

Do Climate Policies Deliver?

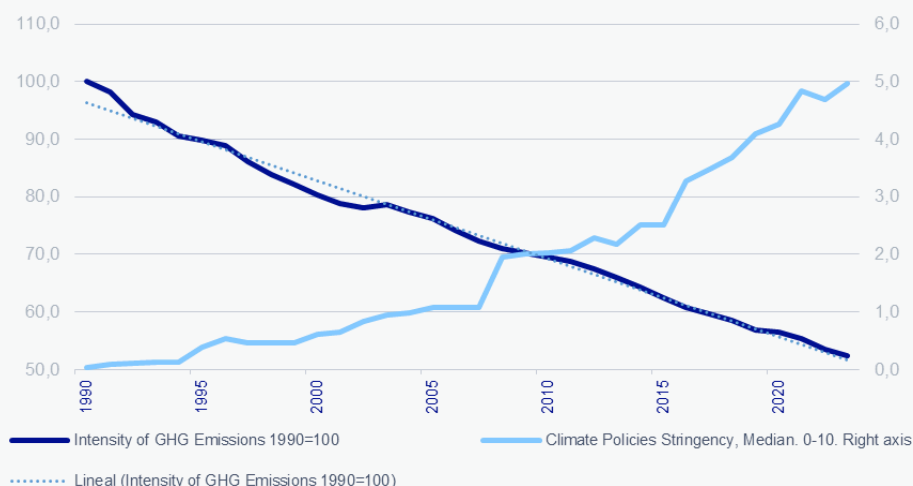
Diego Pérez González and Lucien Antonio Vargas Giagnocavo

Introduction

More ambitious climate policies without greater decoupling between emissions and economic activity. Evidence of the negative consequences of climate change caused by human activity continues to accumulate, while greenhouse gas emissions are not aligned with pathways that would make it feasible to achieve net zero by mid-century—the objective of the Paris Agreement—. In fact, according to recent United Nations analyses, current policies and the commitments undertaken under the Agreement are consistent with lower temperatures than those projected ten years ago, but they still remain well above the goal of keeping the global temperature increase well below 2°C, and limited to 1.5°C, relative to pre-industrial levels.¹

Whether sufficient or not, the ambition of climate policies is increasing, yet this coincides with a lack of evidence of a stronger decoupling between emissions and economic activity. Emissions intensity per unit of global GDP has maintained a very stable rate of decline over the past 35 years, even as policy ambition has increased ([Figure 1](#)).

Figure 1: World GHG Emissions Intensity and Median Climate Policy Stringency (1990=100; 0-10)



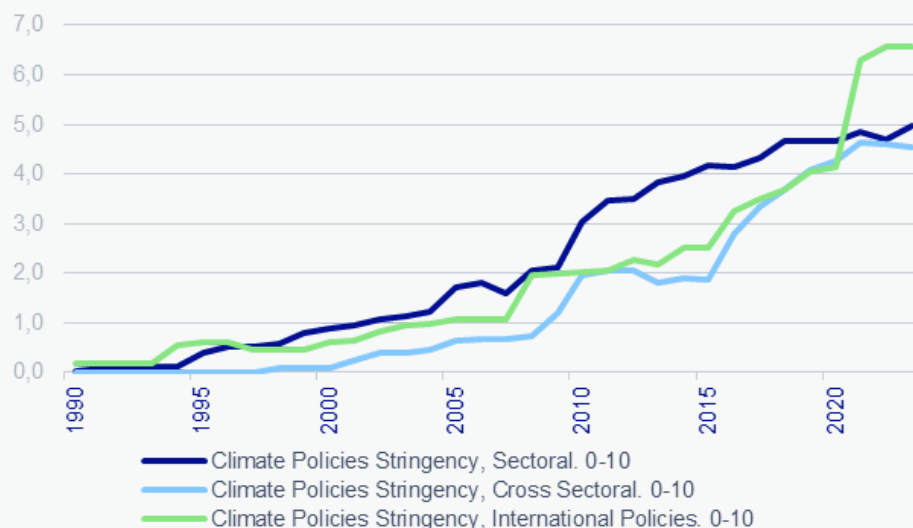
Source: Authors' calculations based on data from IMF and OECD

Note: The series displayed are the unconditional yearly median from the countries in the sample.

¹: "... Global warming projections based on current policies have declined from just below 4°C at the time of adoption of the Paris Agreement, to just below 3°C today. Similarly, temperature projections based on the conditional and unconditional nationally determined contributions (NDCs) have fallen from 3–3.5°C to 2.3–2.5°C in this year's report... The proportion of global emissions covered by net-zero emission pledges by around the middle of the century has increased from zero in 2015 to about 70 per cent today. At the same time, climate governance frameworks, policies and legislation have advanced substantially, while low-carbon technology costs have plummeted. These developments position the international community far more favourably to accelerate climate ambition and action than a decade ago – and such acceleration is critically urgent." Reference: [Emissions Gap Report 2025: Off Target - Continued Collective inaction puts Global Temperature Goal at Risk](#). UNEP November 4, 2025.

Climate mitigation policy database for more granular analysis. The OECD climate mitigation policy database compiles and classifies up to 130 instruments across 56 different policies for nearly 50 countries since 1990, also assessing their degree of stringency.² The evolution of climate policy stringency ([Figure 2](#)) reveals important differences in the pace and nature of regulatory action. The chart shows a steady increase in climate policy stringency from 1990 to the early 2020s across three dimensions: sectoral, cross-sectoral, and participation in international policies. Sectoral and cross-sectoral stringency rise gradually, with noticeable acceleration after the late 2000s, while international policy stringency remains lower for most of the period but increases sharply, with a particularly marked acceleration in the post-2015 period (following the Paris Agreement).

FIGURE 2: CLIMATE POLICY STRINGENCY (values from 0 to 10)



Source: Authors' calculations based on data from OECD

Note: The series displayed are the unconditional yearly median from the countries in the sample. The index goes from 0 (not stringent at all) to 10 (very stringent).

With this level of geographic granularity, time coverage, and policy-type detail³, it is possible to examine sophisticated patterns in the relationship between climate policy stringency and emissions outcomes. This note offers a dynamic and comparative assessment of how two types of climate policy, international commitments and national cross-sectoral, interact with countries' emissions intensity⁴. Beyond characterising these average dynamic relationships, we explore key sources of heterogeneity, including how the association between policy stringency and emissions intensity differs before and after the entry into force of the Paris Agreement, and whether policy tightening episodes are followed by distinct responses across countries, with different emissions-intensity levels. This approach allows for a nuanced assessment of whether sustained

² (CAPMF) Climate actions and policies measurement framework. OECD.

³ The structure of the CAPMF can be downloaded [here](#).

⁴ For this analysis, we focus on cross-sectoral policies, whose transversal nature allows for a more meaningful comparison with international climate policy efforts. Nationally determined sector-specific policies are therefore excluded. Given that our analysis is conducted at the aggregate level, without a sectoral disaggregation, and that the effectiveness of sectoral policies is highly contingent on country-specific economic structures, aggregating such measures into a single indicator would be potentially misleading and would obscure important policy-specific distinctions.

increases in policy stringency tend to coincide with tangible decarbonisation outcomes, while acknowledging that international policy indicators may also reflect broader global decarbonisation dynamics.

To analyse the dynamic relationship of climate policy stringency on the emissions intensity (the log ratio of GHG emissions to Real GDP), we employ a panel regression approach using Local Projections ([Jordá, 2005](#)) over a sample of 50 developed and developing economies⁵ spanning the period 1990 to 2023. Our data is compiled from publicly available sources, including the OECD, the Potsdam Institute for Climate Research (PIK), the Penn World Table (PWT) V11.0, and The World Bank. A complete list of the variables and their descriptive statistics are shown in Table 1.

TABLE 1: VARIABLES USED IN THE ANALYSIS

Variable	Description	Source	Transformation
GHG Emissions	Million tons of CO2-equivalent (excluding LULUCF)	Potsdam Institute for Climate Research (PIK)	log
Real GDP	PPP adjusted USD millions	Penn World Table	log
Population	Millions of persons	Penn World Table	log
Manufacturing share	Share of the manufacturing sector as percentage of total GDP	World Bank	log
Environmental Policy Stringency	Degree to which climate actions and policies prescribe, incentivise or enable GHG emissions mitigation (0 not stringent, 10 very stringent)	OECD	standardise

Methodology

Local projections ([Jordá, 2005](#)) are used here to characterise the dynamic response of emissions intensity following policy tightening episodes, rather than to identify impacts of structural policy shocks. We estimate the following set of panel regressions:

$$\ln y_{i,t+h} = \alpha_i^h + \beta_1^h \text{policy}_{i,t} + \sum_{l=1}^{\mathcal{L}} \theta^h X_{i,t-l} + \phi^h \ln y_{i,t-1} + \delta_1^h D2008 + \delta_2^h D2020 + \epsilon_{i,t}^h$$

where $y_{i,t+h}$ is the outcome variable for country i in year t at horizon h . In our case, the outcome variable is the log ratio of GHG emissions divided by Real GDP ($\frac{kg\ CO2-eq}{dollars\ ppp-adjusted}$). $\text{policy}_{i,t}$ are

⁵: The countries included in the sample are: Argentina, Australia, Austria, Belgium, Bulgaria, Canada, Chile, China, Colombia, Costa Rica, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, Mexico, the Netherlands, New Zealand, Norway, Peru, Poland, Portugal, Romania, Russia, Saudi Arabia, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey, and the United Kingdom.

the two stringency indicators $k \in \{\text{cross-sector}, \text{international}\}$. The regressions include $l = 2 \text{ lags}^6$ of the matrix of controls $\mathbf{X}_{i,t}$, which contains log Real GDP per capita and log share of the manufacturing sector. In addition, we include two dummies which take value one for 2008 and 2020, respectively⁷. $\epsilon_{i,t}^h$ is error term, which is clustered at country level. Finally, we also include country fixed effects (α_i^h) and the lag of the dependent variable ($y_{i,t-1}$).

The sequence of β^h at the different horizons is our main parameter of interest capturing the dynamic impact of increasing climate policy stringency on emissions intensity. We analyse this dynamic impact up to a six-year horizon ($h=1,\dots,6$) to capture both short- and medium-term dynamics. Moreover, we extend the horizon to five years prior to the policy change ($h=-5,\dots,0$) to test for any potential anticipation effects preceding the implementation of increased policy stringency. Given that the regressions are estimated using the log-level of the variables and the policy indicators are standardized, the resulting Impulse Response Function (IRF) can be interpreted as the percentage change of the emissions intensity at horizon h given a standard deviation increase in the climate policy stringency.

Baseline results

The IRFs in [Figure 3](#) represent the dynamic relationship between climate-policy stringency and countries' emissions intensity. By extending the estimation window to horizons prior to the moment where stringency is increased, the figure shows that emissions intensity follows a similar and stable trajectory prior to the policy change for both policy indicators, with no evidence of anticipation effects. In both cases, emissions intensity declines at a roughly constant rate (though marginal), indicating that policy changes are not preceded by systematic adjustments in emissions intensity.

Following a one-standard deviation increase in international policy stringency, emissions intensity declines immediately and continues to fall over the medium run, reaching a reduction of more than 10 percent after six years. The response is monotonic and statistically significant for all horizons, indicating that international policy actions (e.g. international co-operation, international public finance and GHG emissions data and reporting) are strongly associated with domestic reductions in emissions intensity⁸.

Cross-sectoral policy tightening also yields a negative and persistent relationship, though slightly smaller in magnitude. The estimated responses suggest that moments of strengthened domestic cross-sectoral regulation tend to be followed by an almost 5 percent reduction in emissions intensity after six years. This pattern indicates that nationally driven regulatory tightening is

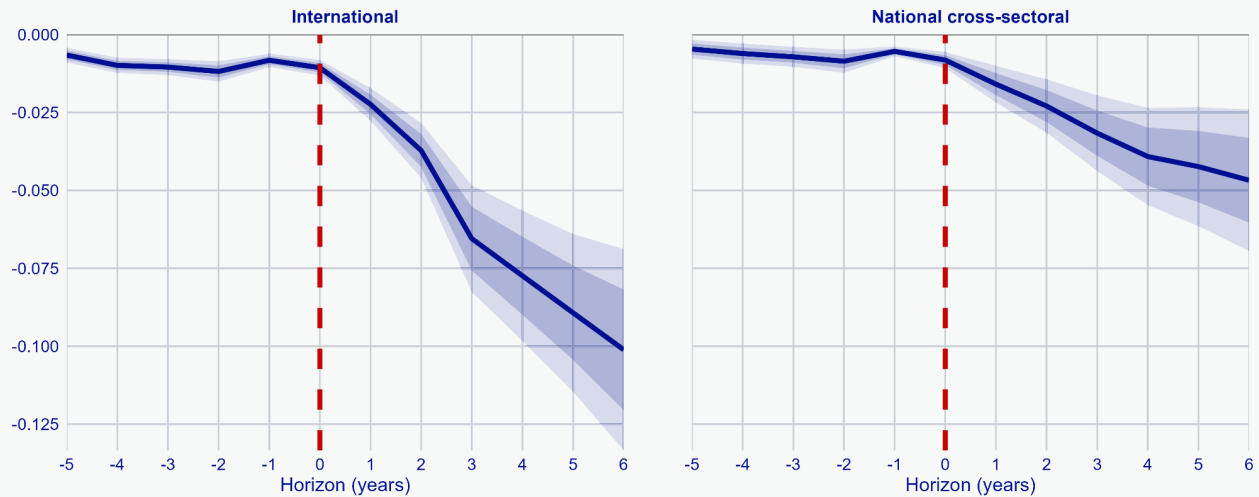
⁶ Lag selection criteria conducted via the Akaike Information Criteria (AIC).

⁷ This adjustment is implemented to mitigate the potential confounding influence of significant economic dislocations, specifically the Great Financial Crisis and the COVID-19 pandemic, on the computed ratio.

⁸ It is crucial to acknowledge that these results potentially overestimate the impact of international commitments. As can be observed in Figure 2, they serve as leading indicators for cross-sector nationally determined policies. Consequently, the presented results may be capturing compounding effects. Nonetheless, this does not negate the role of international policies in providing impetus for domestically formulated ones.

systematically accompanied by meaningful emissions-intensity adjustments, albeit of a more moderate scale than those observed during episodes of broader international policy tightening.

FIGURE 3: IMPULSE RESPONSE FUNCTIONS OF EMISSIONS INTENSITY
(LOG-LEVEL RESPONSE TO A 1 STD INCREASE IN CLIMATE POLICY STRINGENCY)



Notes: The figures show the Impulse Response Functions of the log-level of the emissions intensity ratio at different horizons. The dark (light) shaded blue area represents the 68 (90) percent confidence bands. The solid blue line represents the point estimate of the coefficient. Responses have been scaled to show the impact of a 1 standard deviation change in the policy stringency indicators

Taken together, these patterns indicate that emissions intensity tends to display a stronger and more persistent response to shifts in global or internationally coordinated policy stringency than to changes in average national cross-sectoral policy stringency. This regularity is consistent with the view that international commitments may operate as salient policy signals or benchmarks with more pronounced adjustments in countries' decarbonisation trajectories.

Paris Agreement: Tipping Point or Continuity?

To assess whether the relationship between climate-policy stringency and emissions intensity changed following the adoption of the Paris Agreement, we augment the baseline local projections set up with a post-2015 dummy variable and its interaction with the policy indicator. We estimate:

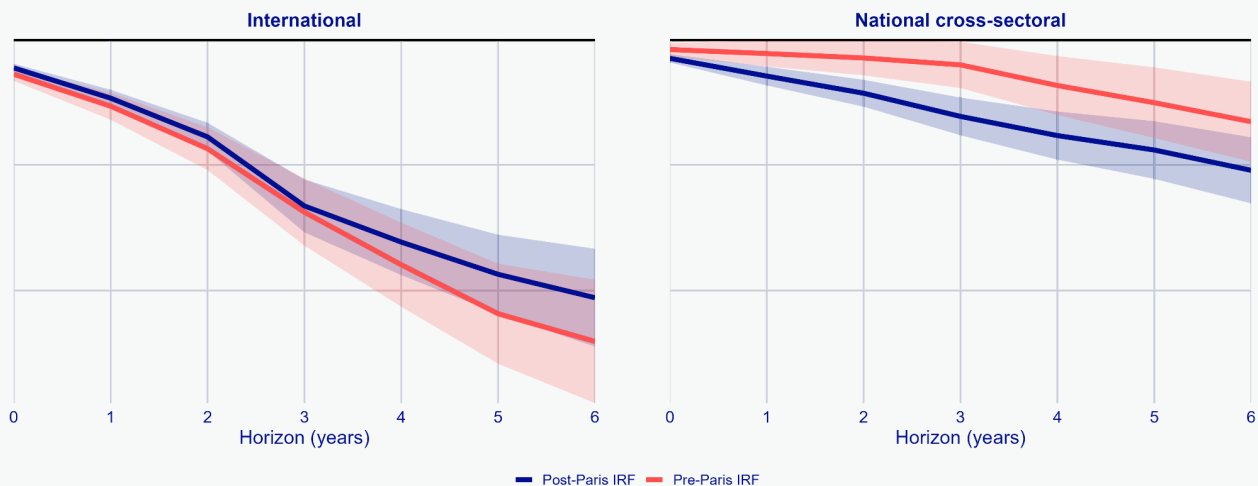
$$\ln y_{i,t+h} = \alpha_i^h + \beta_1^h \text{policy}_{i,t} + \beta_2^h (\text{Post_Paris}_t \times \text{policy}_{i,t}) + \sum_{l=1}^{\mathcal{L}} \theta^h X_{i,t-l} + \phi^h \ln y_{i,t-1} + \delta_1^h D2008 + \delta_2^h D2020 + \epsilon_{i,t}^h$$

where $Post_Paris_t = 1$ from 2016 onward. The coefficient β_1^h captures the response to a policy change as before, while β_2^h measures the change in the response after the Paris Agreement became binding. The interaction framework allows us to test for differential post-Paris effects without splitting the sample.

[Figure 4](#) reports the IRFs for international and cross-sectoral climate policies. For cross-sectoral policies, the post-Paris IRFs display a noticeably stronger and more immediate decline in emissions intensity and the differences are statistically significant from year 1 to 3 following the increase in stringency. This indicates that domestic regulation across sectors became more effective after the Paris Agreement came into effect. This finding is consistent with the view that the Paris Agreement strengthened domestic implementation frameworks and accelerated regulatory adjustments ([Skjærseth et al., 2021](#)).

On the contrary, the estimated interaction effects for international policy stringency are muted. While international policy tightening is associated with declining emissions intensity in both periods, the incremental post-Paris effect is not statistically distinguishable in all horizons.

FIGURE 4: IMPULSE RESPONSE FUNCTIONS OF EMISSIONS INTENSITY
(LOG-LEVEL RESPONSE TO A 1 STD INCREASE IN CLIMATE POLICY STRINGENCY)



Source: Authors' calculations.

Note: The figures show the Impulse Response Functions of the log-level of the emissions intensity ratio at different horizons. The pre-Paris responses (red) and the post-Paris responses (blue), with shaded areas representing the 68% confidence bands.

Differential Enforcement of Climate Policies Across Regulatory Quality Levels

Another potential source of heterogeneity is how effective governments can implement sound policies and regulations. To capture this, we allow the effect of an increase in stringency to differ between countries above and below the median level of regulatory quality. Specifically, we use the Regulatory Quality indicator from the World Governance Indicators (WGI) of the World Bank.

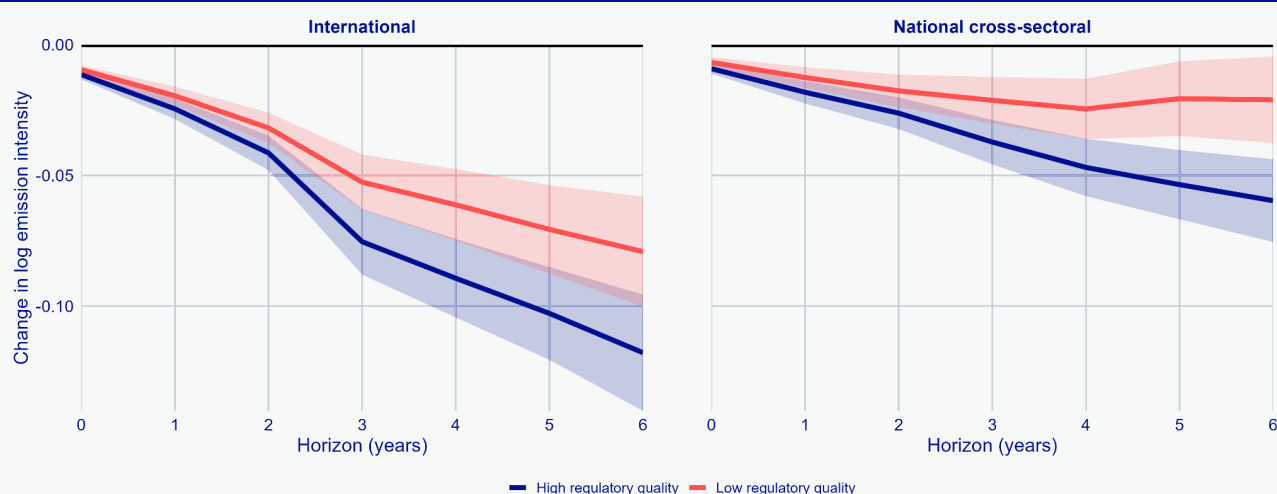
Countries are split into two groups based on whether their mean Regulatory Quality score is above or below the median of the entire sample⁹.

Across both types of policy types, the overall responses for high- and low-regulatory quality countries remain broadly similar to the baseline, indicating that the selected proxy of implementation capability does not materially alter the shape or timing of adjustment. However, the magnitude of the decline following policy-tightening episodes is systematically larger for countries with sounder implementation capabilities ([Figure 5](#)).

The IRFs reveal a persistent gap between the two groups, with countries exhibiting higher regulatory quality experiencing a systematically larger decline in emissions intensity following a one-standard deviation increase in international policy stringency. This pattern suggests that stronger regulatory frameworks may enhance the transmission of international policy signals. Nevertheless, these differences do not reach conventional levels of statistical significance at any horizon, as the confidence intervals of the two impulse responses overlap throughout the projection window.

By contrast, for national cross-sectoral policies, the divergence between the two groups becomes statistically significant in the medium term. Five years after the stringency increase, high-regulatory quality countries exhibit a clearer and more persistent reduction in emissions intensity, while low-quality countries display a much flatter response. **This finding unveils that institutional capacity amplifies the effect of broad domestic policy measures.**

FIGURE 5: IMPULSE RESPONSE FUNCTIONS OF EMISSIONS INTENSITY
(LOG-LEVEL RESPONSE TO A 1 STD INCREASE IN CLIMATE POLICY STRINGENCY)



⁹: Countries classified as *high regulatory quality* are Australia, Austria, Belgium, Canada, Switzerland, Chile, the Czech Republic, Germany, Denmark, Spain, Estonia, Finland, France, the United Kingdom, Ireland, Iceland, Israel, Japan, Lithuania, Luxembourg, Malta, the Netherlands, Norway, New Zealand, and Sweden. Countries classified as *low regulatory quality* are Argentina, Bulgaria, China, Colombia, Costa Rica, Greece, Croatia, Hungary, Indonesia, India, Italy, South Korea, Latvia, Mexico, Peru, Poland, Portugal, Romania, Russia, Saudi Arabia, Slovakia, Slovenia, Turkey, and South Africa.

Note: The figures show the Impulse Response Functions of the log-level of the emissions intensity ratio at different horizons. The solid line is the point estimate, and the shaded areas are the 68% confidence band. Red colour is associated with low-income countries, while blue is associated with high-income countries.

Initial Conditions and Policy Effectiveness: A Crucial Nexus

An important question for climate policy going forward is whether the association between policy stringency and emissions-intensity reductions persists as countries move into more advanced stages of decarbonisation, or whether diminishing returns emerge once the lowest-cost abatement opportunities have been exhausted. At the same time, it is crucial to assess whether similar policy-tightening episodes are accompanied by comparable emissions-intensity adjustments in countries that remain at earlier stages of the transition toward net-zero emissions.

To analyze these potential non-linearities we combine [Koenker and Basset \(1978\)](#) quantile-regression idea with local projections ([Jordà et al., 2022](#)). Quantile Local Projections (QLP) estimate impulse responses at each quantile of the conditional distribution of the dependent variable. Translating our baseline equation to this framework would yield:

$$Q_{\tau}(\ln y_{i,t+h} \mid Z) = \alpha_i^h(\tau) + \beta_1^h(\tau) policy_{i,t} + \sum_{l=1}^{\mathcal{L}} \theta^h(\tau) X_{i,t-l} + \phi^h(\tau) \ln y_{i,t-1} + \delta_1^h(\tau) D2008 + \delta_2^h(\tau) D2020 + \epsilon_{i,t}^h(\tau)$$

where $\beta_1^h(\tau)$ measures the effect of a one standard deviation increase in climate policy stringency on the conditional distribution of emissions intensity. The distribution of the dependent variable is conditional on Z , which contains all the explanatory variables outlined in the baseline regression. In our case, τ ranges from 0.1 to 0.9 by 0.1, resulting in 9 quantiles and a set of $h \times \tau$ (6 x 9) regressions.

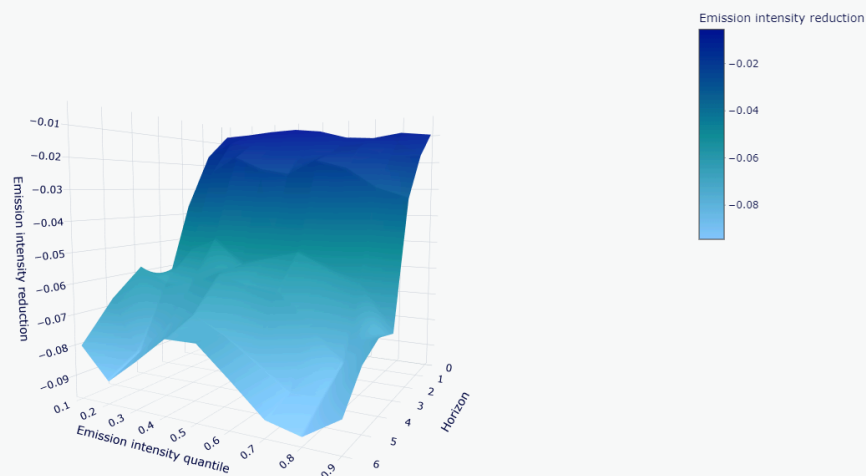
In order to focus on economies with sufficient institutional capacity to implement and enforce policy changes, the estimations are restricted to countries whose regulatory quality index lies above the sample median. This restriction is of extreme importance, as when the full sample is used, the most emissions-intensive countries appear to decarbonise less than cleaner countries, which we attribute to selection bias arising from the concentration of high-intensity economies among low governance countries¹⁰. Once we condition on adequate regulatory quality, the expected non-linearity arises.

[Figure 6](#) shows the quantile IRFs for an increase in international policy stringency. For all quantiles, a one standard deviation tightening is associated with sizable reductions in emissions intensity that deepen over the six-year horizon. From horizon 4 onwards the

¹⁰ This bias is consistent with our earlier finding that low-regulatory quality countries reduce emissions intensity less in response to increased climate policy stringency.

cross-sectional profile displays an asymmetric W-shape. Countries in the lowest and highest emissions-intensity quantiles exhibit the largest percentage reductions, while those in the middle of the distribution responded more weakly. This pattern could be explained because economies with low GHG intensity benefit from advanced technologies, allowing them to translate international commitments into effective additional decarbonisation, whereas high GHG intensity countries possess abundant low-cost abatement opportunities once policy pressure becomes credible. By contrast, countries with intermediate emissions intensity do not take advantage from technological improvements of the cleanest economies nor the “low-hanging-fruit” abatement opportunities of the dirtiest ones, and thus adjust less for the same international policy stringency. Further information on the quantile distribution in the last horizons (where the nonlinearity is more obvious) can be found in the [Annex \(A\)](#).

FIGURE 6: QUANTILE LOCAL PROJECTIONS. INTERNATIONAL POLICIES IMPACT ON EMISSIONS INTENSITY QUANTILES (LOG-LEVEL RESPONSE OF EMISSIONS INTENSITY RATIO TO A 1 STD INCREASE IN INTERNATIONAL POLICIES)



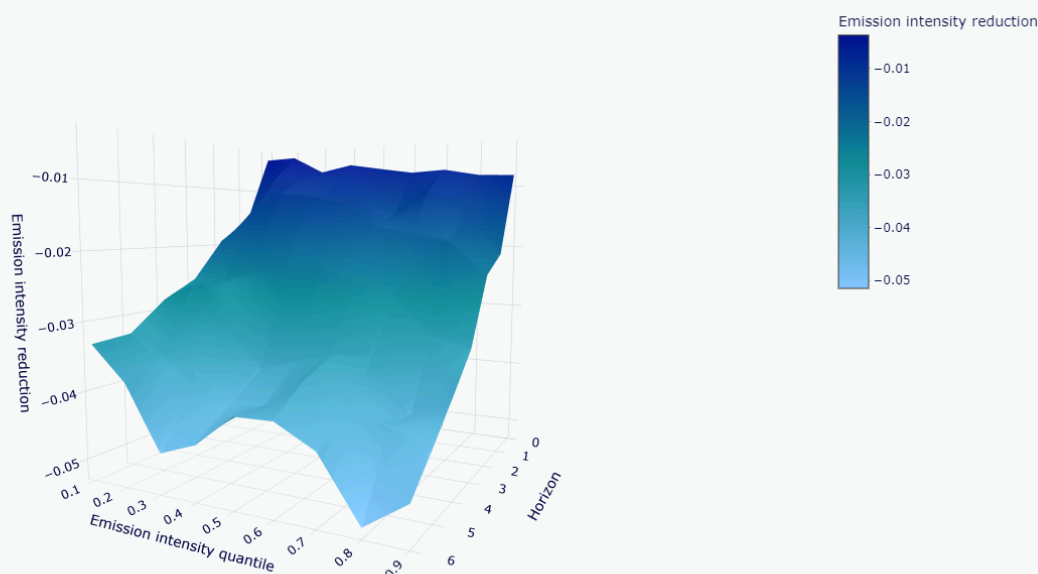
Notes: The Figure displays the estimated coefficient $\beta_1^h(\tau)$ from the regressions explained in the equation above for each horizon h and quantile τ in a 3D plot, where the reduction in emissions intensity is plotted in the z axis. Darker blue represents smaller effects, while lighter blue represents bigger effects.

[Figure 7](#) presents the corresponding quantile IRFs for national cross-sectoral policy stringency. Although the overall magnitude of estimated responses is smaller than for participation in international policies (in line with our baseline estimates), the heterogeneity across quantiles is much more pronounced. The profile at horizon 6 also takes an asymmetric W-shape, but with a larger difference when comparing the bottom quantiles with the middle or top ones. Countries with high emissions intensity (upper quantiles) exhibit the largest medium-run reductions in emissions intensity, approximately 5%. Middle-quantile countries experience reductions of around 4%, and the bottom-quantile countries see reductions exceeding 3%. Further information on the quantile distribution in the last horizons (where the nonlinearity is more obvious) can be found in the [Annex \(A\)](#).

This stronger non-linearity suggests that domestic cross-sectoral policies are especially powerful at unlocking the “easy” abatement margins in very carbon intensive economies, but

remain less effective as we move along the distribution. Again the countries at the bottom and middle of the distribution might have already enjoyed the “easy” abatement costs.

FIGURE 7: QUANTILE LOCAL PROJECTIONS. CROSS-SECTOR POLICIES IMPACT ON EMISSIONS INTENSITY QUANTILES (LOG-LEVEL RESPONSE OF EMISSIONS INTENSITY RATIO TO A 1 STD INCREASE IN CROSS-SECTORAL POLICIES)



Notes: The Figure displays the estimated coefficient $\beta_1^h(\tau)$ from the regressions explained in the equation above for each horizon h and quantile τ in a 3D plot, where the reduction in emissions intensity is plotted in the z axis. Darker blue represents smaller effects, while lighter blue represents bigger effects.

Overall, the QLP analysis reinforces two key messages. First, conditional on adequate regulatory quality, countries with the highest emissions intensity do decarbonise more than cleaner economies, as expected from a marginal-abatement-cost perspective. Second, international policies deliver the largest average reductions in emissions intensity, but the more shaped non-linearity arises from national cross-sectoral policies, where the contrast between very low and very high intensive emitters is most pronounced.

Conclusions

The evidence presented in this note offers a robust, dynamic assessment of the relative effectiveness of international and national cross-sectoral climate policies in driving decarbonisation.

Firstly, we find that both international and national cross-sectoral policy stringency increases are associated with persistent reductions in a country's emissions intensity. However, an increase in international policy stringency generates a larger and more immediate decline, with a 10% reduction after six years, compared to an almost 5% reduction from domestic cross-sectoral policies. This suggests that global agreements and coordinated regulatory signals serve as powerful, credible benchmarks that exert a greater influence on subsequent domestic decarbonisation trajectories.

Secondly, the association between national cross-sectoral policy stringency and emissions-intensity adjustments appears modestly stronger in the post-Paris Agreement period, although this pattern reaches statistical significance only over a limited portion of the projection horizon. This points to the Paris Agreement's role in strengthening domestic implementation frameworks and accelerating regulatory adjustments at the national level. Conversely, the incremental effect of international policy stringency was statistically muted.

Thirdly, institutional capacity emerges as a critical determinant of policy efficacy. While high-regulatory quality countries exhibit a larger overall decline in emissions intensity across both policy types, the divergence between high- and low-regulatory quality countries is only statistically significant for national cross-sectoral policies in the medium term. This unveils that institutional quality, as measured by Regulatory Quality indicators, significantly amplifies the effect of broad domestic policy measures.

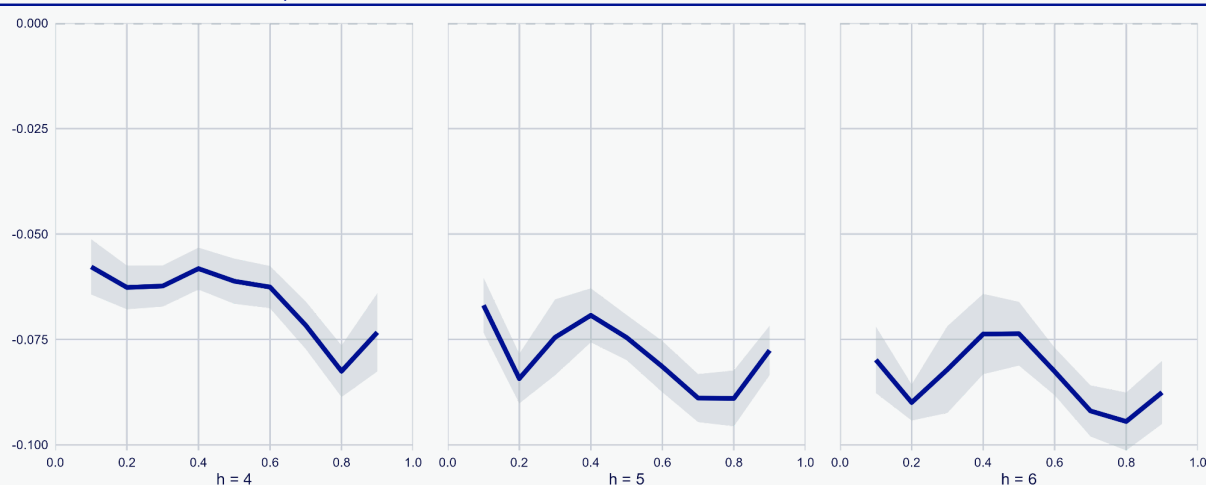
Finally, by employing Quantile Local Projections, we uncover a crucial non-linearity regarding initial emissions conditions. Restricting the sample to countries with adequate regulatory quality, we find that the largest percentage reductions in emissions intensity following an increase in international policy stringency occur in countries at the lowest and highest ends of the emissions-intensity distribution (the 'very clean' and 'very dirty' quantiles), resulting in an asymmetric W-shaped profile. This is consistent with advanced, clean economies leveraging ability to enforce and develop degree and high-intensity economies possessing abundant low-cost abatement opportunities. In contrast, economies in the quantile of intermediate emissions intensity exhibit a weaker response, suggesting a relative lack of both technological advantages and/or easily available abatement "low-hanging fruit." Collectively, these results underscore the need for a multi-faceted climate policy strategy that combines strong international coordination with domestically targeted measures, adapted to both the institutional capacity and initial decarbonisation stage of each economy.

Annex

A. Quantile Local Projections across horizons

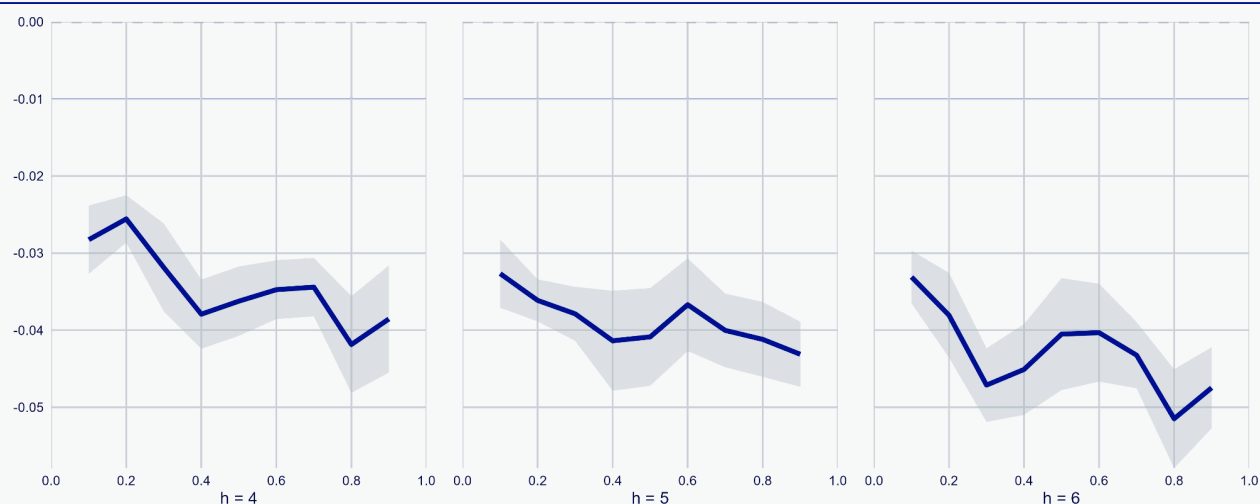
In this annex we report the responses across the quantiles for the last horizons, as these are the ones where the heterogeneity displays.

FIGURE A1: QUANTILE LOCAL PROJECTIONS. INTERNATIONAL POLICIES IMPACT ON EMISSIONS INTENSITY QUANTILES (LOG-LEVEL RESPONSE OF EMISSIONS INTENSITY RATIO TO A 1 STD INCREASE IN INTERNATIONAL POLICIES)



Notes: The shaded blue area represents the 68% percent confidence bands. The solid blue line represents the point estimate of the coefficient. Responses have been scaled to show the impact of a 1 standard deviation change in the policy stringency indicators

FIGURE A2: QUANTILE LOCAL PROJECTIONS. CROSS-SECTOR POLICIES IMPACT ON EMISSIONS INTENSITY QUANTILES (LOG-LEVEL RESPONSE OF EMISSIONS INTENSITY RATIO TO A 1 STD INCREASE IN CROSS-SECTORAL POLICIES)



Notes: The shaded blue area represents the 68% percent confidence bands. The solid blue line represents the point estimate of the coefficient. Responses have been scaled to show the impact of a 1 standard deviation change in the policy stringency indicators

DISCLAIMER

The present document does not constitute an “Investment Recommendation”, as defined in Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse (“MAR”). In particular, this document does not constitute “Investment Research” nor “Marketing Material”, for the purposes of article 36 of the Regulation (EU) 2017/565 of 25 April 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council as regards organisational requirements and operating conditions for investment firms and defined terms for the purposes of that Directive (MIFID II).

Readers should be aware that under no circumstances should they base their investment decisions on the information contained in this document. Those persons or entities offering investment products to these potential investors are legally required to provide the information needed for them to take an appropriate investment decision.

This document has been prepared by BBVA Research Department. It is provided for information purposes only and expresses data or opinions regarding the date of issue of the report, prepared by BBVA or obtained from or based on sources we consider to be reliable, and have not been independently verified by BBVA. Therefore, BBVA offers no warranty, either express or implicit, regarding its accuracy, integrity or correctness.

This document and its contents are subject to changes without prior notice depending on variables such as the economic context or market fluctuations. BBVA is not responsible for updating these contents or for giving notice of such changes.

BBVA accepts no liability for any loss, direct or indirect, that may result from the use of this document or its contents.

This document and its contents do not constitute an offer, invitation or solicitation to purchase, divest or enter into any interest in financial assets or instruments. Neither shall this document nor its contents form the basis of any contract, commitment or decision of any kind.

The content of this document is protected by intellectual property laws. Reproduction, transformation, distribution, public communication, making available, extraction, reuse, forwarding or use of any nature by any means or process is prohibited, except in cases where it is legally permitted or expressly authorised by BBVA on its website www.bbvaresearch.com.