trading System (EU-ETS) and raise carbon prices to make it more effective. All this makes sense, but the capacity to bring about a structural transformation of the EU27 economy and society is compromised by the lack of ambition to bring down GHG emissions, the under-funding of the investment plan, an unwillingness to envision how the green transition can be made to generate significant co-benefits (in terms of job growth, improved health outcomes and a more fair income distribution) and an under-estimation of restructuring costs, distributional impacts and uncertainties. The overly rigid

fiscal policy rules which have been hurting the EU already for more than a decade (Storm and Naastepad 2016), make matters worse.

The problem is perhaps best illustrated by the Green Deal’s “Just Transition Mechanism” (JTM), which was put forward as a “pledge of solidarity and fairness”. The JTM will mobilize €100 billion over 10 years, mostly to support the economic restructuring of the regional coal-producing economies of the EU. However, the €10 billion per year are unlikely to persuade the governments of Poland (which relies on coal for about 80% of its electricity production), Romania, Czechia and Bulgaria, where 56% of all miners work (see Figure 2), to support the Green Deal. Mining jobs in the EU27 numbered 413,254 in 2017 (down from 553,791 in 2011), which amounts to less than 0.2% of EU27 jobs. Polish workers hold one-third of mining jobs in the EU27, mostly in the regions Śląskie and Dolnośląskie. A further 13% of EU miners are based in Germany (in Lusatia and the Ruhrpott-area), 11% in Romania, 6% in Czechia and 5% in Bulgaria (Figure 2). To make a back-of-the-envelope estimate of the ‘compensation’ needed for the job losses resulting from the mining exit, let us consider the German case.

Figure 2

Number of persons employed in mining and quarrying in 2017: EU27



Source: Eurostat database, SBS data by NUTS 2 regions and NACE Rev. 2.

Notes: In 2017, mining and quarrying employed 413.254 workers in the EU27; during 2011-17, the number of mining jobs declined by 140.000. One-third of the mining workers are Polish, 13% are German, 11% are Romanian, 6% are Czech and 5% are Bulgarian.

Germany has more than 55,000 mining workers. Germany’s coal exit commission, consisting of representatives from industry, environmental NGOs, civil society and policymakers, has come to the recommendation that Germany should end coal-fired power generation by 2035. The economic prospects for coal mining regions as well as for coal workers figured prominently in the deliberations of the commission and have led to measures aimed at cushioning the disruptive effects of the coal exit on regional economies, workers and industrial value chains. [Reports in the German media](#) suggest that the affected regions should get some €40 billion in support over the next 20 years — which translates to around € 70.000 compensation per worker. If we lower this estimate by a quarter and assume that a just transition requires €52.500 compensation per East-European worker (for the duration of the transition), then the transition cost would be €75 billion for Poland and €54 billion for Bulgaria, Czechia, Romania, Slovakia and Slovenia combined.¹ The total transition cost for Eastern European member states alone would amount to €130 billion — which is more than what the JTM will provide and it still leaves out workers and communities in Greece, Spain, Ireland as well as Germany. It is hard to see the JTM as a pledge of fairness and solidarity, as it falls short of what will be needed to shoulder the social restructuring cost of the climate transition.

5. More on substance

What is more important than the under-funding of the JTM, is that the Green Deal defines a ‘just transition’ narrowly as providing compensation to coal- or mining-dependent regions, workers and firms, while neglecting the considerable transition costs that will occur in the rest of the economy. The Green Deal will lead to the destruction of jobs in ‘brown’ industries, broadly defined as carbon-intensive industries (*e.g.* car manufacturing and manufacturing of basic metals) and sectors related to extraction and processing of fossil fuels. The good news is that the most carbon-intensive

¹ EU funding for the coal transition in Romania, intended to pay for ‘reskilling’ miners and diversify local economies, has been mostly captured by decarbonization firms, with close connections to Romania’s political elites; private investment and jobs in new economic sectors never actually materialised (Gabor 2020b). There is also [evidence of fraud with EU funds](#) for infrastructure investments, which suggests (national and EU) institutions responsible for recycling the climate transition funds are weakly protected.

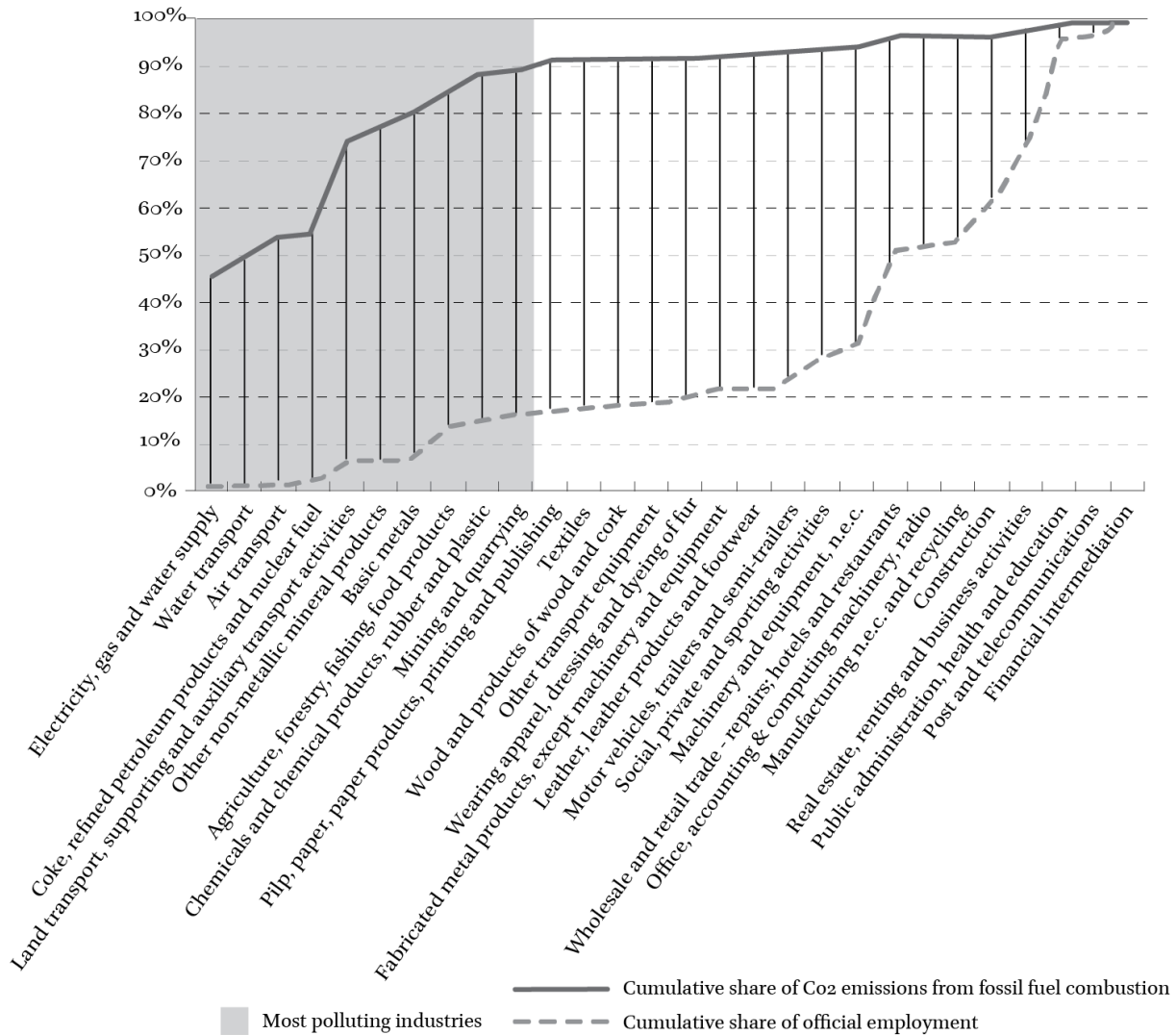
industries employ relatively few workers compared to their economic output. As is illustrated by Figure 3, the ten most carbon-intensive industries in the EU-25 account for almost 90% of all CO₂ emissions, but for only 14% of total employment (OECD 2017). ILO (2018) estimates for a 2°C global warming scenario suggest strong negative impacts of the climate transition on “brown sectors” that are assumed to decrease their workforce between 11% (extraction of gas and petroleum) and 19% (coal-powered electricity generation) compared to a business-as-usual scenario by 2030. If we assume that 15% of “brown sector” jobs will be destroyed between now and 2030 and that this concerns only 14% of all EU27 jobs, then the climate transition will destroy around 4.7 million jobs — of which (direct) mining jobs make up less than one-tenth.

Let us consider automotive manufacturing in greater detail. Moving to electric vehicles (EVs), which feature fewer moving parts and need fewer workers for each car produced, will on net destroy jobs, with recent [estimates](#) pointing to a (direct and indirect) loss of 410,000 jobs in Germany alone. This would amount to a destruction of *one-third* of all 1.1 million (direct and indirect) automotive jobs in Germany. Based on this estimate, the shift to EVs may destroy around 1.1 million middle-skilled and well-paying jobs in the EU27 (particularly in France, Poland, Romania, Austria, Italy and Spain). True, the estimate is likely too high; an alternative and much lower estimate is a [loss of 132,000](#) jobs in the EU as a whole. But still, what, if anything, does the Green Deal promise these workers in terms of ‘solidarity and fairness’?

To be clear, the job destruction is only one side of the transition. The shift to EVs will reduce employment in automotive industries, but it will create jobs in building the (fast) charging infrastructure and in producing EV components and batteries (which are now mainly imported from China). The climate transition — when managed properly — will create new jobs, in renewable energy generation, housing renovation, and transport. According to a recent report by ILO (2018), the economy-wide job growth in the EU during 2020-2030 will exceed the job destruction by around 2 million jobs.

Figure 3

Cumulative employment and CO₂ emissions in 2005, EU25



Source: OECD (2017).

Fast and deep structural change to a carbon-neutral economy will create ‘winners’ and ‘losers’ on a scale not seen before — and there is no reason to expect that it will be a stable restructuring process, if we leave it to the proverbial market forces and private initiative. This is not some evolutionary Schumpeterian ‘gale of creative destruction’, but a deliberate and discrete overhaul of the system, which will lead to an overdose of destruction and a wee bit of creation, if not adequately managed at the macro-economic level. It may still be too early to assess the Green

Deal's approach to macro management of the climate transition, but that there are reasons for concern that the EU is not well prepared to stabilize the restructuring process. Let me illustrate this by looking more closely at two of the Green Deal's flagships: its (un-costed) housing renovation program, aimed at reducing energy consumption of buildings and its 'smart mobility' program.

On the first item, the deal's key objective is to "at least double or even triple" the renovation rate of buildings, which currently is around 1% per year (or the renovation of about 2.3 million houses per year). According to a 2012 study published by the European Commission, the investment needed to reach maximum energy reduction in the building stock is €60 billion per year ([Meijer et al. 2012](#)) — almost a quarter of the Green Deal's annual investment. Most of the energy-renovation costs will be imposed on households and housing corporations, as the Commission is thinking about increasing property transfer taxes for energy-inefficient houses (to be paid by households selling their homes) and imposing minimum energy performance standards on new and existing housing stock (which is a further cost to households). These measures cannot but hurt the lower-income households more than the richer ones — also because house rents will go up in case housing corporations have to pay for the renovation.

But why use tax incentives and performance standards when the social benefits of a massive EU-funded 'housing renovation wave' would clearly outweigh its social costs? Empirical evidence indicates that for every €1 million of investment in energy renovation in the housing stock, 15-17 new jobs are created. If I apply these numbers to the annual €60 billion housing renovation, this would result in 1 million new jobs in the EU27 ([Meijer et al. 2012](#)). Furthermore, the investments in higher energy efficiency will pay themselves back, because they lead to substantially lower energy costs — meaning lower energy bills for households, especially the poorer ones. Average households in the EU are spending around 7.5% of their incomes on energy, but the poorest 10% of households spend almost 10% of their income on energy, compared to 6% for middle-income households and even less for higher-income households (Agora Energiewende 2019, p. 48). Subsidized (credit for) energy-efficiency renovation for lower-income households is both cost-effective and distributionally progressive. Likewise, households in Central and Eastern Europe spend 10-15% of their incomes on energy, while energy-related expenses take up only 4-8% of household income in northern and western Europe (Agora Energiewende 2019, p. 48). Hence,

much of the cost-effective potential for renovating buildings is located in Central and South-Eastern Europe; these member states currently do not have the policies and the capabilities to encourage large-scale building renovations (Agora Energiewende 2019). Empirical evidence shows that energy saving renovation investment in Southern and Eastern Europe may generate more than 25 new jobs for every €1 million of investment (Mikulić, Rašić Bakarić & Slijepčević 2017) — which means the potential for the growth of green jobs is exactly where households are poorer and unemployment is highest.

When it comes to transport (which accounts for a quarter of the EU’s carbon footprint), the aim is to cut emissions by 90% in 2050 (compared to 1990). The Green Deal talks a lot about ‘sustainable smart multi-modal mobility’, but appears to focus mostly on private (road, aviation and waterborne) transportation and (high-speed) railways. The emphasis is on building charging and refueling infrastructures for the 13 million zero- and low-emission (mostly private) vehicles expected to be on Europe’s roads by 2050. The Commission further proposes more stringent air pollutant emissions standards for combustion-engine cars and vans to “ensure a clear pathway from 2025 onwards towards zero-emission mobility.” Germany’s Bundesminister [Peter Altmaier](#) has already made it clear that he is strongly against stricter norms for Germany's car manufacturers.

Unfortunately, there is little mention of smart *public transport* by (zero-emission electric) buses, trams and light-rail. This is a missed opportunity: one million euros spent on public transportation are found to generate about 17 to 31 jobs ([ILO \(2019\)](#)) and it is one of the fastest cost-efficient ways to decarbonize people’s daily mobility. On top of this, smart public transport is good for public health as well (more on this below). EVs are relatively expensive and out of reach for most households (Gaddi and Garbellini 2020, Table 10). In the European market, only 200,000 EVs were sold in 2018, or 1.5% of total car sales. The strategic emphasis on private car transport and infrastructure is distributionally regressive; driving around in expensive Tesla’s will remain a privilege for high-income Green Party voters who have enough income to delink their mobility from carbon emissions. It will not help the majority of people to have adequate decarbonized mobility. A massive expansion of (low-price or free) public transport systems is the obvious way to go. It will not just enable mobility and reduce GHG emissions, but also generate jobs. Indeed, a doubling of public investment in public transport may create around 1.5 million extra jobs in the

EU in the next decade ([ILO \(2019\)](#)) — the question is: how this investment is to be financed — especially for thinly populated rural areas?

Rapidly phasing out fossil fuels in power plants (burning coal), industrial facilities, buildings and vehicles will improve air quality by reducing ambient air pollution — through reducing emissions of particulate matter, nitrogen dioxide (NO₂), and ground-level ozone — and this could reduce premature deaths in the EU27 by [300,000 persons](#) each and every year and also drastically lower morbidity, lost working days, and healthcare care (Boyce 2020). The relatively high additional mortality in Europe caused by air pollution is “explained by the combination of poor air quality and dense population, leading to exposure that is among the highest in the world” (Lelieveld *et al.* 2019, p. 1593). Much of this has to do with burning coal. [Thirty-three of the 50 most polluted towns in Europe are in Poland](#), where burning coal is deemed ‘patriotic’ by the government.

In a back-of-the-envelope calculation, using the official EU default value of € 3.387 million for the value of a statistical life (VSL), an in itself dubious concept to put a euro-value on human mortality, I estimate that the “co-pollutant cost of carbon” in the EU27 would amount to €1 trillion per year (see Agora Energiewende 2019, p. 50). Going by this estimate, the co-pollutant cost of carbon in 2020 comes to €280 per ton of CO_{2eq}, which in a sense is still a conservative estimate of the here-and-now health benefits of cutting emissions, because it does not include the costs of non-fatal illnesses.² Note that the co-pollutant (mortality) cost of GHG emissions is more than five times higher than the social cost of carbon corresponding to the official EU emission reduction target of around €50 per ton of in 2020 (Pisani-Ferry 2019).

More conservative estimates by the European Commission suggest that meeting the 2030 emission reduction targets would reduce *annual costs* related to illness and premature death by more than €136 billion — which implies a co-pollutant cost of carbon of €36 per ton of CO_{2eq} in 2020. The yearly Green Deal budget €100 billion pales even in comparison with these numbers, which considerably underestimate the mortality and morbidity costs of burning fossil fuels. It follows that

² If I use the lower estimate of estimate of air-pollution-related mortality by the European Environmental Agency (of 400,000 deaths per year in the EU28), the co-pollutant cost of carbon is €170 per ton of CO_{2eq} in 2020. The avoided mortality cost then amounts to €0.5 trillion per year.

the switch from fossil to clean renewable energy sources ought to be a no-brainer, as it is not just an enormously effective public health intervention ([Lelieveld et al. 2019](#)), but a colossal cost saver as well. The economic logic for phasing out fossil fuels is impeccable. As [James Boyce](#) (2020) sums it up: “Effective and equitable policies to free ourselves from fossil fuels do not pose a threat to our well-being here and now. Instead, climate policy can be a potent tool for building an economy that works better for people as well as for the planet.”

6. Strategic reliance on ‘green finance’

The European Commission puts its faith in private finance to fund the climate transition by promoting green capital formation through a favorable regulatory treatment of green finance, de-risking and credit subsidies. This circumlocutory strategy certainly reflects realism; after all, the Commission has no ‘hard power’ for toughening regulation on member states’ energy mixes and housing energy efficiency standards or for raising public investment and carbon taxation. Having lost the battles for tougher regulation and higher taxation and spending, the Commission’s hope is that private finance will do the job of greening the economy. Hence, the idea is to do ‘whatever it takes’ to persuade institutional investors (insurance companies, fixed-income asset managers, mutual funds, *etc.*) to — voluntarily — redirect the trillions of money they are managing to specific activities that are officially labelled as being ‘green’ or ‘sustainable’ according to an official EU Taxonomy.³ Global finance will only do this of its own accord if it serves its interest. What makes these ‘green investments’ attractive for private finance is the fact that such green assets will be *de-risked* through EU subsidies and ECB guarantees to support the liquidity of these assets ([Gabor 2020a](#)). The EU provides a first-loss guarantee, enabling the EIB to fund riskier (climate-related) investment under the heading of the InvestEU program (Watt 2020). To be clear, the EU guarantee is, in fact, a German guarantee — without Germany’s backing, the ECB guarantee would not have much credibility.

³ Private financial investors are increasingly putting their money into assets which meet *Environmental, Social and Governance* (ESG) ratings. The problem is that financial investors can shop around for and cherry pick ratings to green-wash their asset management decisions, because the private ‘for-profit’ ESG ratings providers give widely varying ratings for the same asset; for example, Tesla’s global automotive ESG rating varies from very good (MSCI) to very bad (FTSE) and mid-range (Sustainalytics) (see [Gabor 2020c](#) for an excellent analysis of the issues involved).

The problem with this periphrastic strategy is that it relies heavily on private global financiers — such as BlackRock and Goldman Sachs — who are all waist-deep in fossil-fuel investments and, as large shareholders, have been routinely voting against shareholder motions directing corporate boards to take climate action and to integrate environmental concerns in their activities (Gabor 2020a). The Green Deal will be subsidizing carbon financiers, allowing them to make a profit from the climate transition, rather than holding them liable for the GHG emissions (see [Richard Heede 2017](#)). It is important to note that ‘litigation risks’ have increased enormously in recent times for fossil-fuel financiers, as the damage of climate change continues to mount and increasing numbers of individuals, organizations and even countries are seeking redress through legal channels. The Green Deal offers long-time fossil-fuel financiers a rather easy way out, by providing a cushioned, subsidized exit from fossil-fuel investments toward de-risked ‘green assets’. The Green Deal helps BlackRock and other exponents of ‘brown finance’ to greenwash their images. One doesn’t need a crystal ball to foretell that the EU Taxonomy (of ‘green’ investments) will be watered down under the intense pressure of concerted corporate and financial-sector lobbying.

The new class of highly liquid ‘de-risked’ assets, which will be as safe as German *Bunds* because they are guaranteed by EU taxpayers and the ECB, will be in high demand. After all, the global shadow banking system is permanently short of safe securities, which it can use to collateralize global institutional cash pools (Storm 2018). That is, the ‘de-risked’ assets will further enable the already excessive liquidity preference of global financial investors, who have parked at least \$ 5 trillion in collateralized spaces within the global shadow banking system (see di Iasio and Pozsar 2015, Figure 1), ready for immediate use in privately very profitable, but socially utterly unproductive financial speculation in short-term exotic derivative instruments. The Green Deal thus ‘rewards’ an already malfunctioning global financial system, which manages trillions of euros of investable resources in ways which are socially and environmentally unproductive, and often even cannibalizing on the real economy, rather than ‘punish’ and regulate it in ways which make ‘brown assets’ more expensive and liable for the (environmental, social and economic) damage it is causing. We need private finance to stop funding carbon activities now.⁴

⁴ For the record, public banks are finding it difficult to stop financing fossil-fuel activities as well. The European Investment Bank (EIB), which was still [lending €2.4 billion](#) to fossil-fuel companies in 2018, will continue to support any project added to the EU’s ‘projects of common interest’ list before 2022; at present, more than 50 gas projects could be eligible. Under the [EIB’s new policy](#), energy projects

Incentivizing private finance will not be enough to bring about the fast and just transition to climate neutrality promised by the European Commission — which requires green industrial policies to catalyze and support private-sector investment and learning in zero-carbon activities, and proper management of aggregate demand. For one, mission-oriented industrial policy will be indispensable if the Green Deal is to exploit the considerable potential for energy savings and job growth of large-scale energy-efficiency renovation in buildings. Most EU member states do not have the project development capacity for (standardized) large-scale building renovations — and this needs to be built and massively scaled up. Likewise, mechanisms need to be put in place to support workers to transition to new jobs in housing renovation in terms of search assistance and (on-the-job) training. For another, smart zero-carbon public transport has enormous cost-effective potential for reducing GHG emissions, improving public health, and creating new employment — but this requires building up the (charging) infrastructure, using public procurement (of electric buses, trams and trains) to promote the new mobility model, and investing in the development and demonstration of early-phase (battery) technologies and electro-fuels.

The Green Deal will bring additional funding for high-risk research and innovation projects focused on (industrial) decarbonization technologies, renewable energy sources, 100% hydrogen grids, carbon capture and storage, and (battery) storage technologies — but, while important, this does not yet make an industrial policy.⁵ One issue is that large multinational corporations could, after benefiting from public money, offshore their clean-tech innovations to low-wage countries; indeed, battery production for EVs is currently concentrated in Asia (in China, Japan and South Korea). Green Deal spending should therefore include social clauses, requiring companies to base their production in countries with certain wage levels and labor and environmental legal standards (Gaddi and Garbellini 2019). Another issue is that the Green Deal spending will require European

applying for EIB funding will have to show they can produce one kilowatt hour (kWh) of energy while emitting less than 250 grams of CO₂ (replacing the previous norm of 550 gCO₂/kWh). This means that the EIB could potentially still invest in so-called “low-carbon gases such as biogas and hydrogen. The [World Bank Group](#), while doing a lot of ‘Green-speak’ and touting investments in solar parks and other climate-friendly projects, provided \$21 billion in loans, grants, guarantees and equity investments to support fossil fuel projects, and \$15 billion for renewable energy projects during 2015-19.

⁵ There are signs, including the [plan for a “clean hydrogen alliance” by EU Single Market Commissioner Thierry Breton](#), that the EU is embarking on a more assertive industrial policy approach, with plans to deploy a range of tools, including trade, competition and procurement policies.

planning in order to promote the construction of integrated European value chains (to make the most of economies of scale) and to actively reduce the existing regional imbalances in employment and industrial capabilities between Member States (Gaddi and Garbellini 2019). These tasks cannot be delegated to green financial markets, but require an actual industrial plan — which, so far, is missing. Finally, the industrial plan must include tougher (national) regulation and standards. Regulation should not be regarded as a cost, a hindrance or an obstruction. This is a very static view, and a view which neglects the potential "technology-forcing" impacts of norms, rules, standards which may well force firms to become more innovative; the EU should use this potential in support of the climate transition. As shown by [Grubb and Wieners \(2020\)](#), induced (or ‘forced’) innovation is generally underestimated by economists and policy-makers, but it will play a major role in the fight against global warming.

7. Better sources of funding the Green Deal

The EU’s Bismarckian approach to the Green Deal is perhaps best illustrated by the following comment by European Commissioner [Josep Borrell](#), a leading Spanish social democrat:

“I would like to know if young people demonstrating in Berlin calling for measures against climate change are aware of what such measures will cost them” [...] “and if they are willing to lower their living standards to offer compensation to Polish miners, because if we fight against climate change for real, they will lose their jobs and will have to be subsidized.”

Mr. Borrell’s comment is revealing, because it brings out the Commission’s view that ‘real’ climate action will require massive investments, which can only be financed by raising taxes on and lowering living standards of ordinary citizens. This argument, coming from a social democrat, is not just bereft of any political vision or plan, but it is also disingenuous, because it supposes (and wrongly so) that there are no other sources than higher income taxes for the 99% to finance the climate investment. If Mr. Borrell’s statement reflects the mood in Brussels, it is strikingly indistinguishable from sentiments in Eastern-European Member States, where conservative parties are framing the debate on the climate transition as a hard choice between ‘investments in infrastructure and growth’ versus ‘greening the economy while lowering living standards’. Quite like center-right politicians in Poland, Hungary and Romania, Mr. Borrell deliberately ignores the

considerable potential for job growth, health co-benefits as well as income growth for ordinary citizens. It is not a coincidence that this is the view of a leading European *social democrat*. But let me help Mr. Borrell and conclude my essay highlighting a couple of realistic sources of funding the Green Deal, which do not put the burden on ordinary people nor give preferential treatment to global private finance.

First, fossil fuels are considerably underpriced, as was shown already above by the high mortality and morbidity costs of air pollution (due to fossil fuel use). According to [IMF \(2019\) estimates](#), (implicit) fossil-fuel subsidies by the EU amount to €250 billion per year, and removing these subsidies (e.g. by raising fossil fuel prices) will raise Member States' government revenue by an estimated €100 billion per year (Coady *et al.* 2019). In addition to this, the EU should introduce a carbon tax — [only 10 EU Member States are taxing carbon](#), and only three EU countries (Finland, France, and Sweden) have carbon taxes exceeding €30 per ton of CO₂ (Pisani-Ferry 2019). Coverage is low (generally less than 40% of GHG emissions are taxed) and tax rates are low, so there is scope for mobilizing additional (carbon) tax revenue. Taxing carbon emissions at €75 per ton of CO_{2eq} will generate some €270 billion as tax revenue. Higher fossil-fuel and carbon prices will raise households' energy bills; electricity prices (per kWh) will go up by about 2 eurocents⁶; this will trigger strong opposition, without effective offsetting measures for those households affected most — as is shown by the Yellow Vest protests in France. Hence, a substantial part of the *extra* annual tax revenue of €370 billion has to be devoted to providing financial compensation to the affected (energy-poor) households. If we assume that €200 billion is used for compensation, the EU27 will be left with €170 billion of usable tax income each year (see Table 3).⁷

Second, in the EU27, the profit share in GDP has increased by 2.5 percentage points — from 29.5% of GDP during 1995-1999 to 32.1% in GDP during 2015-19. Corporate market power has been rising ever since the 1980s and the growing 'monopoly capitalism' is showing up in significant increases in corporate profit mark-ups. Even the International Monetary Fund is (slowly) getting

⁶ We assume an average CO_{2eq} emission intensity of electricity supply of 275 gCO_{2eq} per kWh (see [International Energy Agency 2020](#)).

⁷ Let us assume that the EU will use €200 billion per year to compensate one-third, or 64 million, households which are (energy) poor. The compensation then amounts to €3125 per targeted household per year. These households will further benefit from lower energy expenses and cheaper, more accessible (zero-carbon) public transport — and from the job growth in climate-transition activities.

worried, devoting a chapter in its recent [World Economic Outlook \(October 2019\)](#) to the macroeconomic impacts of rising corporate market power. Growing corporate power has led to declining average profit tax rate in the EU27 without any good reason — from 9.6% in 1999 to 8.3% on average during 2015-18. Raising the rate of corporate profit taxation back to the level of the late 1990s (and being tough on corporate tax evasion) will raise annual tax revenues by €55 billion (Table 3). Doing this makes sense: corporations will, without doubt, be major beneficiaries of the Green Deal investment program and industrial policy.

Taken together, these two sources will already generate €225 billion per year. One further source of government revenue would be the much-debated wealth tax. The increase in wealth concentration is unmistakable — private wealth has been increasing at 6-7% per year, with the richest 10% of households in the EU owning 60% or more of national wealth and the top 1% holding around 30%. Economists including [Joseph Stiglitz, Todd N. Tucker and Gabriel Zucman \(2020\)](#) are proposing the introduction of wealth taxes (or capital gain taxes) as a rational way to redress inequality and mobilize public revenue. Already a very modest wealth tax could channel some of the mostly unearned capital and wealth gains into the public coffers to fund the Green Deal. Estimates for the US., by Emmanuel Saez and Gabriel Zucman, suggest that a 2% tax on wealth above \$50 million (as proposed by Senator Elizabeth Warren) would yield some \$250 billion per year, or 1.2% of GDP. The equivalent threshold in the EU would probably need to be lower and more progressive, but let us assume — without going into the complexities of designing and implementing an effective progressive wealth tax system — that a similar wealth tax mobilization could be done in the EU27. This would then generate around €175 billion per year, raising total annual public resource mobilization (in support of the Green Deal) to €400 billion (Table 3). We must note that tax revenues can be increased by a similar amount, even without higher or new taxation, by reducing or eliminating exemptions, loopholes and shelters and reducing (corporate) tax avoidance. Hence, contrary to Mr. Borrell's claim, all this could be done without lowering the living standards of 99% of European citizens — but perhaps Mr. Borrell himself may be on the hook, as this long-time social democrat appears to belong to the 1%, with a reported wealth of [€2.77 million in assets including shares in three companies \(Iberdrola, Bayer and BBVA\)](#).

On top of all the above measures, the European Commission can leverage more funding without begging private financiers for money. Pension funds in the EU27 hold assets worth more than €4 trillion. The European Commission could oblige European pension funds to channel (say) one-fourth of their assets (*i.e.* €1 trillion or €100 billion per year during 2020-30) into officially approved Green Deal activities with the risk-free guarantee of a net return of (say) 4%; the ECB could provide the guarantee in the last instance.⁸

To put this into context: the five biggest Dutch pension funds (with assets of €0.9 trillion) made a 15% return on their investments in 2019; if they continue to make a similar return on three-quarters of their assets and get 4% on one quarter of their funds, their average rate of return will become 12¼%. This way, public money would be used for the common good of (future) pension earners, rather than to provide risk-free returns to the BlackRocks of this world. Public finances should be protected from carbon financiers ([Gabor 2020b](#)). Finally, going against Dombrovskis and decades of fiscal austerity and *Schwarze Null* ideology, EU fiscal rules need to be relaxed in order to give Member State governments the space to manage aggregate demand and support employment during the climate transition. For most EU economies, fiscal multipliers are larger than 1, indicating the effectiveness of fiscal policy instruments. The climate transition will be massively upsetting for decades, with huge, uncertain, distributional impacts — governments will need sufficient policy space in order to be able to guide the restructuring.

Table 3 presents an alternative sourcing of funds for a much larger Green Deal of €500 billion per year during 2020-30, which could help to lower GHG emissions by 60-65% in 2030 (relative to 1990). €500 billion constitutes 3.5% of the GDP of the EU27. Investing this in renewable energy, housing renovation and public transport will create millions of extra jobs, reduce emissions and save hundreds of thousands of lives — each year. Compared to the €250 billion of annual fossil-

⁸ There is a nascent discussion on the appropriate role of central banks, like the ECB, in financing the climate transition. [Martin Sandbu \(2020\)](#) identifies two roles: (1) integrating climate risks into central bank decision-making; and (2) pro-actively using monetary policy instruments to shift resources from ‘brown’ to ‘green’ activities. However, it is not clear why central banks should be at the forefront of funding the green transition, with so much money floating around in the wrong places. Putting the spotlights on the ECB has the effect of putting activist fiscal policy and redistribution in a permanent dark. It allows governments to abscond behind central bankers and forfeit their responsibilities in steering tax-funded public investment in socially and environmentally desirable ways and impose rules on private finance to do the same. See [Peter Bofinger \(2020\)](#) for a similar take.

fuel subsidies paid by the EU and to the (fossil-fuel caused) negative public health externality of €1 trillion per annum, this Green Deal 2.0 is a bargain.

Table 3

Green Deal 2.0: annual sources of funding

	euro billions	%- Share
fiscal resources freed by the removal of fossil-fuel subsidies	€ 100	20%
EU-wide carbon tax of €75 per ton of CO ₂ eq	€ 270	54%
<i>minus</i> compensation payments to (energy-) poor households	- € 200	- 40%
modest increase in corporate profit taxation	€ 55	11%
very modest EU-wide wealth tax	€ 175	35%
leveraging pension funds	€ 100	20%
charging systemic banks an insurance fee	P.M.	
carbon border taxes	P.M.	
Total annual investment	€ 500	100%

Source: Author's imagination.

8. Concluding observations

The predictable response to my €5 trillion Green Deal for 2020-2030 is that it is mere wishful thinking and far beyond what is politically possible — look, EU Member States cannot even reach an agreement on filling a budgetary gap of €75 billion in the EU budget for 2021-2027 (due to Britain's exit). Seen in this Bismarckian way, the current €1 trillion Green Deal does constitute a Big Leap Forward, considerably expanding the boundary of 'what is politically attainable' within the EU. While this may well be true, it sadly will not be enough.

While Mr. Borrell and some of his colleagues in the European Commission worry about the need to choose between 'paying for climate action' versus 'maintaining or raising living standards', the

inconvenient truth is that a transition to climate neutrality is a *condition* for sustainable economic prosperity. A failure to decarbonize and transit to a zero-carbon economy will inflict considerable economic damage, drastically reduce living standards and increase inequality within the EU. Scenarios developed in the [European Commission's PESETA III study \(2018\)](#) show that 'business-as-usual' (meaning global warming in excess of 3°C) will reduce the GDP of the EU (as a whole) by around 2% per year at the end of the century, and in Southern Europe by 4.2% per year. Mortality due to heatwaves is estimated to increase by a factor of 50 and, with one-third of Europeans living within 50 km of the coast, coastal flooding will affect 3 million people every year.

These welfare losses and damages could be reduced by two-thirds by climate action which keeps global warming below 2°C — and even more if GHG emissions are cut so as to keep warming below 1.5°C, which is what a €5 trillion Green Deal could achieve. In addition, when properly managed, this Green Deal would generate massive co-benefits in the form of millions of well-paid jobs, an improved quality of life (because of lower air pollution and lower mortality), and reduced inequalities in mobility, life expectancy, and incomes and wealth. The failure to recognize an existential threat (global warming in this case) for what it is and the incapacity to envision an inclusive strategic response to achieve climate neutrality while improving living standards are, to say the least, not very Bismarckian. We cannot leave it to social democrats such as Mr. Borrell or to conservative governments in Central and Eastern Europe to define 'what is politically possible'.

Despite of all good intentions, the Commission's Green Deal (as it is) will not work, because the Commission decided to work with and through (especially financial) markets, taking what [Gabor 2020b](#) has called a "politics as usual, third-way approach that seeks to nudge the market towards decarbonization." The success of the Green Deal is made dependent on the whims and fancies of a malfunctioning global financial system, subsidizing carbon financiers rather than holding them to account for the (environmental, social and economic) damage they have been causing or enabling by their funding. By choosing to make the Green Deal critically dependent on global finance, the European Commission itself is closing down all avenues for systemic change through tougher regulation, higher taxation and higher spending, as well as for an ambitious green macroeconomics and green industrial policies, which would enable achieving climate neutrality in a socially and economically inclusive manner. Jeffrey Sachs' assessment is completely wrong, in

other words: what ails the EU Green Deal is exactly what troubles the Union in general — an absence of social democracy at work. Public finances should be made to work for the common good and be protected from carbon financiers.

Bibliography

- Agora Energiewende. 2019. *European Energy Transition 2030: The Big Picture. Ten priorities for the next European Commission to meet the EU's 2030 targets and accelerate towards 2050*. Available at: https://www.agora-energiewende.de/fileadmin2/Projekte/2019/EU_Big_Picture/153_EU-Big-Pic_WEB.pdf
- Bofinger, P. 2020. 'Time is ripe for a new ECB strategy.' *Social Europe*, January 6. Link: <https://www.socialeurope.eu/time-is-ripe-for-a-new-ecb-strategy>
- Boyce, James. 2020. 'Freedom from fossil fuels is good for your health.' INET Blog, February 20. Link: <https://www.ineteconomics.org/perspectives/blog/freedom-from-fossil-fuels-is-good-for-your-health>
- Claeys, G. & S. Tagliapietra. 2020. 'A trillion reasons to scrutinise the Green Deal investment plan.' *Bruegel Blog Post*. Link: <https://www.bruegel.org/2020/01/a-trillion-reasons-to-scrutinise-the-green-deal-investment-plan/>
- Coady, D., I. Parry, N. Le and B. Shang. 2019. 'Global fossil fuel subsidies remain large: an update based on country-level estimates.' *IMF Working Paper WP/19/89*. Washington, DC: IMF.
- Gabor, D. 2020a. 'Interview.' *Nachdenkseiten*.
- Gabor, D. 2020b. 'The European Green Deal will bypass the poor and go straight to the rich.' *The Guardian*, February 19. Available at: <https://www.theguardian.com/commentisfree/2020/feb/19/european-green-deal-polish-miners>
- Gabor, D. 2020c. 'The Wall Street Consensus.' *Working Paper UWE Bristol*.
- Gaddi, D. & N. Garbellini. 2019. *Automotive and Electric Mobility*. Report for the European Parliamentary Group GUE/BGL. Brussels. Available at: <https://www.martin-schirdewan.eu/wp-content/uploads/2019/12/Automotive-electric-mobility.pdf>
- Greenpeace. 2019. 'European Green Deal misses the mark.' Available at: <https://www.greenpeace.org/eu-unit/issues/climate-energy/2517/european-green-deal-misses-the-mark/>
- Grubb, M. and C. Wieners. 2020. 'Modeling myths: on the need for dynamic realism in DICE and other equilibrium models of global climate mitigation.' INET Working paper No. 112. New York: Institute for New Economic Thinking. Link: https://www.ineteconomics.org/uploads/papers/WP_112-Grubb-and-Wieners-Climate-Change.pdf
- Heede, R. 2017. 'Carbon producers' tar pit: dinosaurs beware.' INET Blog. Available at: <https://www.ineteconomics.org/research/research-papers/carbon-producers-tar-pit-dinosaurs-beware>
- Iasio, G. di and Z. Pozsar. 2015. 'A Model of Shadow Banking: Crises, Central Banks and Regulation.' Available at: https://pdfs.semanticscholar.org/d643/57308378a875b7020b9a12ff2dc8e88222c1.pdf?_ga=2.62181868.1372838689.1583402783-1141848413.1583402783

- ILO. 2018. *Greening With Jobs. The World Employment Social Outlook 2018*. Geneva: International Labour Organization. Available at: https://www.ilo.org/weso-greening/documents/WESO_Greening_EN_web2.pdf
- ILO. 2019. *Jobs in Green and Healthy Transport. Making the Green Shift*. Report for the International Labour Organization, UNECE and the Transport, Health and Environment Pan-European Programme (THE PEP). Available at: <https://thepep.unece.org/sites/default/files/2019-06/Information%20note%2004%20Study%20on%20green%20and%20healthy%20jobs%20in%20transport.pdf>
- Lelieveld, J., K. Klingmüller, A. Pozzer, U. Pöschl, M. Fnais, A. Daiber and T. Münzel. 2019. 'Cardiovascular disease burden from ambient air pollution in Europe reassessed using novel hazard ratio functions.' *European Heart Journal* 40 (20): 1590-1596. Link: <https://academic.oup.com/eurheartj/article/40/20/1590/5372326>
- Mazzucato, M. 2019. 'Europe's Green Deal could be the most important in a generation.' *Financial Times*, December 11. Link: <https://www.ft.com/content/2f5bbdf6-1aab-11ea-81f0-0c253907d3e0>
- Meijer, F., H. Visscher, N. Nieboer and R. Kroese. 2012. *Jobs Creation Through Energy Renovation of the Housing Stock*. NeuJobs Working Paper D14.2 Available at: http://conference.iza.org/conference_files/neujobs_2014/4.pdf
- Mikulić, D., I. Rašić Bakarić & S. Slijepčević. 2017. 'The socioeconomic impact of energy saving renovation measures in urban buildings.' *Economic Research* 29 (1): 1109-1125.
- OECD. 2017. *Employment Implications of Green Growth: Linking Jobs, Growth, and Green Policies*. Link: <https://www.oecd.org/environment/Employment-Implications-of-Green-Growth-OECD-Report-G7-Environment-Ministers.pdf>
- Pisani-Ferry, J. 2019. 'A credible decarbonization agenda can help strengthen Europe's economy.' Available at: <https://www.piie.com/blogs/realtime-economic-issues-watch/credible-decarbonization-agenda-can-help-strengthen-europes>
- Pisani-Ferry, J. 2020. 'The Green Deal is not just one of many EU projects, it is the new defining mission.' Available at: <https://www.bruegel.org/2020/01/the-green-deal-is-not-just-one-of-many-eu-projects-it-is-the-new-defining-mission/>
- Sachs, J. 2019. 'Europe's Green Deal.' Available at: <https://www.project-syndicate.org/commentary/europe-green-deal-is-global-beacon-by-jeffrey-d-sachs-2019-12>
- Sandbu, M. 2020. 'How central banks should think about climate change. Use monetary power to target the 'green spread' in the market.' *The Financial Times*, March 5.
- Schröder, E. and S. Storm. 2018. 'Economic growth and carbon emissions: the Road to 'Hothouse Earth' is paved with good intentions.' *INET Working Paper No. 84*. New York: Institute for New Economic Thinking. Link: https://www.ineteconomics.org/uploads/papers/WP_84.pdf
- Storm, S. 2018. 'Financialization and economic development: a debate on the social efficiency of modern finance.' *Development and Change* 49 (2): 302-329. Link: <https://onlinelibrary.wiley.com/doi/epdf/10.1111/dech.12385>

- Storm, S. and C.W.M. Naastepad. 2016. 'Myths, mix-ups, and mishandlings: understanding the Eurozone Crisis.' *International Journal of Political Economy* 45 (1): 46-71. Link: <https://www.tandfonline.com/doi/pdf/10.1080/08911916.2016.1159084?needAccess=true>
- Varoufakis, Y. and D. Adler. 2020. 'The EU's green deal is a colossal exercise in greenwashing.' *The Guardian*, February 7. Available at: <https://www.theguardian.com/commentisfree/2020/feb/07/eu-green-deal-greenwash-ursula-von-der-leyen-climate>
- Watt, A. 2020. 'The European Green Deal: will the ends, will the means?' *Social Europe*, January 14. Link: <https://www.socialeurope.eu/the-european-green-deal-will-the-ends-will-the-means>