



G7 Finance Ministers and Central Bank Governors' Meeting

Finance Track Menu of Policy Options for a Just Transition towards Net Zero

G7 FINANCE TRACK

STRESA – MAY 23rd-25th 2024

Finance Track Menu of Policy Options for a Just Transition towards Net Zero

G7 countries account for around 40% of the global economy and 25% of CO₂ direct emissions.

Given their economic weight, they have a responsibility to lead the way towards decarbonisation, thus setting out a global path for achieving net-zero greenhouse gas emissions by 2050.

Progress towards climate objectives requires acceleration. We remain committed as G7 to providing a substantial contribution to efforts to reduce global GHG emissions by around 43 percent by 2030 and by 60 percent by 2035, relative to the 2019 level, in light of the latest findings of the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. At the same time, higher energy prices, geopolitical instability, rising inequalities and social challenges, are all factors that risk undermining political and societal support for climate action. In such context, developing climate policies that are effective in reducing emissions, conducive to economic growth, and socially acceptable, is paramount. This can contribute to creating a positive narrative on climate action, underpinned by robust economic analysis and concrete suggestions.

In the long run, decarbonisation can help achieve higher net welfare by preventing severe climate disruptions and their associated costs.¹ In the short run, it implies changes in the composition of growth and considerable transition costs, but could also generate positive impacts, such as environmental benefits.² Recent research shows how multipliers associated with spending in clean energy and biodiversity conservation are estimated to be larger in the long run than those associated with expenditure in non-eco-friendly energy and land use activities, depending on sectors, technologies, and horizons.³ Further, promoting investment in green technologies and adopting more stringent climate policies can yield positive and meaningful increases in innovation⁴ and productivity⁵ over time, thereby playing an important role for long-term economic growth. In the short run, innovation and green investments can minimize the negative impacts of more stringent climate mitigation policies and help countries accelerate the implementation of climate action. Reaping the economic benefits of the transition depends on the implementation of well-designed policies, on the capacity to exploit synergies between structural reforms, and on setting up an enabling environment to crowd in private investment.

Notwithstanding the long-term benefits of decarbonising the economy, in the short run its concrete implementation requires substantial investments. Additional revenue and private investment could be mobilised to finance decarbonisation of economies and mitigate the short-

¹ IPCC, "Climate Change 2022: Impacts, Adaptation and Vulnerability | Climate Change 2022: Impacts, Adaptation and Vulnerability, 2023".

² WB, "Within Reach: Navigating the Political Economy of Decarbonization", 2023.

³ IMF, "Building Back Better: How Big Are Green Spending Multipliers?", 2021.

⁴ IMF, "Green Innovation and Diffusion: Policies to Accelerate Them and Expected Impact on Macroeconomic and Firm-Level Performance", 2023.

⁵ Paper prepared by the OECD-Italy's Department of Treasury Taskforce for Multilateral Policy Support, "Green Investment and Productivity: Main Policy Challenges", 2024.

term costs of the transition; on the fiscal policy front, carbon pricing instruments can represent a cost-effective option for encouraging the adoption of more sustainable production and consumption patterns by setting a price on greenhouse gases. These options come along with a substantial revenue raising potential in the short run that can provide policy makers with resources to support the most vulnerable groups, the most affected communities and the carbon-intensive sectors and regions in the transition and to provide incentives for fostering the decarbonisation process and develop green and low-carbon technologies.

Embarking on ambitious decarbonisation pathways also presents major challenges, both at the domestic and international levels. Such challenges should be managed in a way that maximises the effectiveness and fairness of climate policies, while seizing the opportunities of international cooperation to minimise negative spillover effects arising from asymmetries, especially in high emissions sectors. G7 countries have a crucial role to play in fostering cooperation at a global scale, to mitigate risks of carbon leakage and implement effective policy actions that tackle climate change and preserve competitiveness and open trade.

Acknowledging the multiple dimensions across which climate policies can be assessed, the Italian Presidency has decided to focus on five key aspects: (i) the impact of climate policies and green investment on growth, productivity and innovation; (ii) exploring carbon pricing potential, amongst other policy options, in pursuing long term decarbonisation while dealing with the costs of transition in the short run; (iii) the distributional impact of climate policies, (iv) ways to foster the legitimacy and political acceptability of climate action, and (v) fostering international cooperation, including by improving the assessment and measurement of carbon leakage risks and by mitigating them. Over the first half of 2024, such aspects have been discussed by the G7 Finance Track, with the analytical support of the IMF, the WBG and the OECD. While recognising the importance of taking into account national and regional specificities, the G7 agreed that a well-balanced policy mix for a just transition could be designed in a way that also encourages innovation and investment in green and low-carbon technologies, addresses equity concerns, promotes social and political support for climate action, and minimises negative international spillover effects of asymmetric policies. The G7 also concurred that a systemic and holistic approach should be adopted, using a wide array of policies, and promoting synergies among different measures, with the ultimate goal of accompanying all productive sectors and society groups along the structural transformations needed to decarbonise our economies.

Based on this work, the following **menu of policy options for a just transition towards net zero** has been developed by the G7 Finance Track, with the aim to help develop appropriate climate policies.

The domestic level: ensuring a just and inclusive climate transition while enhancing political acceptability

Key policy options include:



Maximising the impact of climate policies and green investment on growth, productivity and innovation



Exploring carbon pricing potential, amongst other policy options, in pursuing long-term decarbonisation while dealing with the costs of transition in the short run



Addressing the different dimensions of distributional and social impacts of market and non-market-based instruments



Ensuring consistent policy design and sequencing to transform the political economy and pave the way for long-term ambitious policies



Using public engagement and communication to improve political acceptability and the legitimacy of climate policies



Maximising the impact of climate policies and green investment on growth, productivity and innovation

- Expansion and advancement of climate policies can play an important role in accelerating green innovation and adds certainty about the future business environment. Key policy levers to promote this process include market and non-market-based instruments, such as emission limits and emissions-trading systems, and expenditure measures such as R&D support and feed-in-tariffs.
- More stringent and well-calibrated climate policies can generate positive productivity gains in the medium and long term. Non-market-based policies, such as performance standards and emissions limits, can also help promote innovation.
- Several studies indicate that green spending tends to be associated with large multipliers in the long run. In particular, investing in green technologies can have a positive impact on productivity over time. This impact is even larger when associated with green skills intensity. Promoting investment in the training and reskilling of the workforce can generate major positive returns.

- Innovation and productivity are clear drivers of economic growth. Policy makers could consider introducing a combination of market-based, fiscal, and regulatory policies to promote green innovation and lift productivity. The collaboration between private and public R&D is also of key importance.
- Policy action could aim at promoting private investment in decarbonisation technologies. Public investment and tailored measures could aim at removing barriers, creating the right enabling environment and crowding in private investment.
- Overall, promoting a growth-friendly transition to a net-zero economy, both domestically and globally, would also increase public support and international buy-in for climate action.

ii

Exploring carbon pricing potential, amongst other policy options, in pursuing long-term decarbonisation while dealing with the costs of transition in the short run

- In a context where further efforts to curb GHG emissions are needed, carbon pricing can represent a cost-effective option for introducing a price signal in the market and encourage behavioural changes towards the adoption of more sustainable production and consumption patterns.
- Policy options include carbon taxes or charges, emission fees, emission trading systems or other environmental taxes, and the phasing-out of, among others, inefficient fossil fuels subsidies, as well as an appropriate sectoral coverage of pricing instruments.
- These instruments will help the economic system to transition away from fossil fuels and accelerate zero and low-emission technologies, favour the adoption of renewable and clean energy sources, encourage energy efficiency, and ultimately enhance a transformative climate action.
- These policy options come along with a revenue raising potential in the short run that can help support the decarbonisation while making the net-zero transition more affordable for the society.

iii

Addressing the different dimensions of distributional and social impacts of market-based and non-market-based instruments

- With respect to fairness considerations, the distributional impacts of climate policies can significantly vary across countries, depending on the overall need for decarbonisation and development levels and on the composition of household consumption.
- Policy makers could consider the introduction of targeted and carefully designed support measures for vulnerable groups, including the ones who stand to be negatively affected by the transition, that can make the overall policy mix more equitable. This may also include labour

policies promoting the creation of decent work and quality jobs, social protection measures, reskilling programs, education and training, public transportation, and a far-sighted industrial policy in order to transform production systems and consumption patterns coherently with an orderly and just transition.

- Adopting a wide range of different support measures could improve the welfare of a larger number of households. For instance, in some countries a reduction in payroll taxes alone would not reach vulnerable groups that are not in employment, while lump-sum transfers would be less efficient than reducing a distortionary tax. Instead, a mix of the two measures could maximise welfare gains and create support for a green tax reform across different types of households.
- Recent research carried out on a range of different countries by the IMF suggests that on average, a low share of the revenues generated by green taxation could be sufficient to compensate households in the lowest deciles of the income distribution. This would leave enough fiscal space to promote the decarbonisation of the economy and address other policy objectives, such as the reduction of other distortionary taxes.

iv

Ensuring consistent policy design and sequencing to transform the political economy and pave the way for long-term ambitious policies

- Countries would benefit from strategically selecting and sequencing mitigation instruments and measures that enable them to introduce climate policies that transform the economy and yield the systemic changes needed to gradually reduce net emissions to zero.
- Climate policy action must prepare an enabling environment to make the introduction of future policies effective and widely accepted. Prioritizing feasible climate measures that have the potential to build greater political support by yielding tangible benefits for specific groups can contribute to create momentum for climate action and prepare the ground for more ambitious future policies.
- As even well balanced and appropriately designed policies may be poorly accepted by citizens due to beliefs and misperception related to climate change and to mistrust in the legitimacy of the process, policy reforms could be designed as to be proportionate and tailored to countries' and regions' specificities, and policy design could also include support for small and medium enterprises and other actors that may be negatively affected in the short run by the transition.
- Policy makers may consider the introduction of policies that set binding and non-binding targets for future actions, followed by incentivising measures that create consensus around climate action and once the need for action is shared and understood, introduce more stringent and effective mitigation policies, such as carbon taxes, emission trading schemes or performance standards

and emissions limits. Policy certainty is critical for investment in low-carbon technologies, while stop and go policies can be detrimental.

V

Using public engagement and communication to improve political acceptability and the legitimacy of climate policies

- Information can be a powerful and inexpensive way to raise support. A clear, transparent, and evidence-based communication of mitigation policies, including of their rationale and their impact is key to build support, even in those segments of the society that would in principle oppose.
- Where applicable, a preliminary assessment of reform proposals in terms of effectiveness, macroeconomic effects, and implications for the society could help build a solid rationale for introducing a given policy reform and anticipate opposition.
- Building on this, policy makers may choose to consult with affected stakeholders and public opinion and explain, through a transparent and evidence-based approach, the rationale, the potential impact, and the countervailing measures that are associated to the policy action. This process may also be used to better align the use of support measures with the priorities identified by the public opinion.

The international level: fostering international cooperation, including by improving the assessment and measurement of carbon leakage risks and by mitigating them

Key policy options include:

vi

Considering different determinants of carbon leakage to implement tailored policy responses through international cooperation

vii

Monitoring carbon leakage risks as climate mitigation policies become more stringent

viii

Promoting the development of common approaches for emissions intensity of products, sectors and countries

vi

Considering different determinants of carbon leakage to implement tailored policy responses through international cooperation

- The risk of carbon leakage depends on differences in the stringency and ambition of climate mitigation policies across countries, possibly jeopardising efforts to reduce GHG emissions globally. However, it may vary according to multiple factors such as the structure of different economies, their efficiency, and the emission intensity of domestic and foreign production processes.
- The adoption of well-designed anti-leakage instruments can encourage climate action and favour the decarbonisation of the industrial sector globally. However, policy makers could evaluate whether the potential increase in global emissions may be offset by alternative measures that are tailored to the economic context. In particular international cooperation could enhance the reduction of carbon intensity abroad, limiting the rise in global emissions.
- As such, policy makers may benefit from building awareness of positive spillover effects of climate policy, which reduce emissions abroad. These include technology spillovers as well as policy spillovers. These can be enhanced by supporting partner countries in adopting low-carbon technology and implementing climate policy. At the same time, the risk of negative spillovers to developing economies should be taken into account.

vii

Monitoring risks of carbon leakage as climate mitigation policies become more stringent

- Mitigation policies have been evolving differently across countries and the asymmetry in mitigation policy stringency has increased. Further efforts are needed to understand to what extent carbon leakage could undermine progress towards cutting emissions globally.
- In this context, it is important to better assess the determinants of carbon leakage and the impact of policy asymmetries on output and trade, through changes in relative prices. Shift in economic activity across countries and emissions intensities' differential across countries may result from several economic determinants, such as technologies, production efficiency, production costs, and product quality differentiation.

viii

Promoting the development of common approaches for emissions intensity of products, sectors and countries

- To promote greater cooperation on climate action, it is fundamental to develop robust and compatible approaches for emissions intensity metrics. These can be developed at the country, sector or product level depending on their specific purpose. They can help determine whether the risk of carbon leakage in specific sectors or regions could result in a potential increase in global emissions.
- Building on the current efforts under the OECD's Inclusive Forum on Carbon Mitigation Approaches (IFCMA) initiative, policy makers could increase coordination to develop approaches to compute comparable emissions intensity metrics that can be applied at the regional, sectoral, plant or product level. This would contribute to shed light on the risks of carbon leakage in hampering the efforts to curb global emissions.
- Metrics should be robust, transparent, and interoperable among different regions and sectors with different emissions intensity (depending on the technology of production and sources of energy). To guarantee the development of such metrics, it is important to build a consistent and effective data collection, to ensure robust and compatible monitoring, reporting and verification systems and sharing of emission data and carbon intensity metrics across the supply chain.
- Solid and shared metrics will help identify which product and sector in an economy may face carbon leakage risks and guide where and how to implement policies such as taxes, tax incentives, subsidies, and regulations. Emissions intensity metrics can also underpin leakage risk mitigation policies such as mandatory product emission standards and border carbon adjustments.