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## Competing for sustainability? An institutionalist analysis of the new development model of the European Union

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# **Competing for sustainability? An institutionalist analysis of the new development model of the European Union**

**Claudius Gräbner-Radkowsch, Theresa Hager  
and Anna Hornykewycz**

# **Competing for sustainability?**

## **An institutionalist analysis of the new development model of the European Union**

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### **Abstract**

This paper explores whether the EU's new economic development model of 'competitive sustainability' could serve as a role model for ecologically sustainable development models for advanced economies in general. To this end, we first discuss theoretically the interplay between 'competitiveness' and 'sustainability' and identify several challenges for combining them. In delineating different interpretations of competitive sustainability, we emphasize that operationalizing the concept requires deliberate design of the institutions governing competition so that it can contribute to sustainability. We substantiate our claim by using input-output data to analyze whether the identified challenges are indeed relevant. We conclude that they are, and finally propose possible solutions.

**Keywords:** competition, sustainability, development, Europe dependency, planetary boundaries

JEL: B52, F55, O20, O44, Q01, Q57

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## 1 Introduction/Motivation

For several decades, economic policy-makers as well as scholars have trusted in measures such as growth and productivity to secure the prosperity of nations. However, the ongoing climate crisis has led many to question these measures as policy goals in themselves. The European Commission, for instance, explicates in their Annual Sustainable Growth Strategy of 2020 that “[a]n economy must work for the people and the planet” (European Commission 2019, p. 1). If economies take environmental limits seriously, a re-thinking of their overall development model becomes necessary. The new European Commission has delineated such an alternative development model, which is meant to address the challenges of climate change and maintain standards of living. At the core of this model lies the combination of two concepts: ‘competitiveness’ and ‘sustainability’. Together, as ‘competitive sustainability’, they are meant to serve as the foundation of the EU’s new development model that puts a special focus on sustainability. First initiatives associated with this new model were the adoption of the European Green Deal and the *Fit for 55 Package*, a set of proposals to revise EU legislation to achieve the central climate goal of reducing greenhouse gas emissions by 55% until 2030.

The aim of the present paper is to critically investigate the concept of ‘competitive sustainability’ and its transformative potential from an institutionalist perspective, and to assess to what extent – and under which conditions – it can serve as a role-development-model for other ‘advanced’ economies by taking both planetary boundaries and social justice considerations seriously. To this end we proceed as follows: in the next section we discuss the conceptual relationship between ‘competitiveness’ and ‘sustainability’ and identify conceptual challenges, which may lead to tangible frictions depending on the operationalization of ‘competitive sustainability’ in actual policy making. The next section highlights the empirical relevance of one such challenge: the potential externalization of environmental costs by some countries to sustain their own sustainability and competitiveness. The final section, then, discusses the implications for how the European development model would need to be operationalized if it was useful as a viable development model for advanced economies.

## 2 Competitiveness, sustainability, and competitive sustainability: conceptual pre-considerations

Aside from a euphonious political slogan, the meaning of ‘competitive sustainability’ is not entirely clear. We, therefore, first discuss the two central elements – ‘competitiveness’ and ‘sustainability’ – and then study their relation and potential challenges in operationalizing the strategy of ‘competitive sustainability’.

‘Competitiveness’ is a malleable concept, the precise meaning of which is subject to political struggles (e.g., Linsi 2020, Gräbner-Radkowsch & Hager 2021). In any case, however, it only makes sense in relation to its underlying process: competition. Competition, in turn, is a social process that involves at least two parties that compete for a (naturally or artificially) scarce good (Altreiter et al. 2020). This interaction is structured by social institutions that provide a mechanism to resolve this conflict in a non-violent way, i.e. by linking the allocation to the relative performance of the competitors according to some (explicitly or implicitly) defined performance measures. ‘Competitiveness’, then, denotes the relative performance capacity of one of these actors and may correspond to an asset, a capability or a property. Thus, ‘competitiveness’ is a *relative* concept: an actor’s competitiveness can only be determined in relation to others, and an increase in the competitiveness of one actor necessarily comes with a decrease in the competitiveness of other actors.<sup>1</sup>

‘Sustainability’ is usually defined as “the quality of being able to continue over a period of time” (“sustainability” 2022). In contrast to their competitiveness, the sustainability of an actor can be determined without reference to other actors – it is an *absolute* concept in the sense that it is not necessarily comparative. On the contrary, increasing the sustainability of one actor usually has a positive impact on *overall* sustainability and does not reduce the sustainability of others. What is more, in the EU policy discourse, the term sustainability is most often used with reference to the sustainable development goals (SDGs), where it is stressed that ‘sustainability’

might, in principle, lead to an improved performance of all actors involved – despite decreasing competitiveness for some.

<sup>1</sup> This, of course, does not imply that the process of competition cannot lead to all competitors being better off through the process of competition: the threat of mutual competition

calls for (globally) *joint* action that centers around the goal to enable the present generation of humans to meet their needs in a way that does not compromise the ability for future generations to do the same. That is, not only does an increase in the sustainability of an actor imply an indirect increase in sustainability of others via overall sustainability – according to current policy discourse, coordination is a necessary precondition to achieve sustainability in the first place.

To summarize, while competitiveness is a relative concept that is based on competition, sustainability is absolute and requires coordination. Thus, it is not readily clear whether ‘sustainability’ and ‘competitiveness’ can be achieved simultaneously and, consequently, whether the combination of the two concepts as ‘competitive sustainability’ is sensible. This is especially relevant in the context of an economic development model that is meant to respect ecological boundaries: while, in this context, the goal of becoming more sustainable *relative* to other countries is not in itself a problem, for ‘competitive sustainability’ to work as an environmentally sustainable development model, it must ensure that its impact is to establish *overall* sustainability. This, for instance, would not be the case if there were feedback mechanisms that benefited countries as they themselves became more sustainable, and if there were simultaneously ways in which one country could increase its own sustainability at the expense of another.

Whether this challenge is relevant in practice depends on how the relation between ‘competitiveness’ and ‘sustainability’ is conceptualized in the concept of ‘competitive sustainability’. There are at least three ways of how this could be done. First, ‘competitive sustainability’ can be understood as ‘*competing in sustainability*’: here, countries try to harness the process of competition to achieve individual sustainability. That is, countries compete with other countries for more sustainability. The second possible reading is ‘*sustainability as competitive advantage*’: here, countries aspire to become more sustainable in order to become more competitive. This link could originate, for instance, from the fact that the production of sustainable products became more economically attractive and sustainable production strategies directly translate into greater competitiveness in the global economy; or from particular institutions, e.g. the legal obligation to pay fees for the emission during production processes. Again, sustainable production strategies would then translate into greater cost competitiveness on international markets. Thus, in all these cases,

greater competitiveness is to be achieved via greater sustainability. In the third interpretation, ‘competitive sustainability’ is understood as ‘*competitiveness despite sustainability*’: here, countries transform their economies toward greater sustainability without jeopardizing their competitive position on international markets. In this sense, competitiveness and sustainability appear as two separate goals; this poses the challenge to address and rule out any trade-off between the two goals.

All the three interpretations can be found in the Annual Sustainable Growth Strategy 2020 of the European Commission (European Commission 2019). For instance, there are passages that clearly suggest the ultimate goal of ‘competitive sustainability’ is greater overall sustainability:

“It puts sustainability – in all of its senses – [...] at the center of our action” (European Commission 2019, p. 1)

Other passages, however, suggest that sustainability is merely a means for greater competitiveness:

“[By] developing new technologies and sustainable solutions, Europe can be at the forefront of future economic growth and become a global leader in an increasingly digitalised world [...]” (European Commission 2019, p. 1).

And yet other passages even suggest the Commission follows the third interpretation in which sustainability and competitiveness are separate goals, e.g., when they emphasize the divergence between rich and poor regions due to technological change and the challenges caused by the energy transition “*unless suitable measures are taken to boost regional competitiveness*” (European Commission 2019, p. 10).

Although the three interpretations of ‘competitive sustainability’ are different in meaning, they have similar implications if one is interested in improving upon overall sustainability: all imply the need for an appropriate institutional framework that incentivizes countries who wish to sustain or improve their competitiveness on international markets to transform their economies toward sustainability. In all cases, however, the combination of ‘sustainability’ and ‘competitiveness’ could, in principle, also undermine the success of such an endeavor if ‘competitive sustainability’ was operationalized in a way that does not incentivize countries

to contribute to *overall* sustainability, e.g., if countries were able to improve their own sustainability at the expense of the sustainability of others. The extent to which this challenge is relevant is an empirical question and depends on the institutions established to manage the competitive process.

### 3 Practical relevance: the case of externalizing environmental stressors

This section studies empirically the extent to which the conceptual challenge just discussed, i.e. the practice of countries to improve their own sustainability at the expense of others and, thereby, to jeopardize the goal of overall sustainability, is indeed relevant and how such practice could be identified. To this end we use data from the multi-regional input output (MRIO) table EX-IIOBASE3 (Stadler et al. 2018), which contains information about the emissions and flows of a wide variety of environmental stressors. For the sake of illustration, however, we focus on the global warming parameter

GWP100, an aggregate measure for negative environmental impacts. In a sustainable development model, countries would need to aim at reducing the *overall* stressors emitted to the environment measured in terms of their global warming potential. In what follows, we compare two different accounting styles and discuss their different implications as well as the consequences for the operationalization of ‘competitive sustainability’.

To begin, we employ the production-based accounting (PBA) approach to country-level environmental stressors, by attributing emissions to the area in which they are produced. Figure 1 presents the corresponding results for countries belonging to the EU28 (including the UK). The following conclusions can be drawn: First, some countries in the EU achieved a relative reduction of environmental stressors, at least compared to 2000, while other countries increased their emissions. Second, the differences in absolute and per capita emissions are notable: countries with a larger population (such as Germany) tend to have higher overall emissions, but smaller emissions per capita. In any case, there are considerable differences among EU countries.

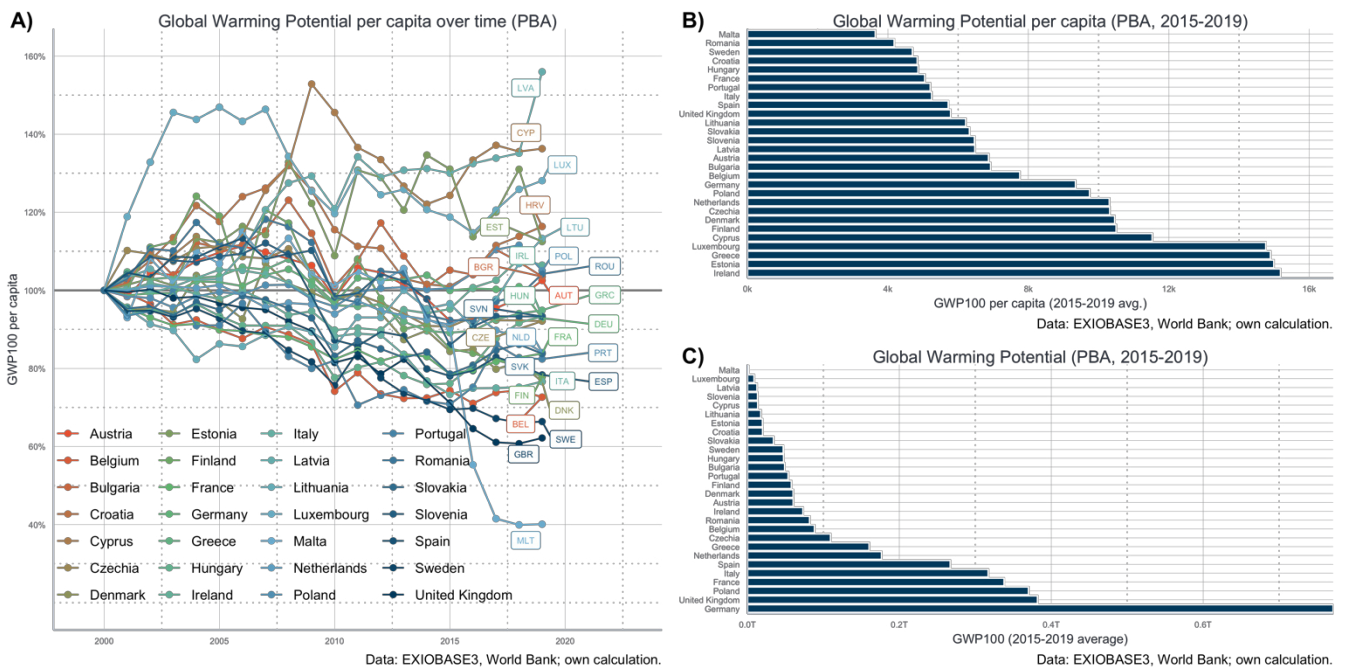


Figure 1: total emissions of the EU28, as measured by the production-based accounting approach. GWP100 is reported as an indicator that measures the energy absorbed by the emissions over 100 years in equivalents of CO<sub>2</sub> emissions.

Adopting a global perspective, Figure 2 aggregates all European Member States into the EU28 category. It shows that some of the actors considered, including the EU28, managed to reduce their overall environmental impact as compared to the year 2000. Aside from the EU28, this includes mainly high-income countries; in several other countries total environmental stressors

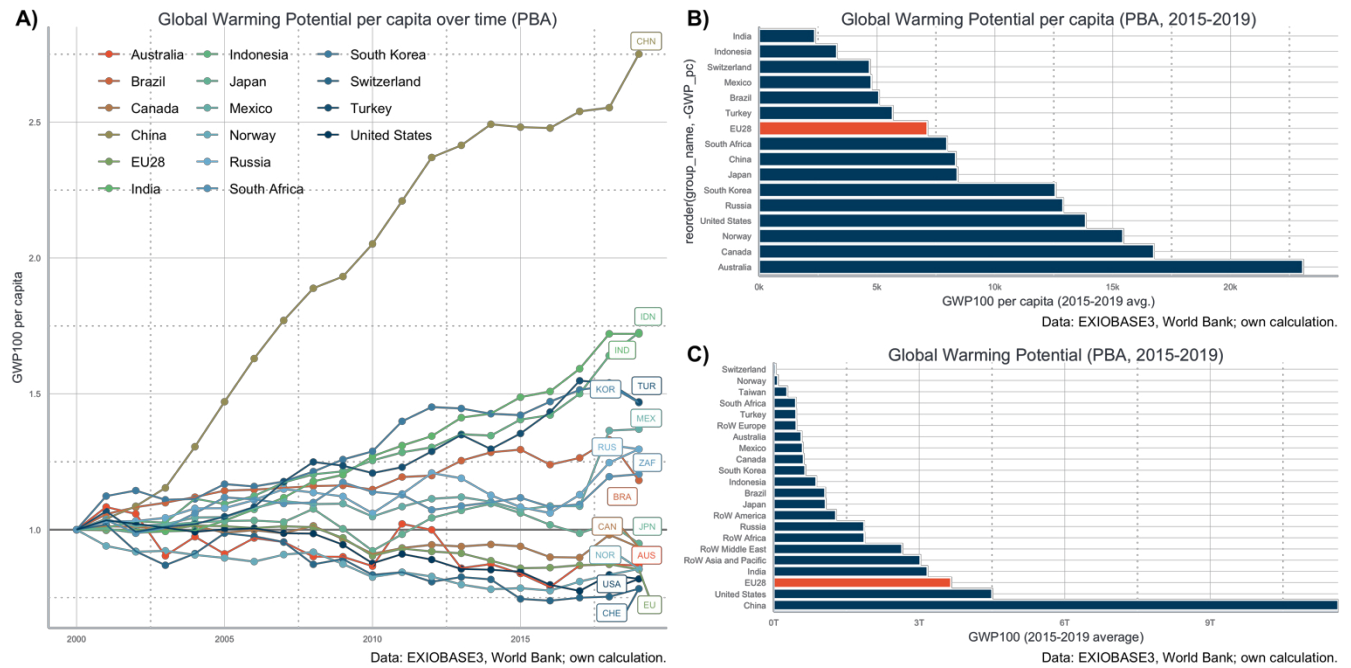


Figure 2: total emissions on a global level, measured by the production-based accounting approach.

While such a view at absolute emissions has been the standard method for accounting environmental stressors, and the default basis for environmental policy design, it has a significant drawback: it cannot capture the strategy of countries to improve their own sustainability at the expense of others by relocating economic activities to other countries and then importing the final goods, thus reducing their own emissions. As argued above, the challenge of the concept of ‘competitive sustainability’ makes it susceptible to such externalizing behavior unless it is adequately institutionalized. To assess whether such behavior has been relevant in the context of the EU (and to outline strategies to identify and prevent it), we use the data from EXIOBASE3 to compute *imported* and *exported* emissions: imported emissions are

have increased. Looking at absolute figures, the EU28 has managed to achieve a lower-middle position in terms of per capita emissions, albeit it ranks third in terms of absolute emissions. This also shows that the EU is a relevant player in addressing the global climate crisis. At all events, the data suggest that at least some advanced countries are on track to reduce their overall impact.

those that occur in other countries for producing the goods and services consumed at home. For instance, if Germany imports wheat from Turkey, the imported emissions correspond to the emissions generated in Turkey during the production of the wheat to be delivered to Germany. Conversely, exported emissions are those generated domestically in the production of goods and services that are then sold to customers abroad. So, if China manufactures a solar panel that is shipped to the US, then China is exporting the emissions associated with the manufacturing process to the US. The difference between imported and exported emissions gives an indication whether a country is externalizing environmental stressors: if imports exceed exports, other countries tend to bear the environmental costs for the consumption activity at home.



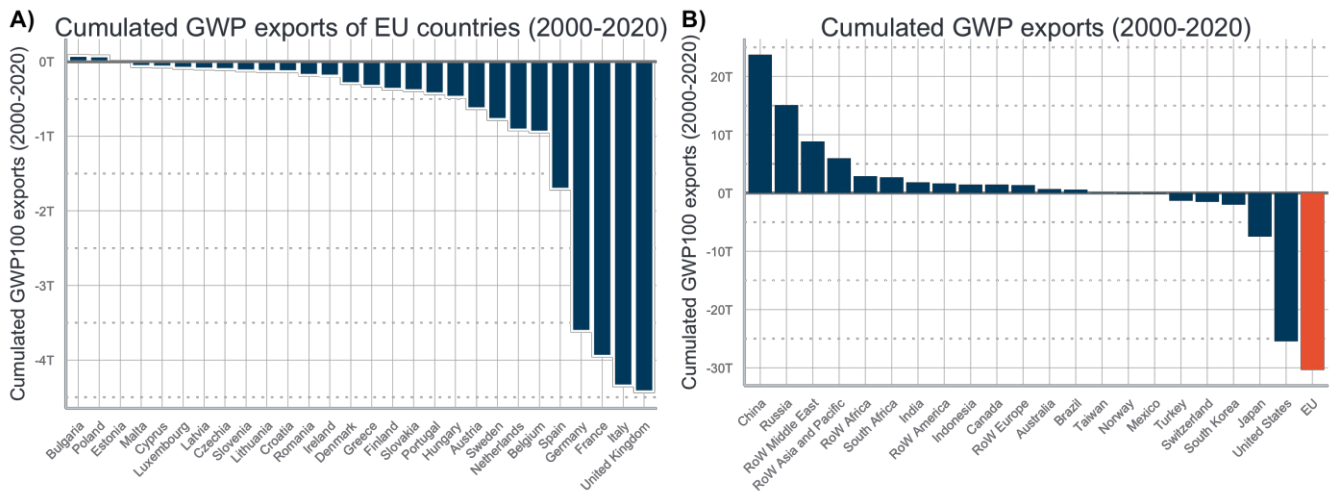


Figure 3: emission imports and exports.

Figure 3 summarizes the results by aggregating environmental stressors over the period 2000 - 2020 (there have been little changes in the trends followed by individual countries) by showing the difference between imported and exported emissions (with a negative number representing emission imports). Figure 3A shows that the vast majority of EU Member States are net emission importers, but that there are considerable differences between them: several EU countries show only very small or even no emission imports. Since, however, the emission importers are large in terms of their economies, and there are much more emission importers than exporters, the message of Figure 3B is not surprising: the EU as a whole is still a significant net importer of environmental stressors, which means that the environmental impact of the EU economy is underestimated if only its absolute emissions are considered (as done in Figure 1).

In all, this empirical application shows the following:

- (1) Within the EU, the majority of countries are persistent importers of environmental stressors, yet the degree is very heterogeneous across Member States.
- (2) The EU as a whole is a persistent and significant importer of emissions at the global level.

Both conclusions suggest that the conceptual challenge of ‘competitive sustainability’ highlighted in the previous section is relevant – regardless of the interpretation adopted: there is a real danger that countries improve upon their own sustainability and competitiveness at the expense of the sustainability of other countries (and, thereby, at the expense of the system as a whole). While

this does not indicate that the idea of ‘competitive sustainability’ necessarily suffers from a fundamental inconsistency of the two concepts of ‘competitiveness’ and ‘sustainability’, it does show that the EU must address this challenge and enact regulations to prevent such externalizing behavior in the future.

## 4 Discussion and Outlook

Based on the assertion that the current environmental crisis requires new development models to address future challenges, this paper set out to discuss whether the EU’s proposal of ‘competitive sustainability’ could be a viable option for advanced economies in general. This task was aggravated by the fact that the term ‘competitive sustainability’ has multiple interpretations – all of which can be found simultaneously in the Annual Sustainable Growth Strategy 2020, the European Commission’s key document on the subject. Three of these interpretations have been discussed, and while they differ significantly in meaning, they all face one big challenge: the goal of overall sustainability may be compromised if countries can improve their sustainability by externalizing environmental costs to other countries with which they compete.

To avoid this, policy-makers must address the potential problem of externalization and beggar-thy-neighbor policies by institutionalizing ‘competitive sustainability’ in a way that reconciles the principles of coordination and competition: competition can only contribute to increasing overall sustainability if the institutions that govern competition are agreed upon by the competing parties on a cooperative meta-level. This means that while countries can compete at the level of concrete



economic interaction, they must cooperate to successfully coordinate on the rules of their competitive interaction. These rules must, *inter alia*, prevent the kind of competitive behavior that jeopardizes overall sustainability. Thus, for ‘competitive sustainability’ to be effective, cooperation among the competing actors on an adequate institutionalization of their competition is mandatory.

While such an endeavor is difficult, it is by no means impossible. There exist a number of feasible measures or rules that prevent the externalization of environmental stressors. For instance, one could complement the classical production-based accounting and measure the sustainability of countries also by the so-called *consumption-based accounting approach* (CBA), where environmental stressors are not attributed to the geographical unit where the emission took place, but to the unit where the final product was consumed. This would make externalization attempts immediately visible, and their extent could even be regulated by the institutions governing competition themselves. A complementary strategy would be to set up strict border adjustment rules, or even strict limits on the emissions import surplus that countries may accumulate (see also, e.g., Wood et al. 2020). Finally, one could aim to scale down consumption and production activities in general, a non-mainstream strategy advocated by degrowth-scholars and sufficiency-oriented policy programs (see, e.g., Zell-Ziegler et al. 2021).

Although the European Commission does not yet assess countries using the CBA, there are plans to implement a *New Carbon Border Adjustment Mechanism* (CBAM) (European Commission 2021, Cazcarro et al. 2022). This suggests that, at least to some extent, the Commission is addressing the challenges identified in this paper. As our analysis has shown, the implementation of such measures is crucial since ‘competitive sustainability’ is not a panacea in itself. Only if its institutionalization is thoroughly deliberated, it could indeed be turned into a development model for advanced economies that takes planetary boundaries and social provisioning seriously.

## References

- Altreiter, C., Gräbner, C., Pühringer, S., Rogojanu, A., & Wolfmayr, G. (2020). Theorizing competition: an interdisciplinary framework. *SPACE Working Paper*, 4. <https://spatial-competition.com/wp-content/uploads/2020/12/SPACE-WP4-CompetitionFramework1.pdf>
- European Commission (2021). 'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality, COM/2021/550 final, available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021DC0550>
- European Commission (2019). *Annual Sustainable Growth Strategy 2020*, COM/2019/650 final, available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52019DC0650>
- Gräbner-Radkowsch, C., & Hager, T. (2021). (Mis)measuring competitiveness: the quantification of a malleable concept in the European Semester. *ICAE Working Paper*, 130. [https://www.jku.at/fileadmin/gruppen/108/ICAE\\_Working\\_Papers/wp130.pdf](https://www.jku.at/fileadmin/gruppen/108/ICAE_Working_Papers/wp130.pdf)
- Cazcarro, I., García-Gusano, D., Iribarren, D., Linares, P., Romero, J. C., Arocena, P., Arto, I., Banacloche, S., Lechón, Y., Miguel, L. J., Zafrilla, J., López, L.-A., Langarita, R., & Cadarso, M.-Á. (2022). Energy-socio-economic-environmental modelling for the EU energy and post-COVID-19 transitions. *Science of The Total Environment*, 805, 150329. <https://doi.org/10.1016/j.scitotenv.2021.150329>
- "Sustainability" (2022). In *The Cambridge Dictionary*. Cambridge University Press. Retrieved December 11, 2022 from <https://dictionary.cambridge.org/us/dictionary/english/sustainability>
- Linsi, L. (2020). The discourse of competitiveness and the dis-embedding of the national economy. *Review of International Political Economy*, 27(4), 855–879. <https://doi.org/10.1080/09692290.2019.1687557>
- Stadler, K., Wood, R., Bulavskaya, T., Södersten, C., Simas, M., Schmidt, S., Usubiaga, A., Acosta-Fernández, J., Kuenen, J., Bruckner, M., Giljum, S., Lutter, S., Merciai, S., Schmidt, J. H., Theurl, M. C., Plutzar, C., Kastner, T., Eisenmenger, N., Erb, K., ... Tukker, A. (2018). EXIOBASE 3: Developing a Time Series of Detailed Environmentally Extended Multi-Regional Input-Output Tables. *Journal of Industrial Ecology*, 22(3), 502–515. <https://doi.org/10.1111/jiec.12715>
- Wood, R., Neuhoﬀ, K., Moran, D., Simas, M., Grubb, M., & Stadler, K. (2020). The structure, drivers and policy implications of the European carbon footprint. *Climate Policy*, 20(sup1), S39–S57. <https://doi.org/10.1080/14693062.2019.1639489>
- Zell-Ziegler, C., Thema, J., Best, B., Wiese, F., Lage, J., Schmidt, A., Toulouse, E., & Stagl, S. (2021). Enough? The role of sufficiency in European energy and climate plans. *Energy Policy*, 157, 112483. <https://doi.org/10.1016/j.enpol.2021.112483>