Business Ethics and Leadership, Volume 6, Issue 3, 2022
ISSN (online) – 2520-6311; ISSN (print) – 2520-6761

Weighing Externalities of Economic Recovery Projects: An Alternative to Green Taxonomies that is Fairer and more Realistic

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Type of manuscript: review paper

Abstract: *Natural and man-made crises and disasters often cause untold destruction, but also provide multiple opportunities for economic redevelopment post the crisis. Like other crises the COVID-19 pandemic has spurred public and private entities to become engaged in significant redevelopment efforts. Policymakers in some countries view these efforts as an opening for not only including other issues such as deficits in infrastructure and the social systems, but also for redefining their political priorities towards a "green economy". While pursuing various policy objectives at the same time is a prudent undertaking, it seems rather questionable that politicians, under the pressure of ecological activism, would evaluate all crisis policy measures by their effect on environmental outcomes. We are seeing this in the European Union (EU) as it is about to couple its Recovery and Resilience Facility (financed through the "Next Generation EU Recovery Fund") with its Green Deal. In the U.S., so far, the Build Back Better package and the American Rescue Plan seem to seek separate evaluation schemes for their different policy fields. The aim of this paper is to evaluate the wide-ranging opinions that exist on the intention to make recovery support contingent on ecological effects: For example, there is the classic Tinbergen Rule which states that for each policy target there must be at least one policy tool; thus, if there are fewer tools than targets, then some policy goals will not ultimately be achieved. Likewise, long-term climate change mitigation can only be achieved with long-term policies that consider and weigh out all externalities. Moreover, embarking on long term recovery plans cannot solely be formulated and implemented on ex-ante definitions of ecological impacts. The paper raises the question whether requesting ecological effects from all recovery programs is just and fair. It contrasts the various options of coupling recovery efforts and climate mitigation with state-of-the-art approaches of valuating multiple externalities: weighing the diverse externalities of policy projects can determine which policy tools to choose. It also demonstrates the downside of a policy that are solely focuses on granting financial support, if not, a project can effectively meet a pre-specified ecological and energy goal as set up by the EU and which ranks recovery projects according to their arbitrary effect on climate change. A wider scope of decision criteria will produce more effective ways to "build back better".*
Keywords: externalities, Post COVID-19, recovery programs, Tinbergen rule.
JEL Classification: D62, I15, I18.

Received: 12 July 2022 **Accepted:** 20 August 2022 **Published:** 30 September 2022

Funding: There is no funding for this research.
Publisher: Sumy State University

Cite as: Bardy, R., & Rubens, A. (2022). Weighing Externalities of Economic Recovery Projects: An Alternative to Green Taxonomies that is Fairer and more Realistic. *Business Ethics and Leadership, 6*(3), 23-34. http://doi.org/10.21272/bel.6(3).23-34.2022.

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Introduction

Externalities are effects on members of a society that are caused by an activity, or a policy measure pursued by another member and whose consequences are not meant to affect them directly. There may be negative effects like air pollution from gas emissions by a production facility or positive effects like community development being fostered through a new road that is built nearby. Since the term "externality" was first used by Pigou (1946), economists and politicians have applied it very widely both in theoretical conceptions and in practical cases. The majority of this was with negative externalities and the overwhelming attitude went to what has been called to have the cost of those consequences "internalized" by their originator, e.g., the business firm that emits the gases. The most recent example is a carbon tax. However, as with any other tax that is levied, the taxing authorities must consider whether it also can produce side effects that may be unwanted, like provoking a transfer of the pertinent production to another region (a negative externality of this tax) or that is wishful, like inducing technological improvements (a positive externality of the tax). So, for evaluating any such decision, a government must also weigh the externalities that are to be expected. There are only very few cases where a policy measure has one effect. And many measures are indeed targeting more than one objective.

The Tinbergen Rule: An Opponent to Multi-Targeting. Wherever authorities resort to multi-target policy measures, they need to tailor the policies to achieve maximum effectiveness with a given budget or minimize spending for attaining the targets. The problem, then, lies with the instruments, as has been shown throughout many countries for the design of agri-environmental policy mixes (Schader et al., 2014). The most important task here is to weigh the environmental impacts and societal costs of agri-environmental policy against each other to provide a basis for economically sound policy design. There may be some instruments at hand, like fiscal policy, grants, and re-dimensioning of space, but an efficient approach will require at least as many policy instruments as targets. This is the essence of what the Tinbergen Rule (1956) spells out, which has been a guiding principle for economists and policymakers for over 50 years. It has been discussed regarding agriculture, waste, health, energy, and climate (e.g., Braathen, 2007; Knudson, 2009).

One new field where the Tinbergen Rule comes into play about sustainable development is central banking, where a consensus has come about which states that central banks cannot ignore climate change (NGFS, 2019). The question is whether addressing climate-related risks and supporting mitigation and adaptation policies fit into central bank mandates and which instruments they should adopt for the purpose (Dikau and Volz, 2021). Pertaining to their operational level, central banks will run the risk that they are supposed to achieve too many objectives and have too few tools. They would need to be equipped with effective instruments to achieve environmental goals without compromising other goals. If they cannot set up a toolkit for, e.g., monitoring the effect of "green investments" on climate change, they might resort to other supervisory instruments - and this fall into the trap of misapplying the Tinbergen Rule. So far, almost all central banks have avoided having their mandate extended to entail a pro-active sustainable development role by, e.g., promoting green investment, as there are indeed concerns that this may cause conflict with other central bank goals, including financial stability (Battiston et al., 2017).

In the relatively small but crucial policy area of conjoining agricultural and environmental targets and in the no less important field of central banking policies, prudent solutions that optimize outcome must follow the Tinbergen Rule. The same prudence should be exercised on the higher levels of policy-making that target climate change and the overall restoration of the economy after the COVID-19 crisis.

Clear-Cut Approaches to Policies on Climate Change? Climate policy is a relatively new area of public policy making and has attracted far more attention than the results it delivers in practice. Researchers have warned early on that the results may be jeopardized, one, by the attitude of trying to meet targets of which politicians believe that they are aspired by citizens, and, secondly, by the methods of policy evaluation (Stripple and Bulkeley (2013). There also is the danger of misinterpretation or misinformation on climate change (Zhou and Shen, 2022). Another reason for concern is the intention of the European Union to couple the Recovery and Resilience Facility https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en) with its Green Deal (https://ec.europa.eu/clima/policies/eu-

climate-action_en). The most visible feature of this entanglement is the intention of the EU Commission to evaluate all crisis policy measures by their effect on environmental outcomes (Sikora, 2021).

By contrast, in the U.S., the Build Back Better package Biden that updates the American Rescue Plan https://www.tpctax.com/insights/the-american-rescue-plan-a-look-ahead-at-build-back-better-economic-recovery-legislation/ follows a different path. Various fields of activity are kept separate from each other. The opposite instruments like fiscal policy, labor market regulation, financing infrastructure projects etc. will be applied independently, and the evaluation schemes will be tailored according to the nature of the projects (Nersisyan and Wray, 2021). Also, while the E.U. just mentions the criteria that a project must observe for receiving financial support, the U.S. government is a distinct preview of how the money will be spent. One part is the "Infrastructure Bill" (see Figure 1).

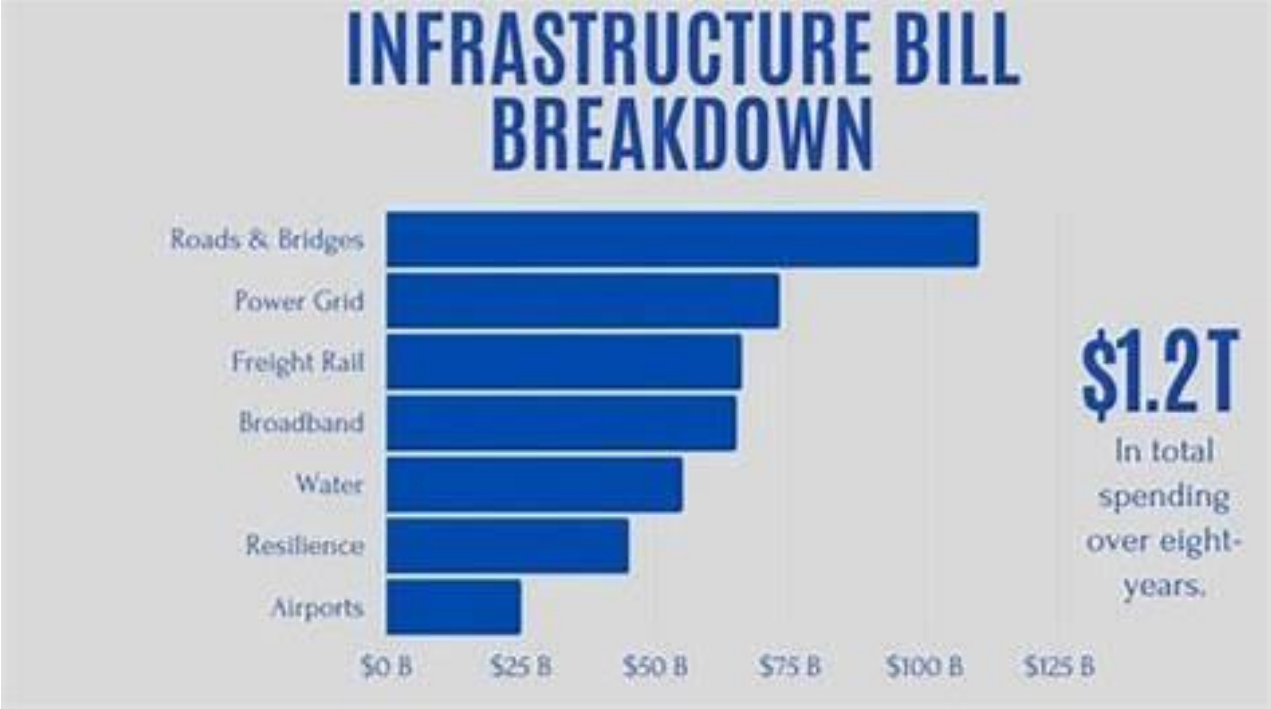

Figure 1. Breakdown of the US Infrastructure Bill

Source: https://www.forconstructionpros.com/

The other part is the "Rescue Plan" which was approved by the US Congress as shown in Figure 2.

	"Phase IV"	"Phase V" Proposals		
	H.R. 133 as Enacted (Dec. 27, 2020)	Biden Proposal (Jan. 14, 2020)	Prior GS Scenario	American Rescue Plan, as Enacted (Mar. 10, 2020)
State fiscal aid	0	370	250	350
Education grants	82	170	170	170
Public health	69	160	160	125
Stimulus payments & child tax credit	169	595	400	520
Unemployment insurance	119	275	200	246
Rental/homeowner assistance	25	35	35	42
Child care	10	40	40	48
Safety net programs	19	20	20	53
Health insurance	-	50	50	103
Business assistance	313	50	50	72
Student loan relief	-	-	-	0
Pension relief	-	-	-	51
Transportation	27	20	20	40
Air carriers	17	-	-	17
Broadband	7	-	-	7
Farm subsidies	13	-	-	9
Eliminate SALT limitation for 2020	-	-	-	0
Other business tax provisions	-	-	-	-70
Federal emergency management fund	-	-	-	50
Other	-	115	105	12
Total cost ($bn/10yrs)	**868**	**1900**	**1500**	**1844**
Total cost (% of GDP)	**3.9**	**8.6**	**6.8**	**8.4**

Figure 2. Breakdown of the American Rescue Plan

Source: US Congressional Budget Office

There is a reason why the EU cannot set up a listing like the one that went through the US Congress: The EU Commission can only issue what is called "Directives", i.e., a framework that must be converted into national law by each of the member states. Still, the framework requests that in all member-states, a quota of 37 % minimum must be reached for "green" projects, and the states may adapt this to country-specific challenges. To that, warnings have been posted, that national executives, using the pretext of subsidiarity which their federal structures allegedly require, will take advantage of the package to pursue their own goals by "exploiting the blindness of the EU and its treaties to federal systems" (Scheller and Körner, 2022).

The paper will discuss not discuss the "politicking" mentioned at the end of the preceding paragraph. It will limit the discourse on (1) the deviation of the EU policy makers from the widely acknowledged Tinbergen Rule and (2) the apparent deficiency in the EU's evaluation scheme of externality consideration. From there, the paper will present alternative ways of dealing with the consequences of the COVID-2109 crisis and the need to respond to climate change. Considering this purpose, the paper does not offer a comprehensive literature review as this would have to encompass many references, e.g., externalities, economic politics and project evaluation. The authors instead wish to formulate a well-founded call for decision-making on recovery and restructuring in the EU.

Tinbergen Revisited: One Single Taxonomy for Evaluating an Overall Program? There is an ongoing debate whether the Tinbergen Rule is still relevant in an interconnected world where one policy instrument used by a distinct government authority, or a rule-setting body, might exert influence on an area far from this institution's realm. The opponents of the rule often go back to the work of Tinbergen (1957), who studied the impact of an infrastructure improvement on the transport cost of existing traffic and the national product. The study showed that the national product could increase substantially beyond the value of the reduced cost of transportation; this difference has been labelled the Tinbergen multiplier. But when examined within the broader context of multimarket welfare analysis, it has been revealed that Tinbergen's result is heavily dependent on the localization of the transport sector within infrastructure and only exhibits a mere spillover phenomenon (Hussain and Westin, 1997).

Among the advocates of the Tinbergen Rule, there are quite a few whose arguments relate to the mandates of central banks. For instance, De la Peña (2021) finds "that the Tinbergen Rule is alive and well" (De la Peña, 2021: 1). He maintains that while the conventional monetary policy does well in counteracting inflation, it is not sufficient to guard against financial instability, e.g., when associated with unsustainable credit expansion. He insists that the optimal policy mix must use two separate tools that focus each on price and financial stability. It has been corroborated by analyses that especially view at open economies (Medina and Roldós, 2018; Kockerols and Kok, 2019). From there, we have a direct path to the EU's leaning on one "green taxonomy" for evaluating recovery and infrastructure projects destined to rebuild the European economies after the crisis caused by COVID-19.

The EU's "green taxonomy" first came up as a part of the EU Sustainable Finance Action Plan (SFAP), a major policy objective by the European Union that aims to promote sustainable investment across the 27-nation bloc. Parts of it will become effective from March 2021, with a longer timeline for the more complex new laws (e.g., https://www.robeco.com/de/unsere-expertise/sustainable-investing/glossary/eu-sustainable-finance-action-plan.html). The actions proposed by the EU Commission respond to five broad strategies that can be defined as 'public incentives', 'standardization', 'disclosure', 'corporate governance' and 'financial regulation' (Busch, D., Ferrarini, G., and van den Hurk, 2021). It was meant to be a broad regulation applying to asset managers, pension funds, EU banks and insurers, among others. A major part of the SFAP is a classification system that was constructed with the intent of working as a tool to identify sustainable investments and sustainable financial products. The taxonomy defines an investment's environmentally sustainable activities, and the taxonomy provides two criteria: (a) Substantial contribution to at least one of the six environmental objectives defined in the regulation and (b) Do no significant harm to any of the other environmental objectives (EU Technical Expert Group on Sustainable Finance, 2019).

The six environmental objectives as defined in the SFAP are:

- Climate change mitigation.
- Climate change adaptation.
- Sustainable use and protection of water and marine resources.
- Transition to a circular economy, waste prevention and recycling.
- Pollution prevention and control.
- Protection of healthy ecosystems.

As said, this was directed toward investors and investment managers. Later on, when the European Green Deal was launched, the taxonomy's criteria were integrated into the Deal's ambitious array of activities that aim at reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels and making Europe the world's first climate-neutral continent by 2050. The Green Deal is to be financed from the EU's seven-year 2021-2027 budget with 1 trillion EUR. Adding to this is the 360 billion EUR in loans and 390 billion EUR from the Next Generation EU Recovery Fund (the EU's "lifeline out of the COVID-19 pandemic"). The fund will operate from 2021-2023 and will also be tied to the EU's regular 2021-2027 budget.

At stake, hence, is total finance of 1.8 trillion EUR in investments, reduction of levies, subsidies, etc., and all of this will be subjected to the criteria of the green taxonomy. The rationale would be that whichever facility is funded from a capital expense to tax allowances, it should contribute to the target of reducing net greenhouse gases. At first sight, this seems highly questionable: One could think of many expenses or investments for rebuilding economic sectors that were diminished by the pandemic where the contribution to climate mitigation or climate change adaption or any other of the six environmental objectives listed above. Take the tourist industry, for instance, where a trend to sustainable tourism has been seen for the last few years. So, the hotels, transport, and excursion-offers are already following the imperative of sustainability. It would not be possible to elevate new investments above the existing level.

Another example is social infrastructure: An increase in wages for health-workers or in hospital capacity cannot be related to any of the six objectives either. At second thought, with a view to the Tinbergen Rule, even if the targets of rebuilding economies and fighting climate change would seem to be somehow compatible, how can one imagine that the two targets be achieved simultaneously by just selecting one investment object? Even the decisions to be made under the EU Sustainable Finance Action Plan have met with criticism − although they only relate to core banking products that have nothing to do with recovery or resilience programs (EBF and UNEP, 2021). Third thought: We are only at the beginning of the programs,

and it remains to be seen whether the EU will stay with this format. One way out could be that instead of trying to evaluate how much a decision for the Next Generation EU Recovery Fund contributes to one of the taxonomy's environmental objectives, the external effects of that decision are taken into account.

An Alternative: Weighing the Positive and Negative Externalities. Externality valuation has become a standard procedure in policymaking, not the least on issues that regard the environment. The quest for monetization can best be gathered from the definition given by OECD (2000): Externalities are about "situations where the effect of production or consumption of goods and services imposes costs or benefits on others which are not reflected in the prices charged for the goods and services being provided". Apart from the production or consumption of goods and services, it is also almost any measure a government inflicts on its citizens that as well causes costs or benefits in areas on which the measure was not meant to have an effect when it was taken. So, when a crisis policy is only evaluated based on environmental outcomes, rebound effects are likely to happen that undo the validity of the green stimulus that was intended. What is needed, therefore, is long-term policies to price externalities caused by the measure (Strand and Toman, 2010). A prominent example relates to sectors linked to air travel: e.g., hotels and restaurants have limited direct emissions but high indirect emissions through tourism and business travel. Stimulus payments aimed at such carbon-complementary sectors may backfire unless accompanied by other measures that account for those externalities (Dwyer et al., 2010).

Everyone does not share the criticism against the EU's unilateral decision-base for evaluating recovery measures. One supportive argument is that the Tinbergen Rule claims that, to obtain an efficient outcome, as many instruments are needed as there are externalities can only be applied to a "first-best world". However, so it is argued, in practice, there are constraints − practical and political − that make perfect fine-tuning through various instruments rather difficult. The example chosen by the supporters of multi-targeting of one policy tool is a carbon tax. If implemented in isolation, the tax might worsen the current recession in the COVID crisis. But, the argument goes, if the proceeds were used to lower labor taxes, the policy could instead alleviate the COVID crisis (Engström et al., 2020). One immediate answer is that while including tax and subsidy reforms such as revenue-neutral carbon pricing in a set of climate policies, subsidies cannot substitute carbon pricing (Helm, 2020), nor should proceeds from carbon taxes be used for purposes other than direct environmental issues, e.g., for incentivizing research on technologies that create carbon-neutral production processes (Venmans, Ellis, and Nachtigall, 2020). Further than that, policymakers have a broader set of instruments at hand indeed, as will be shown in the next section. Each instrument will cause external effects besides the result for which it is targeted. Any dutiful decision-maker would have to consider these externalities before applying the instrument. It would be a very fair process because exploring all the externalities of a project does not leave anyone behind who would be affected by the measure.

Balancing the Policy Approaches to Target Recovery and Resilience. There is no doubt that the challenges for economic policy have become very demanding in the light of climate change and the COVID pandemic. One primary feature is that policymakers face more conflicting goals than ever. So, there is a growing need for theory- and evidence-based economic policy addressing these challenges. What is required are long-term packages of measures that consider interactions between different policy areas. Long-term perspectives demand that all potential consequences of an action taken by a government are accounted for. While the COVID-19 pandemic and climate change have brought about new problems, they have also exacerbated economic problems that have built up all the way. Five of these, in particular, are playing a central role for developed economies like the members of the EU:

- Growing criticism of international trade.
- Increasing doubt about the reasonableness of further economic growth.
- Increasingly complex distributional conflicts.
- Diminishing political scope for policy actions by national governments.
- Increased system competition between market economies and emerging markets.

With climate change and COVID, these problems are not disappearing into thin air, and the pandemic is likely to aggravate, e.g., income inequality, national and corporate debt and growing protectionism. What the five problems have in common is that some fundamental beliefs that have accompanied economic policy for decades are increasingly being called into question. And politicians on all levels, even when laying a primary focus on COVID and climate change, must not only approach the other problems as well; they must measure their decisions in a way that their schemes of evaluation and their choice of instruments are not

called into question either. In the following[1], the nexus will be shown that exists between the five problem fields and the actions that the EU will take on climate change and recovery from COVID. The rationale behind this is that a mere view on the environmental consequences of such actions might worsen the situation in those fields.

(1) International trade is coming under increasing pressure: Hands off from a carbon border tax? For a long time, the international division of labor and the associated foreign trade followed a relatively predictable development. They took the form predicted by the Heckscher-Ohlin model: capital- and technology-rich economies such as Germany and the United States concentrated on the production of capital- and technology-intensive goods. Labor-rich countries like India and China were specialized in products that require many workers to produce, especially low-skilled people (e.g., Bajona and Kehoe, 2010). This labor division resulted in an increase in the real gross domestic product (GDP) in all countries involved. As material prosperity increased, intangible living conditions such as health status, life expectancy and educational attainment also improved. However, these developments have been slowed for several years by at least three trends:

First, the negative income effects of the labor factor are becoming increasingly noticeable in Western industrialized countries. It has been impressively demonstrated by Autor et al. (2013) regarding the impact of Chinese imports on local labor markets in the USA. Second, the classic international division of labor, according to which labor-rich countries like China specialize in labor-intensive manufactured products and capital-rich countries like Germany specializes in capital-intensive manufactured products, is becoming blurred. Since the announcement of the "Made in China 2025" strategy in 2015, it has been clear that the industrialized countries are facing additional competition from emerging economies in the key industries that are important to them.

Finally, the pollutant emissions associated with the transportation of goods over long distances and the negative externalities they cause are increasingly coming into focus. If the associated additional societal costs were to be fully reflected in market prices, this would render many cross-border economic activities that are profitable now uneconomical. The question must come up if this is going to become highly biased when the EU introduces a Carbon Border Adjustment Mechanism to disallow imports of products whose production causes high carbon-dioxide emissions. In an international context, this would only make sense if the levy's proceeds were hypothecated towards low-carbon innovation and channeled towards climate change mitigation and adaptation investments in Least Developed Countries (Burke et al., 2021).

With the intention of the EU to subject all policies to one single "green taxonomy" it seems not very likely that such hypothecating will occur (Marcu, Mehling, and Cosbey, 2020). It might as well be seen as a measure of protectionism and provoke numerous trade disputes. There is another perspective: The COVID pandemic has illustrated how fragile global supply chains can be. In the future, many companies and even entire economies will take greater care not to plan their supply of inputs and end products primarily based on efficiency. Still, they will give greater weight to the risk of disrupting these supply relationships. In individual cases, this may lead to a relocation of production back to, e.g., the EU. Any subsidization through the EU Recovery Fund will likely be disputed under the WTO regime.

(2) The growth paradigm is reaching its limits: Is de-growth an alternative? A cornerstone of economic policy almost anywhere is the goal of ensuring adequate economic growth. There are many reasons for this goal: Economic growth creates jobs and thus income. Economic growth is the basis for high government revenues and, therefore, political room for maneuver. However, the social consensus that economic growth is desirable is increasingly coming under pressure. There are three main reasons for this – all three from the viewpoint of developed economies like, e.g., Germany or the Netherlands:

First, there are doubts that sustained growth is possible at all. It relates to the budget constraints of an economy, above all, the limited nature of natural resources. It also includes the question of whether an increase in real GDP is welfare-enhancing given the ecological costs. Second, there is doubt that economic growth will reach all citizens. Even if it is acknowledged that aggregate income increases, it is doubted that the trickle-down effect works. Finally, there is a fundamental doubt that growing material prosperity actually increases the happiness or satisfaction of individuals in wealthy industrialized countries. In other words, there is doubt that more goods and services increase people's life satisfaction and happiness.

[1] This is based on an exposition by T. Petersen (2020): Fünf Thesen zu den zukünftigen Herausforderungen für die Wirtschaftspolitik [Five theses on the future challenges for economic policy]. *List Forum, 46*(2), 259-268.

Doubting the meaningfulness of the goal of increasing real GDP, in turn, has significant consequences for economic policy. Efficiency is a crucial argument of economists, possibly even the strongest economic argument. However, it loses persuasive power when the associated consequence - maximizing GDP under given restrictions − is no longer the decisive goal of economic policy. Economic policy measures must consequently pursue multiple goals. Here again, what comes into play is the Tinbergen Rule: Pursuing multiple goals is generally not possible with a single economic policy instrument (Tinbergen rule). Consequently, economic policy increasingly requires packages of measures across policy fields to solve practical problems, and the evaluation schemes must be compatible with the problems to be solved. "De-growth" may be a postulate in some ascetic circles of Western countries. But they should be reminded of the situation in the developing world. China claims it is entitled to growth – which has enriched the West for centuries. Do we want de-rich the world?

(3) Distribution Conflicts Become More Complex: Avoid One-Sided Subsidization! The classic distribution conflict between the two factors of production, labor, and capital has existed at least since David Ricardo and Karl Marx. It leads to state intervention in primary distribution, primarily through the tax and transfer system, but also through regulatory intervention. This distribution conflict will increase in the future because digitization will replace labor with capital, data, and technologies in the long term. Also, conflicts between consumers and producers will gain in importance, further complicating the map of distribution conflicts. For example, whether Europe should protect itself against subsidized imports from China with anti-subsidy tariffs arises. European companies affected by Chinese competition (and this concerns not only the owners of capital but also the people employed there) will be in favor of this.

However, European consumers benefit from lower prices and have no interest in making imports more expensive. The same applies to European companies that use these imports as inputs for their production. Another issue concerns how to deal with private offers that are exchanged on platforms. Cab drivers understandably resist Uber's ride services, and hotels resist Airbnb's accommodation services. Consumers, on the other hand, want more of these offerings because for them, that means a larger supply at lower prices, i.e., a welfare gain.

The measures to be applied to recover from the COVID pandemic should not make the lines of conflict more diffuse than they already are. In principle, citizens have a high interest in platform offers and in low-priced imports − but only if this does not affect the industry in which they have their job. In principle, companies have a high interest in open goods markets so that they can sell their products abroad and import inexpensive inputs − but only if these imports do not compete with their products. It also applies to environmental concerns: Citizens are highly interested in protecting nature against damages from climate change – but only if this does not interfere with their economic situation. Likewise, some European governments, creating an unnecessary "concern" regarding improbable risks, wish to ban nuclear power plants and thus eliminate the chances that these might offer for new generations.

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(4) Nation states are losing their ability to shape policy: Basic sovereignties must be retained. Technological advances in the field of transport and communication technologies mean that the temporal and spatial interconnectedness of regions worldwide has increased considerably. As a result, even distant events now affect us more directly and quickly than ever before. The experience of the U.S. real estate and financial crisis from 2007 onward has shown that the collapse of a major bank in the age of globalization can lead to consequential economic damage that occurs worldwide, reaching billions of dollars. The COVID pandemic is further evidence of global dependencies − interrupting global supply chains or the export dependency of individual economies. Globalization and digitalization are generally leading to greater convergence of national economies. As a result, undesirable developments can become a multilateral or even global problem in more and more areas, which then also requires a global solution. For example, Environmental pollution does not stop at national borders. Global negative externalities, therefore, require global internalization. Unilateral measures are possible and necessary, but even if a single country were to pursue an exemplary climate protection policy, it would not be able to insulate itself from the consequences of wrong climate policies in other countries.

These global interconnections have had consequences for economic policy for quite some time. Combating climate change, stabilizing global financial markets, protecting the environment and other global problems call for strengthening international cooperation and enforcing overall global strategies. As a result, all states are to cede individual national sovereignty rights to supranational institutions − the EU is showcasing this. However, an upgrading of the competencies of supranational or intergovernmental institutions inevitably goes hand in hand with a loss of influence and importance of the nation states − a development that politicians acting in their interests want to keep as low as possible. They must also reckon with the rise of populist tendencies that cause a decline in acceptance of international cooperation. In addition to these acceptance problems, there is also a strategic implementation problem: In the case of global solution approaches, there is an excellent incentive for individual states not to participate in this strategy and instead to behave like a "free rider". And it is to be feared that the COVID pandemic will act as a catalyst. As many economies have suffered significant growth losses, it may well be that individual governments will want to give their companies an international competitive advantage with lower corporate taxes and lower environmental protection requirements. Serious conflicts are to be foreseen if the EU ties its measures for recovery to even higher environmental protection requirements.

(5) System competition with emerging economies puts market economies under increasing pressure: The EU should not deepen this diversity by peculiar regulations on "build back". Historically, the classic system competition − market economy versus planned economy − was decided with the demise of real existing socialism. Now, however, there is another competing system, China, which is economically prosperous. One feature that has been neglected in Europe is the platform economy – the Chinese have gained here as a result of European technology support that they have used to their advantage: A look at the 100 most valuable platform companies in the world (measured by the stock market or market value in U.S. dollars, as of April 30, 2020) shows that the Americas have a share of 68%, followed by the Asia-Pacific region (share of 27%). But Europe only has a share of just 3% in this indicator and is thus only just ahead of the 2% share of Africa (Quimba, Rosellon, and Calizo Jr., 2020).

Europe has lost the race for market share in the platform sector because it has trapped itself in a regulatory quandary: In principle, markets are welfare-optimizing without distorting market interventions. Therefore, there is a consensus that subsidies should only be used to internalize positive externalities. But how should EU policymakers react when the U.S. and, to an even greater extent, China support their industries with subsidies, even if there is no regulatory justification for doing so? If the EU does not want its companies to lose out in the global digitization competition, corresponding subsidies may be unavoidable because the competing economies will also put them to use.

These questions also gain importance from experience during the COVID pandemic: The lack of protective masks and inputs from abroad promote the desire for Germany to reduce its dependence on essential inputs and end products. For such production capacities to be established in Germany or Europe, they must be competitive against foreign competition. If this is not the case, government support is needed − subsidies,

tax breaks, or industrial policy interventions. The challenge can be formulated as a provocative question: Can the EU afford to sacrifice the competitiveness of its domestic business location on the altar of pure doctrine if the rest of the world does not adhere to these rules? The parallel to the EU "regulating" the post-pandemic recovery by tying it to improvements in the ecological sphere becomes obvious. The EU should rather dedicate efforts to measuring overall progress in improving the ecological environment. It could become a model for the rest of the world by implementing what Noel laureate William Nordhaus calls Green Accounting (Nordhaus, 2021). This system corrects the traditional economic measures by adequately reflecting pollution and other spillover effects of economic activities in real, accumulative, monetary terms.

Each of the issues (1) to (5) represents a challenge that cannot be met by policies that place a primordial emphasis on *fighting climate change* – which, at least in Continental Europe, often overshadows *mitigating the consequences* of climate change. While climate change is a concern for society, politicians need to balance their instruments carefully. They need to consider the interests of all parties. Otherwise, their measures are neither fair nor practical. If we take the example of what was said under (3) of the above list: Producing welfare losses for the present generation is not fair and trying to determine what the future generation should do (e.g., regarding the use or the ban of nuclear energy), is neither practical nor ethical: They create conflict lines which they will not be able to deal with, and they reduce the future generation's scope of decision-making.

Conclusion

Policies that intend to repair a crisis need to be commensurate with the complete set of emergencies. It applies to the selection of objectives, targets, and instruments. With the COVID-19 crisis, the set reaches from health to social and economic issues. None of the COVID-19 emergencies is directly related to the problems caused by climate change, even though they also have health- and social and economic implications. From a budgeting perspective, it may appear plausible to couple the expenses for a policy measure that regards COVID-19 with one that regards the mitigation of climate-change effects if both measures are executed, e.g., within the area of health. The challenge concerns which instrument to choose and how to evaluate its outcome. From all that has been said here, it does not seem reasonable to choose just one evaluation tool. But this is the case, obviously, with the European Union's ambitious plan to spend 1.8 trillion EUR on recovery projects.

With a view to supporting both the (economic) recovery after COVID-19 and the mitigation of climate-change effects, the European Union's choice, so far, has been to use one single criterion for evaluating various types of projects even though they lie within different areas of policymaking. The criterion would be the effect of those projects on improving the environmental situation. It has met with criticism because it contradicts the long-standing Tinbergen Rule, which claims that a separate instrument should be used for each policy target. Also, this type of policymaking seems to neglect that the need to confront conflicting goals is increasing while the options for resolving them in national policymaking are decreasing. Focusing on allocative efficiency in the areas of environmental and climate impact without accounting for issues of income and wealth distribution and intangible aspects of life is prone to neglect the interest of many societal groups.

It is neither fair nor practical, and politicians should have this analyzed by a widespread collaboration between different scientific disciplines and a greater diversity of research methods. One example of such interdisciplinarity there are recommendations for dealing with the coronavirus pandemic in Germany published in early April 2020 (Abele-Brehm et al., 2020). Fourteen scientists from economics, constitutional law, ethics, and psychology, as well as infection research, pharmacology, epidemiology, and internal medicine, collaborated on these recommendations.

Even when the COVID-19 pandemic has ended, this type of cooperation must be used to answer other questions relevant to economic policy, such as decarbonizing the economy, dealing with the effects of climate change in general, and dealing with increasing migration movements worldwide. Any answer to such a question will exhibit that choosing a solution causes externalities for the sectors not directly targeted by that solution. The only way to deal with this is by determining which these externalities are, which weight has to be allocated to each of them, and how this must be accounted for when implementing the solution.

Author Contributions: Conceptualization: Roland Bardy, Arthur Rubens; data curation: Roland Bardy, Arthur Rubens; formal analysis: Roland Bardy, Arthur Rubens; investigation: Roland Bardy, Arthur Rubens; methodology: Roland Bardy, Arthur Rubens; project administration: Roland Bardy, Arthur Rubens; resource: Roland Bardy, Arthur Rubens; software: Roland Bardy, Arthur Rubens; supervision: Roland Bardy, Arthur Rubens; validation: Roland Bardy, Arthur Rubens; visualization: Roland Bardy, Arthur Rubens; writing-original draft: Roland Bardy, Arthur Rubens; writing-review editing: Roland Bardy, Arthur Rubens.

Conflicts of Interest: Authors declare no conflict of interest.

Data Availability Statement: Not applicable.

Informed Consent Statement: Not applicable.

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