in short
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Climate Performance of the G7 States

CO_2 Productivity as a Benchmark

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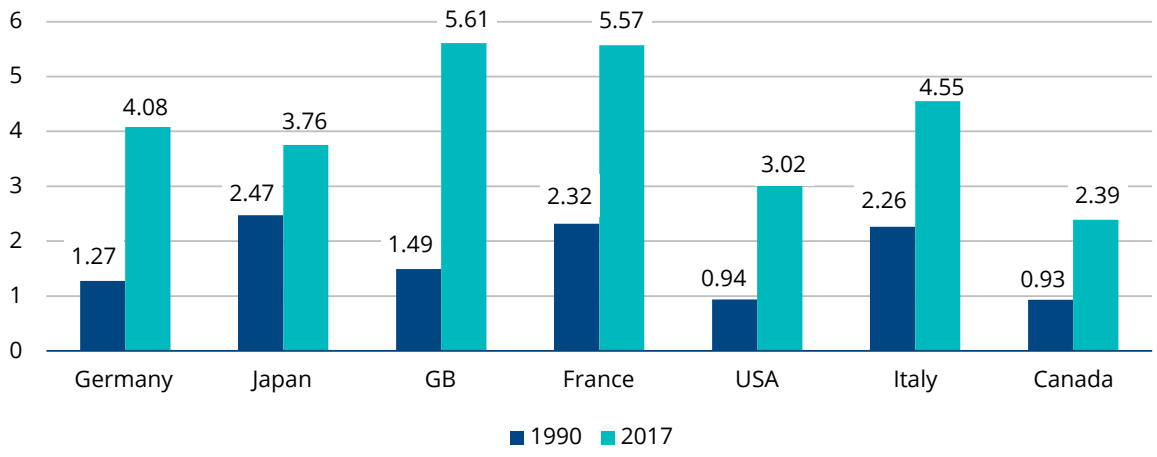
The economic revival of the G7 countries after the Corona crisis should go hand in hand with an effective climate policy. In other words: When assessing the climate performance of the G7 countries, economic development must play a central role. CO_2 productivity, which considers greenhouse gas emissions in relation to the value of goods and services produced, is a key factor here. In contrast, Western industrialised countries are still characterised by a one-sided focus on absolute CO_2 emissions. This falsely suggests that a radical decoupling of greenhouse gas emissions from economic development has already been achieved. However, all G7 countries have been able to significantly improve their CO_2 productivity since 1990. Thus, we recommend the following:

1. Establish the CO_2 Productivity as a Central Assessing Benchmark: It provides both climate activists and economists with a reference point for constructive dialogue. It also enables a more holistic assessment of climate performance. Since the share of global CO_2 emissions from Western industrialised countries is falling continuously due to the economic catch-up process of developing and emerging countries, a combined economic/ecological assessment figure is needed when comparing climate performance at the international level. In this way, developing and emerging countries will also be better integrated into the UN sustainability agenda (Agenda 2030) and the Paris Climate Protection Agreement. After all, developing and emerging countries consider their CO_2 emissions in relation to their economic development as a matter of course.

CO_2 productivity measured in GDP (in USD)/kg CO_2



Sources: GDP: World Bank 2020, https://data.worldbank.org/indicator/NY.GDP.MKTP.CD;
THG: OECD 2020, https://stats.oecd.org/Index.aspx?DataSetCode=AIR_GHG

2. Invest in Climate-Friendly Industrial Production: Since industrial production is highly energy-intensive, a high industrial share of GDP is negatively impacting on a country's CO_2 productivity and climate performance. However, an extensive decline in G7 industrial production would be detrimental to climate protection. Due to the continuing high demand for industrial goods on a global scale, lower production in the G7 countries would most likely be compensated elsewhere. It would merely result in a shift in CO_2 emissions. A more sustainable way is to maintain industrial production in the G7 countries with their comparatively high environmental standards. Consequently, the industrial share must be considered when assessing a country's climate performance.

In addition, the defossilisation of industrial production will exponentially increase the demand for CO_2-neutral electricity, especially through the growing use of green hydrogen. The consistent expansion of renewable energies with, if necessary, the import of preferably green hydrogen, is thus essential for good climate performance. With its climate performance to date, Germany can serve as a role model for both Western industrialised countries and emerging markets. This is especially the case when German CO_2 productivity is observed together with the high share of industrial production and renewable energies in the G7 comparison.

Accordingly, the political priority for Germany must be:

- to achieve appreciable economic growth while significantly and cost-effectively reducing CO_2 emissions;
- to maintain the industrial share at least at the current level and
- to further expand renewable energies in a way that land is used efficiently, and social support is maintained.

3. Set CO_2 Pricing as a Guiding Policy Instrument: A clear CO_2 price signal that is as neutral as possible in terms of technology provides longer-term investment incentives for effective climate protection. Here, the European Emissions Trading Scheme (EU ETS) has proven to be a key instrument of climate policy; with the share of coal-based electricity having declined substantially over recent years. Provided that the price of certificates in the EU ETS reaches a pivotal level in the long term through sufficiently ambitious climate targets, the climate performance of the European G7 states (despite Brexit Great Britain is still interested in participating in the EU ETS), will greatly improve over the coming years. It is expected that this effect will be particularly strong for Germany with its currently still large share of coal-fired electricity compared to the G7. Conclusively, the EU ETS should be extended to as many economic sectors as possible considering the clear advantages (quantity-based target accuracy, cost efficiency and openness to technology).

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