Towards a sustainable recovery? Carbon pricing policy changes during COVID-19

10 March 2022

This brief focuses on the role carbon pricing can play in the COVID-19 recovery and in reaching national and international climate goals, such as those in the Paris Agreement. It outlines the carbon pricing policy changes (Emissions Trading Schemes (ETS), fossil fuel support (FFS), carbon, fuel excise and aviation taxes) that took place during the first 20 months of the pandemic (January 2020 to August 2021) in the 47 OECD and G20 countries. There had been 99 incidents of carbon pricing policy changes during this period, with the majority expected to have a negative effect on greenhouse gas emissions. However, policy changes with climate-positive effects were broader in scope regarding coverage of emissions and sectors and are, thus, likely to outweigh the climate-negative policy changes.

Key messages

- During the first 20 months of the pandemic (Jan 2020 – Aug 2021), 99 cases of policy changes related to carbon pricing as defined in this brief (i.e. emissions trading schemes (ETS), carbon, fuel excise or aviation taxes[1] or fossil fuel support (FFS)) took place in 47 OECD and G20 countries. Most of these policy changes had an expected negative climate effect, resulting in increased greenhouse gas (GHG) emissions. These policy changes were mostly time-limited measures implemented as a response to the pandemic and rather small in scope of emissions.
- Fewer climate-positive carbon pricing policy changes occurred during the same 20 months period. However, these were mostly broader in emissions scope and planned before the pandemic, indicating that COVID-19 did not derail the implementation of planned carbon pricing policy changes. Climate-positive changes are likely to outweigh the climate impact of climate-negative policy changes. A similar trend was seen for subnational jurisdictions.
- Some countries announced new carbon pricing schemes during the pandemic, while only a few countries explicitly integrated carbon pricing in their recovery plans.
- Countries' net-zero ambitions align with the overall climate direction of their carbon pricing policy changes during the pandemic. However, there was little alignment observed between countries' carbon pricing policies and green fiscal recovery spending, and no correlation found between countries' carbon pricing policy changes and GDP per capita.
- Despite of some progress, carbon price levels and coverage are still too low and the pace of change too slow to be compatible with the goals of the Paris Agreement.

Carbon pricing can support the COVID-19 recovery and the Paris Agreement

COVID-19 significantly impacted societies and economies globally. Governments responded with a range of social and economic measures to cushion these impacts as part of their COVID-19 recovery plans. Some of these efforts have direct or indirect consequences on countries' future GHG emissions and, thereby, on the cost and likelihood of countries achieving short and long-term climate goals (OECD, 2021[1]). In the meantime, the latest report from the Intergovernmental Panel on Climate Change (IPCC) state that unless a deep cut in GHG emissions occurs within the following decades, limiting global warming to well below 2°C or 1.5°C, as stated in the Paris Agreement, would be unattainable (IPCC, 2021[2]).

Pricing GHG emissions, reducing or removing government support to fossil fuels and the aviation industry are effective policy means to increase the price of emissions and thus push investment and consumer choices towards low-carbon options. Furthermore, the revenue from carbon pricing or the public expenditure saved from removing fossil fuel support can be used to support vulnerable population groups, finance recovery measures or help reduce COVID-19-related debt.

Carbon price levels and coverage of emissions had been too low before the COVID-19 pandemic to attain the reduction levels needed to align with the Paris Agreement. Reaching the Paris Agreement would require a carbon price in the range of EUR 43-86 per tonne of CO_2 (t/CO_2) by 2030 (High-Level Commission on Carbon Prices, 2017[3]). Yet, in 2018, only 45% of energy-related CO_2 emissions in 44 OECD and G20 countries faced a carbon price, leaving a lot of room for improvement (OECD, 2021[4]).

[1] Aviation taxes (e.g. passenger duty taxes or airport parking or usage fees) do not explicitly price carbon, but they increase the price of flying and can thus be interpreted as a proxy for carbon pricing.

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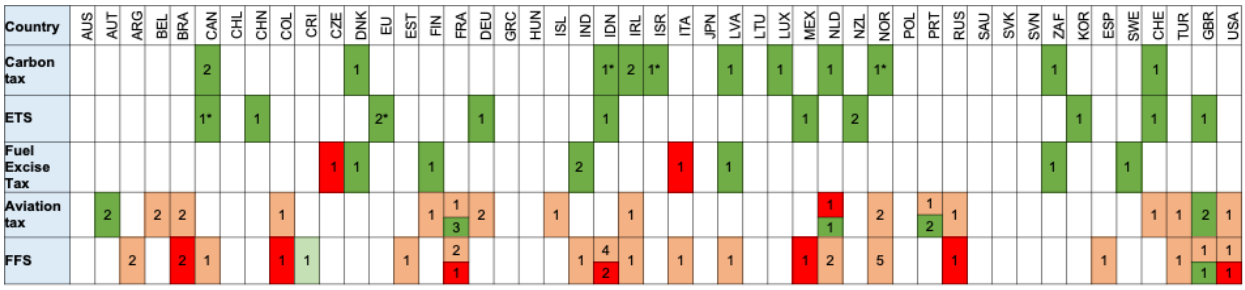
This policy brief investigates the developments of carbon pricing policy changes (i.e. carbon taxes, Emissions Trading Schemes (ETS), fuel excise taxes, aviation taxes, and fossil fuel support (FFS)) that occurred in the first 20 months of the COVID-19 pandemic (January 2020 – August 2021) in the 47 OECD and G20 countries. The policy brief is based on the OECD working paper developed for the Carbon Market Platform[2] (CMP): *Carbon pricing and COVID-19: Policy changes, challenges and design options in OECD and G20 countries* (OECD, forthcoming). The CMP paper and this policy brief cover the number of policy changes. They do not assess the GHG coverage or the aggregate GHG impact of carbon pricing policies or existing policies that did not undergo any policy changes.

Carbon pricing policy changes during the first 20 months of COVID-19

A total of 99 cases of carbon pricing policy changes took place in 37 of the 47 OECD and G20 countries between January 2020 and August 2021 (Figure 1). 56% of these policy changes would increase GHG emissions and were thus "climate-negative". Most (78%) of these climate-negative policy changes were temporary, relatively small in scope and mainly stemmed from COVID-19 responses in the aviation and fossil fuel sectors. These sectors were deeply impacted as the global containment measures significantly reduced the demand for both. To avoid bankruptcies in the aviation sector (OECD, 2020[5]); spiralling debt in countries dependent on oil exports (OECD, 2020[6]); and impact on vulnerable households, policies supporting the industries and consumers were put in place during COVID-19 (IISD, 2020[7]).

44% of the carbon pricing policy changes were expected to reduce GHG emissions and were thus "climate-positive". These mainly originated from policy changes in ETS, carbon and fuel excise taxes. Virtually all climate-positive changes were permanent and often planned before COVID-19 yet implemented during the first 20 months of it. In addition, these policy changes were broader in emissions coverage, such as the launch of the Chinese ETS, covering 40% of domestic GHG emissions, equivalent to more than 7% of global GHG emissions.[3] As opposed to climate-negative changes, climate-positive changes are larger in emissions coverage and, thus, likely to outweigh the climate impact of the climate-negative changes.

Figure 1. Carbon pricing changes in the first 20 months of COVID-19 in OECD and G20 countries



Note: Dark/light green: Permanent/temporary policy change with an expected climate-positive effect; Dark/light red: Permanent/temporary policy change with an expected negative climate effect; White: no change; Number: the number of policy changes; *:Proposed but not yet implemented policy changes.
Source: OECD (forthcoming).

[2] The Carbon Market Platform, launched in 2015 under Germany's G7 presidency, brings together a diverse group of countries and organisations with the aim of strengthening international co-operation on developing effective, sustainable and ambitious carbon pricing approaches. More information can be found here.

[3] Policy changes in selected sub-national jurisdictions mainly reflected the national trends. Most climate-positive changes came from carbon taxes and ETS, and the climate-negative policy changes from aviation taxes and FFS.

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The pandemic did not derail the implementation of the planned and permanent policy changes in ETS, carbon and fuel excise taxes. Some countries (e.g. Canada, Indonesia, Israel) also announced possible implementation or strengthening of carbon pricing schemes. For example, Canada announced an increase of its federal minimum carbon price from CAD 40/tCO_2 in 2021 to CAD 170/tCO_2 in 2030. However, only a few countries (e.g. Denmark) explicitly integrated carbon pricing in their recovery plans (Box 1).

Policy changes varied across countries. Out of the 47 OECD and G20 countries concerned, 12 countries had carried out exclusively climate-negative policy changes, while 11 carried out exclusively climate-positive changes. In 14 countries, governments sent mixed carbon pricing signals, strengthening the signal for some instruments but weakening it for others. No changes were observed in 10 countries.

Box 1. Carbon pricing integrated in the Danish Recovery and Resilience Plan

In April 2021, Denmark submitted its Recovery and Resilience Plan (RRP) to the EU Recovery and Resilience Facility. The Danish RRP is based on a EUR 1.55 billion budget and incorporates the pathway to reach the nationally legislated GHG reduction target of 70% by 2030 compared to 1990 levels. The RRP aims at boosting investments in the green transition through a policy package consisting of seven components, including sustainable transport and the Green Tax Reform. The tax reform entails two carbon pricing measures to be executed in two phases to ensure a smooth recovery.

- **Phase one:** Entails an increase of EUR 0.8 per gigajoule (GJ) equivalent to EUR 75/tCO_2. This will increase the existing energy tax on fossil fuels for industrial businesses (currently EUR 10/tCO_2), horticultural and agricultural businesses (currently EUR 3.36/tCO_2) and businesses conducting mineralogical processes (currently unpriced). The tax increase will apply from 2023 and then gradually rise towards 2025 to ensure a smooth transition.
- **Phase two:** Starts in 2025 and includes a uniform and supposedly high, yet undetermined, GHG tax for all sectors, including oil extraction and refining emissions. Notably, phase two will also include a first of a kind tax on agriculture's non-energy related emissions. It has not yet been decided if EU ETS covered sectors will be included under the GHG tax.

Source: (European Commission, 2021[8]) (European Commission, 2020[9]) (Skatteministeriet, 2020[10]) (Ministry of Finance, 2021[11]).

Factors potentially influencing carbon pricing policy changes

Several potential factors could influence the direction of countries' climate policy changes. These factors include countries' green fiscal recovery spending and GDP per capita, as well as whether countries have committed to net-zero GHG emissions. All OECD and G20 countries where carbon pricing changes were all or mainly positive have committed to net-zero (Figure 2). In contrast, 30% of G20 and OECD countries with solely or mostly climate-negative carbon pricing changes have yet to commit to a net-zero target.

In more than a third (36%) of the countries, fiscal spending was aligned with their overall climate category. In other words, countries that carried out solely or mostly climate-negative policy changes also had a low share of green fiscal spending, whereas the opposite was true for those with climate-positive policy changes. However, for 15% (n=7) of countries, fiscal spending and carbon pricing policies were not well aligned. For instance, South Africa had only climate-positive carbon pricing policy changes, yet, it had a low green spending percentage (Energy Policy Tracker, 2021[12]). Finally, no correlation was found between the direction of policy changes and GDP per capita, indicating that wealthier countries did not perform better than poorer countries (or vice versa) regarding carbon pricing policy changes.

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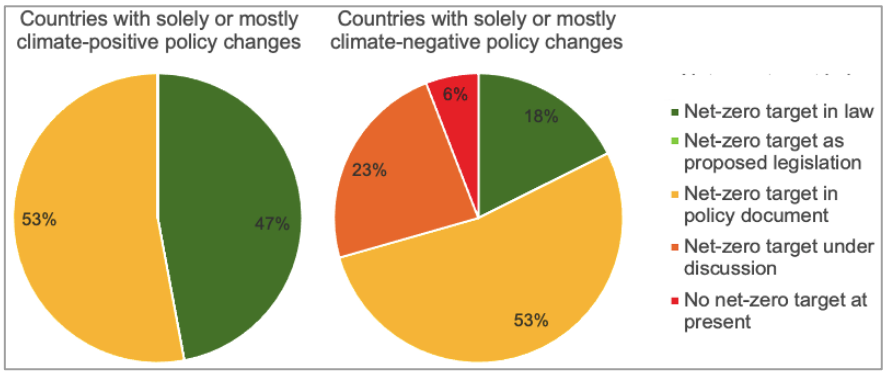
Figure 2. Countries net-zero commitments and their overall climate category of policy changes



Note: The left (right) pie chart displays the net-zero commitments of the countries with solely or primarily climate-positive (climate-negative) carbon pricing policy measures during the COVID-19 pandemic. As per the status of net-zero pledges on the 25th November 2021.
Source: Authors and (ECIU, 2021[13]).

Overcoming barriers to carbon pricing

The implementation or strengthening of carbon pricing is associated with several challenges that have been amplified due to the economic and social consequences of COVID-19. However, multiple options are available for countries to mitigate these challenges. For example, an implementation of or increase in carbon prices can be announced in advance to shape firms' long-term investments and provide sufficient adjustment time (Martin and Van Reenen, 2020[14]). Revenues from carbon pricing can be redistributed to protect vulnerable population groups or can reduce distortionary taxes on firms and labour to help increase economic growth (Maestre-Andrés, Drews and van den Bergh, 2019[15]). However, each revenue recycling option has its advantages and disadvantages (Table 1).

Table 1. Effects of revenue recycling mechanisms on different dimensions of carbon pricing

Recycling mechanism	Environmental effectiveness	Economic growth	Equity	Acceptability
Targeted transfers	+	0	++	++
Lump-sum transfers	+	0	+	0/+
Green spending	++	0/+	-/0/+	++
Reducing labour taxes	+	+	0	0/-
Reducing corporate taxes	+	+	-	-
Government budget or debt relief	+	0/-	-	0/-

Note: Symbol code: ++ very positive; + positive; 0 neutral; - negative.
Source: OECD (forthcoming).

Future policy recommendations

COVID-19 did not derail the planned implementation or strengthening of carbon pricing. Climate-positive policy changes are likely to outweigh the effect on GHG emissions of climate-negative ones. Despite of this, more needs to be done. Carbon price levels and coverage are still too low and the pace of change too slow to be compatible with the goals of the Paris Agreement (OECD, 2021[16]). Revenue recycling and embedding carbon pricing in a holistic policy package (e.g. support for low-carbon alternatives and infrastructure investments) can help increase carbon pricing's effectiveness and acceptability.

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