ICAI, UPC

Fiscalidad del transporte:

Necesidades y Realidades

Xavier Labandeira

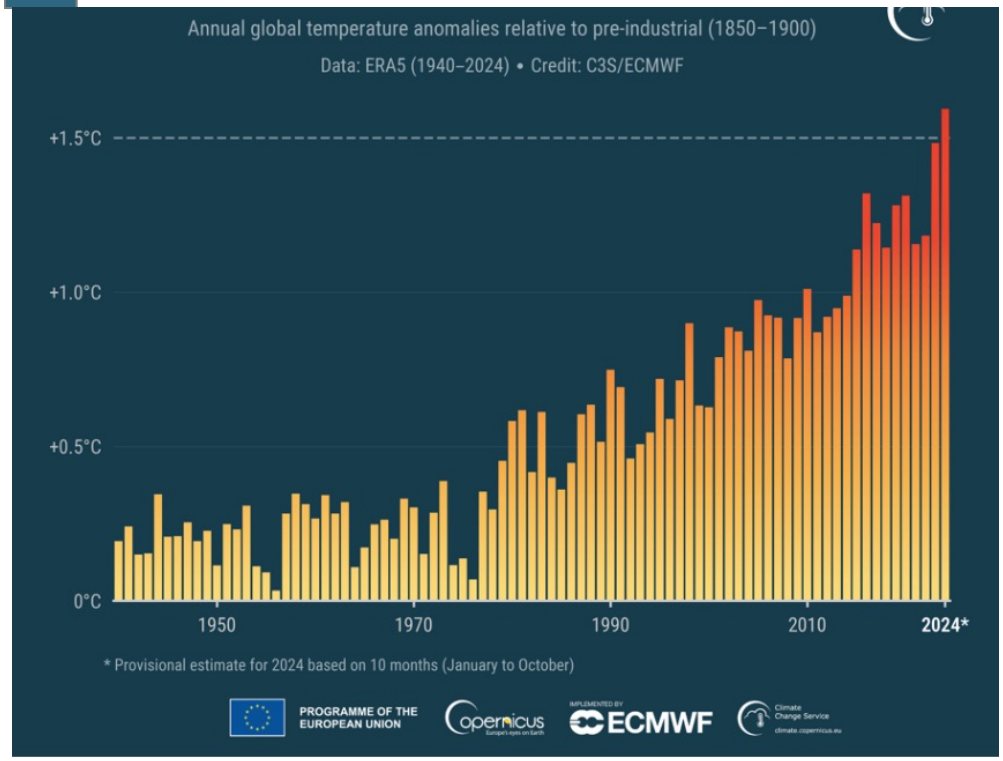
Universidade Vigo

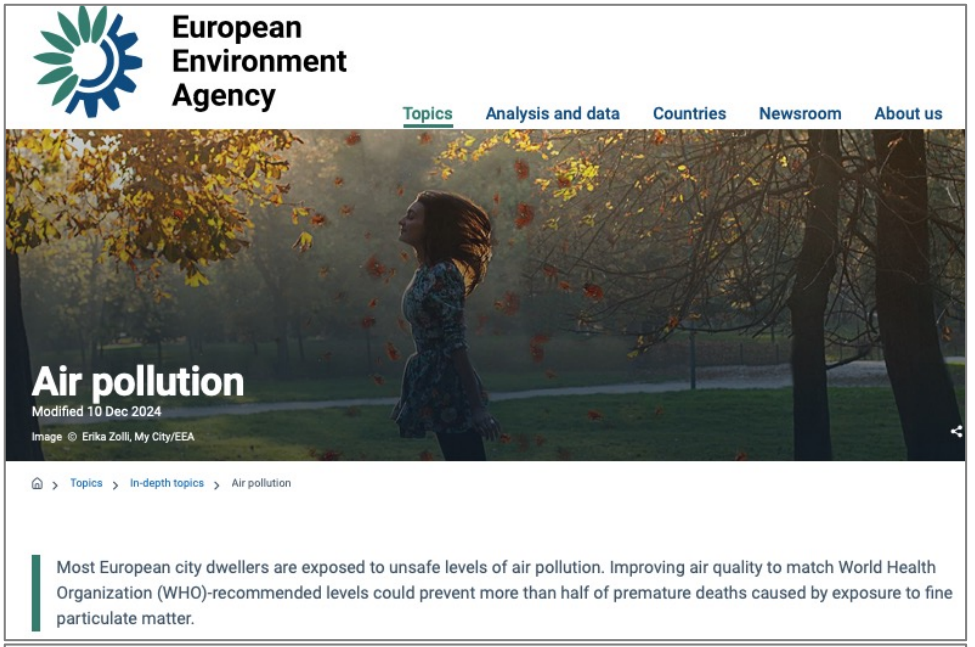
ECOBAS
Economics and Business Administration for Society

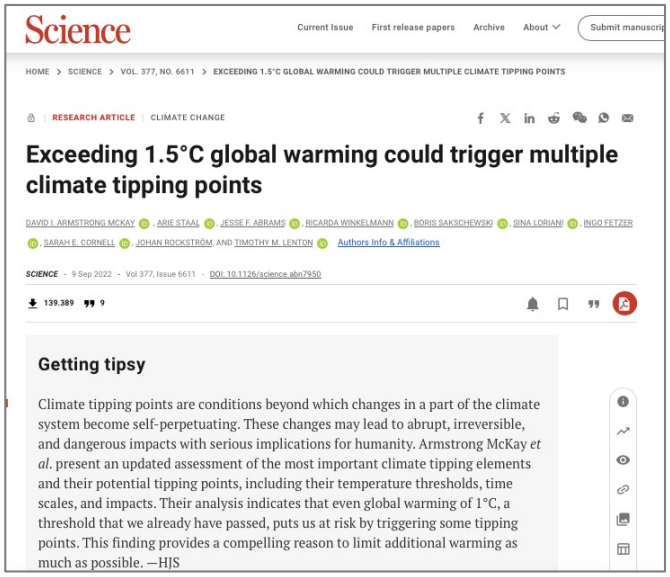
Madrid, 9 mayo 2025

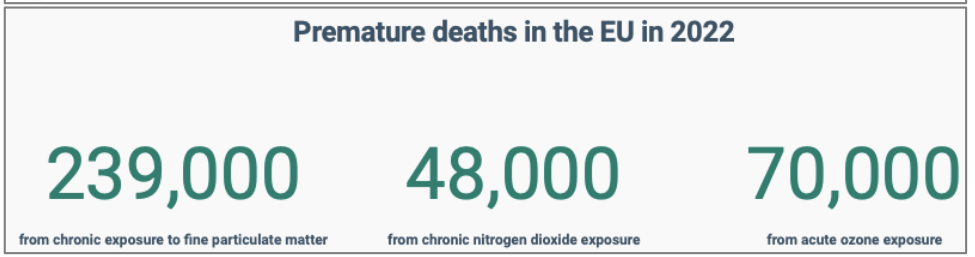
- **Expectativas no cumplidas con la fiscalidad Ambiental**
- **Desafíos del sector transporte: España como ilustración**
- **EUETS-2**

Environmental Taxation

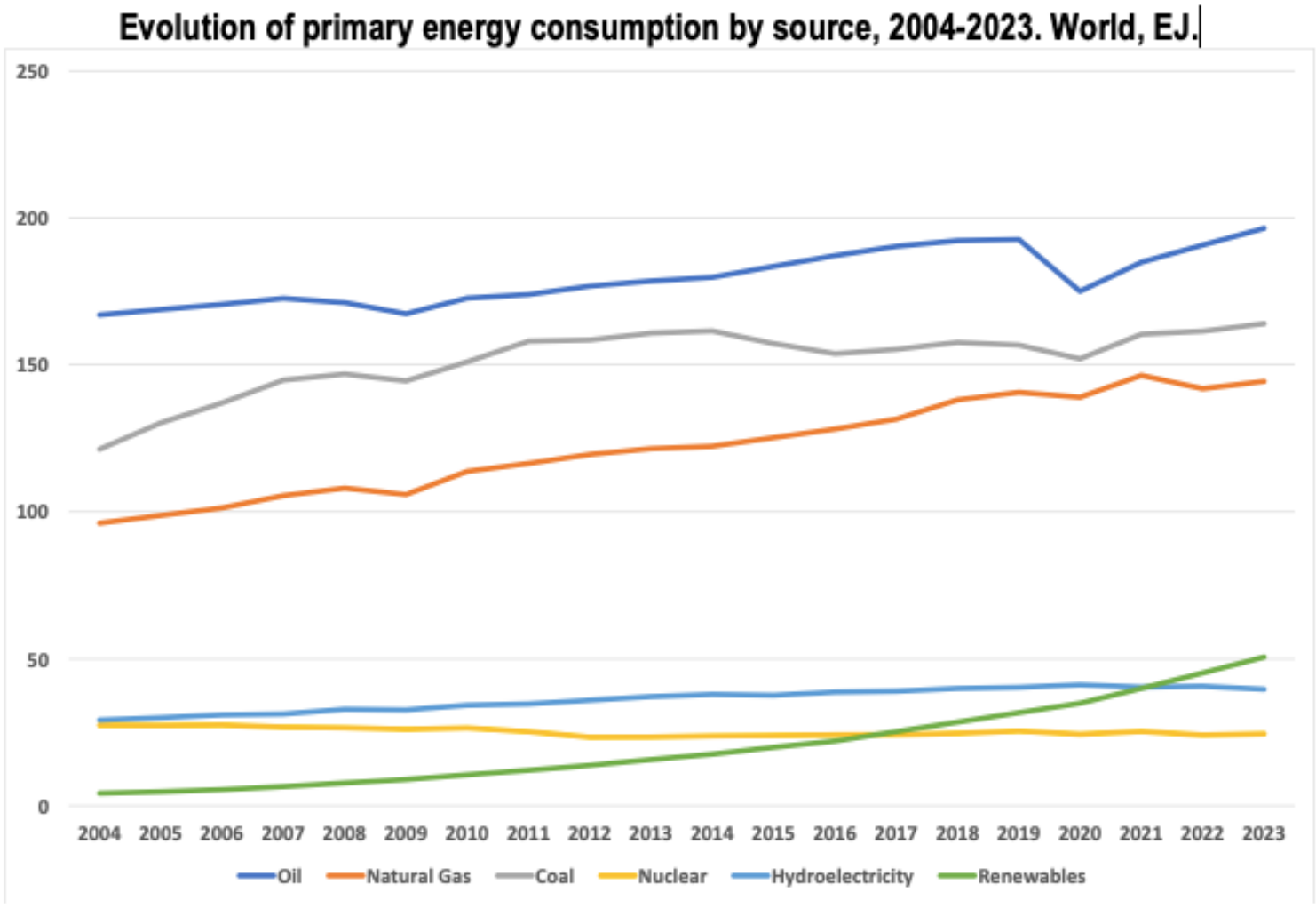








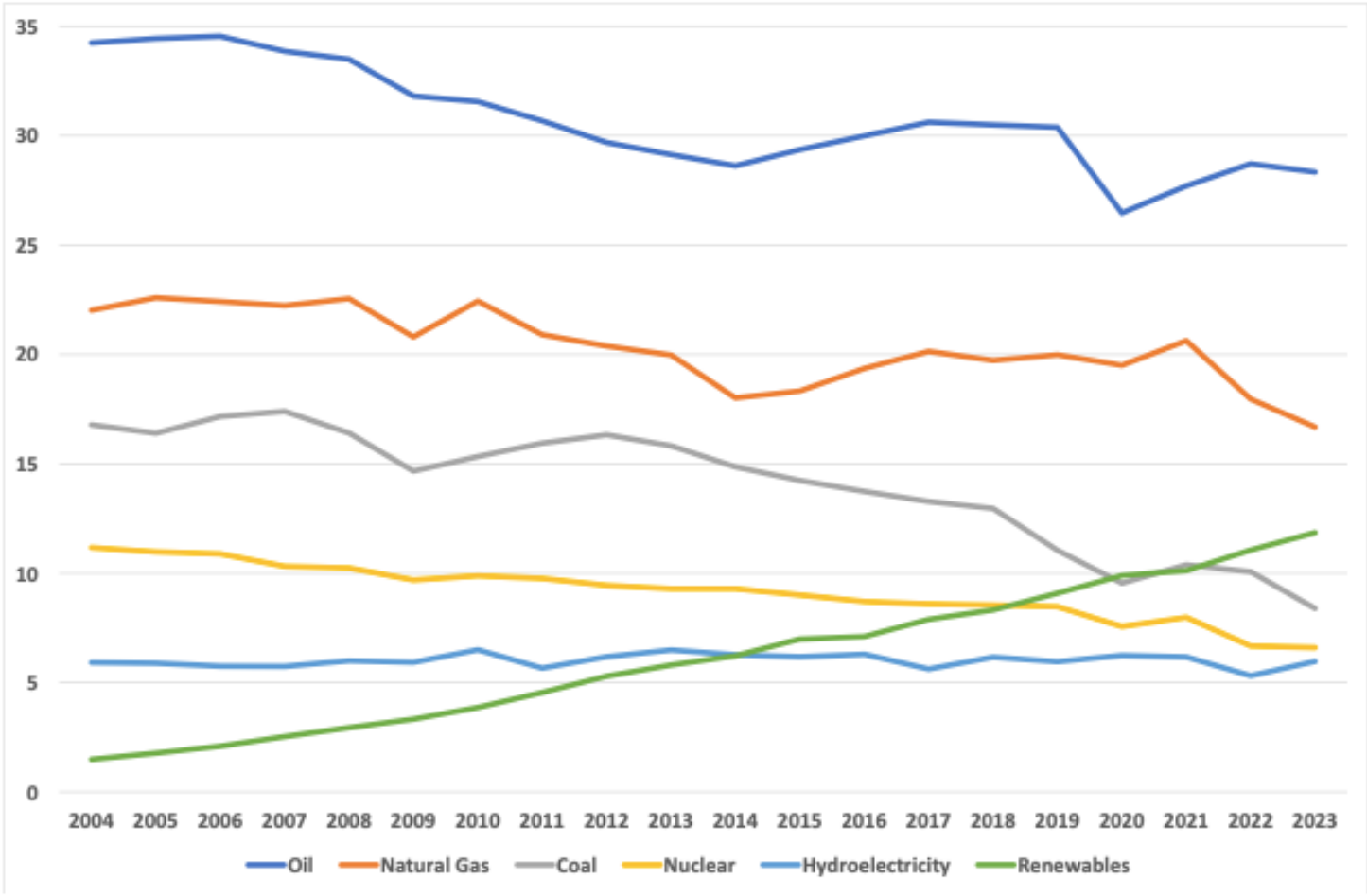
Fossil fuels keep growing



Source: Energy Institute – Statistical Review of World Energy

And reigning in the EU

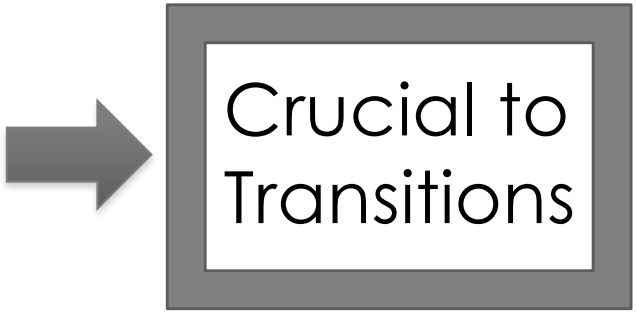
Evolution of primary energy consumption by source, 2004-2023. EU, EJ.



Source: Energy Institute – Statistical Review of World Energy

Why prices for environmental policies?

- Account for social costs ("set prices well")
- Cost-effectiveness
- Salience
- Promote innovation
- Raise revenues for:
  - Distributional compensations
  - Fund the transitions (Energy efficiency, etc.)
- Necessary (not sufficient) for the vast transformations associated to sustainable societies



THE WALL STREET JOURNAL.
THURSDAY, JANUARY 17, 2019

ORIGINAL CO-SIGNATORIES INCLUDE

4 Former Chairs of the Federal Reserve (All)

27 Nobel Laureate Economists

15 Former Chairs of the Council of Economic Advisers

2 Former Secretaries of the U.S. Department of Treasury

Economists' Sign-On Form

ECONOMISTS' STATEMENT ON CARBON DIVIDENDS

Global climate change is a serious problem calling for immediate national action. Guided by sound economic principles, we are united in the following policy recommendations.

I. A carbon tax offers the most cost-effective lever to reduce carbon emissions at the scale and speed that is necessary. By correcting a well-known market failure, a carbon tax will send a powerful price signal that harnesses the invisible hand of the marketplace to steer economic actors towards a low-carbon future.

II. A carbon tax should increase every year until emissions reductions goals are met and be revenue neutral to avoid debates over the size of government. A consistently rising carbon price will encourage technological innovation and large-scale infrastructure development. It will also accelerate the diffusion of carbon-efficient goods and services.

III. A sufficiently robust and gradually rising carbon tax will replace the need for various carbon regulations that are less efficient. Substituting a price signal for cumbersome regulations will promote economic growth and provide the regulatory certainty companies need for long- term investment in clean-energy alternatives.

IV. To prevent carbon leakage and to protect U.S. competitiveness, a border carbon adjustment system should be established. This system would enhance the competitiveness of American firms that are more energy-efficient than their global competitors. It would also create an incentive for other nations to adopt similar carbon pricing.

V. To maximize the fairness and political viability of a rising carbon tax, all the revenue should be returned directly to U.S. citizens through equal lump-sum rebates. The majority of American families, including the most vulnerable, will benefit financially by receiving more in "carbon dividends" than they pay in increased energy prices.

ORIGINAL CO-SIGNATORIES

George Akerlof Nobel Laureate Economist	**Alan Greenspan** Former Chair, Federal Reserve Former Chair, CEA	**Eric Maskin** Nobel Laureate Economist	**William Sharpe** Nobel Laureate Economist
Robert Aumann Nobel Laureate Economist	**Lars Peter Hansen** Nobel Laureate Economist	**Daniel McFadden** Nobel Laureate Economist	**Robert Shiller** Nobel Laureate Economist
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Michael Boskin Former Chair, CEA	**Glenn Hubbard** Former Chair, CEA	**Edmund Phelps** Nobel Laureate Economist	**Robert Solow** Nobel Laureate Economist
Angus Deaton Nobel Laureate Economist	**Daniel Kahneman** Nobel Laureate Economist	**Christina Romer** Former Chair, CEA	**Michael Spence** Nobel Laureate Economist
Peter Diamond Nobel Laureate Economist	**Alan Krueger** Former Chair, CEA	**Harvey Rosen** Former Chair, CEA	**Lawrence Summers** Former Treasury Secretary
Robert Engle Nobel Laureate Economist	**Finn Kydland** Nobel Laureate Economist	**Alvin Roth** Nobel Laureate Economist	**Richard Thaler** Nobel Laureate Economist
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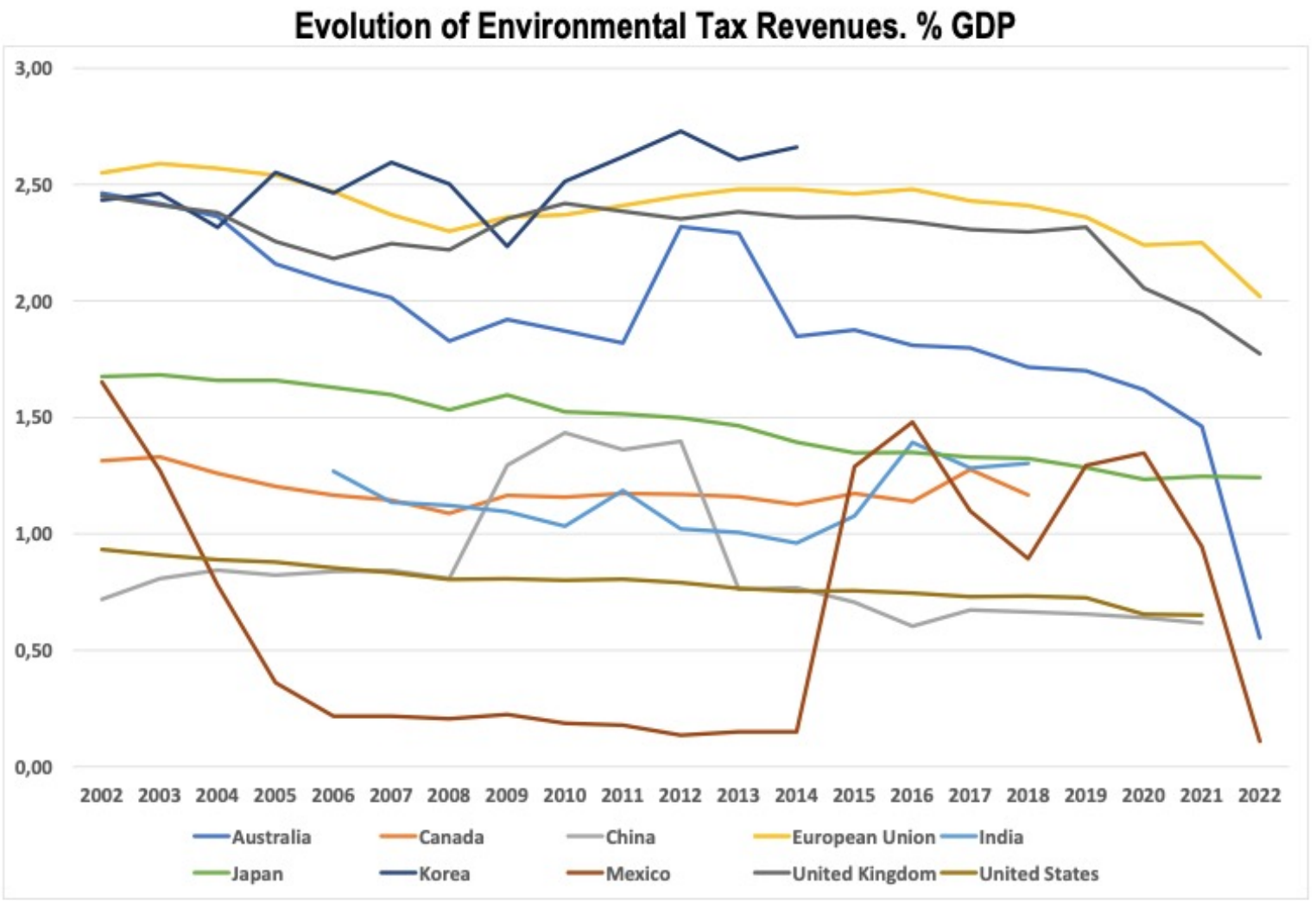
Martin Feldstein Former Chair, CEA	**Robert Lucas** Nobel Laureate Economist	**Myron Scholes** Nobel Laureate Economist	**Paul Volcker** Former Chair, Federal Reserve
Jason Furman	**N. Gregory Mankiw**	**Amartya Sen**	**Janet Yellen**

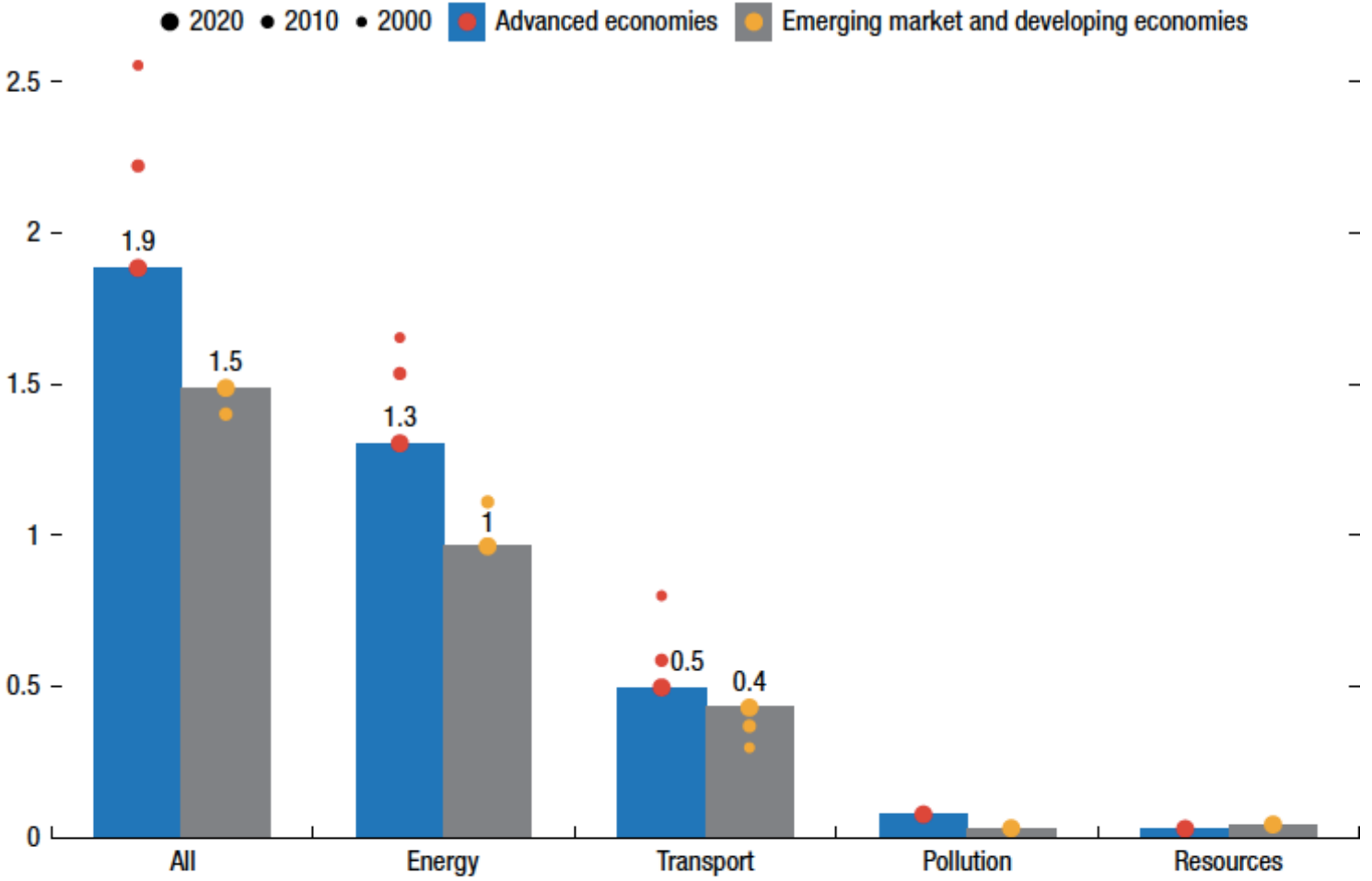
BUT...



Sources: OECD, 2025. OECD data explorer. Environmentally related tax revenue
European Commission, 2025. Taxation and customs union. Data on taxation. Tax revenue by economic function.

Data

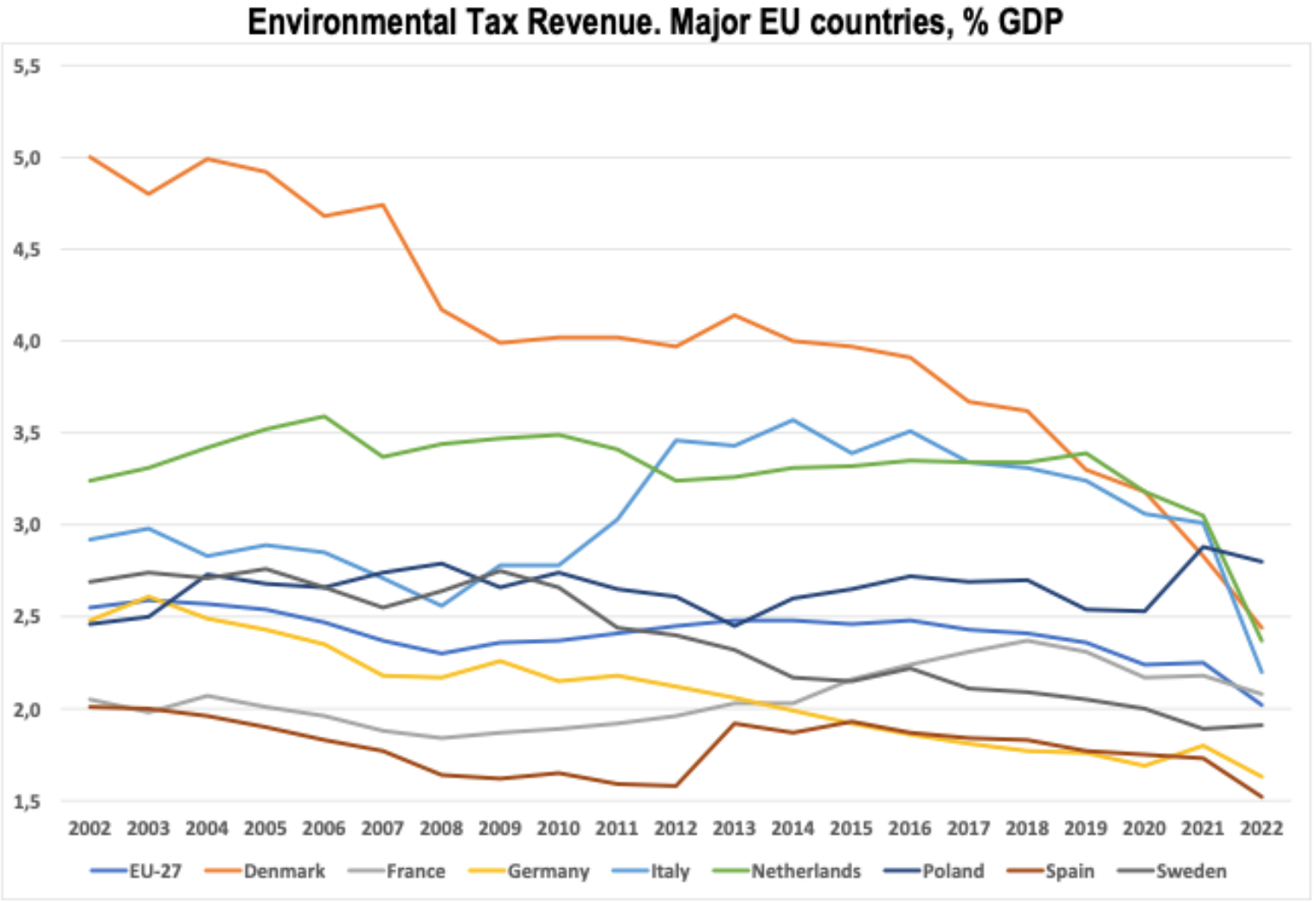
Figure 3.2. Environmental Tax Revenue as a Percentage of GDP in Emerging Market and Developing Economies versus Advanced Economies, 2000, 2010, and 2020
(By tax base category, GDP per capita-weighted average)



Source: Authors' calculations using Organisation for Economic Co-operation and Development (2022c).

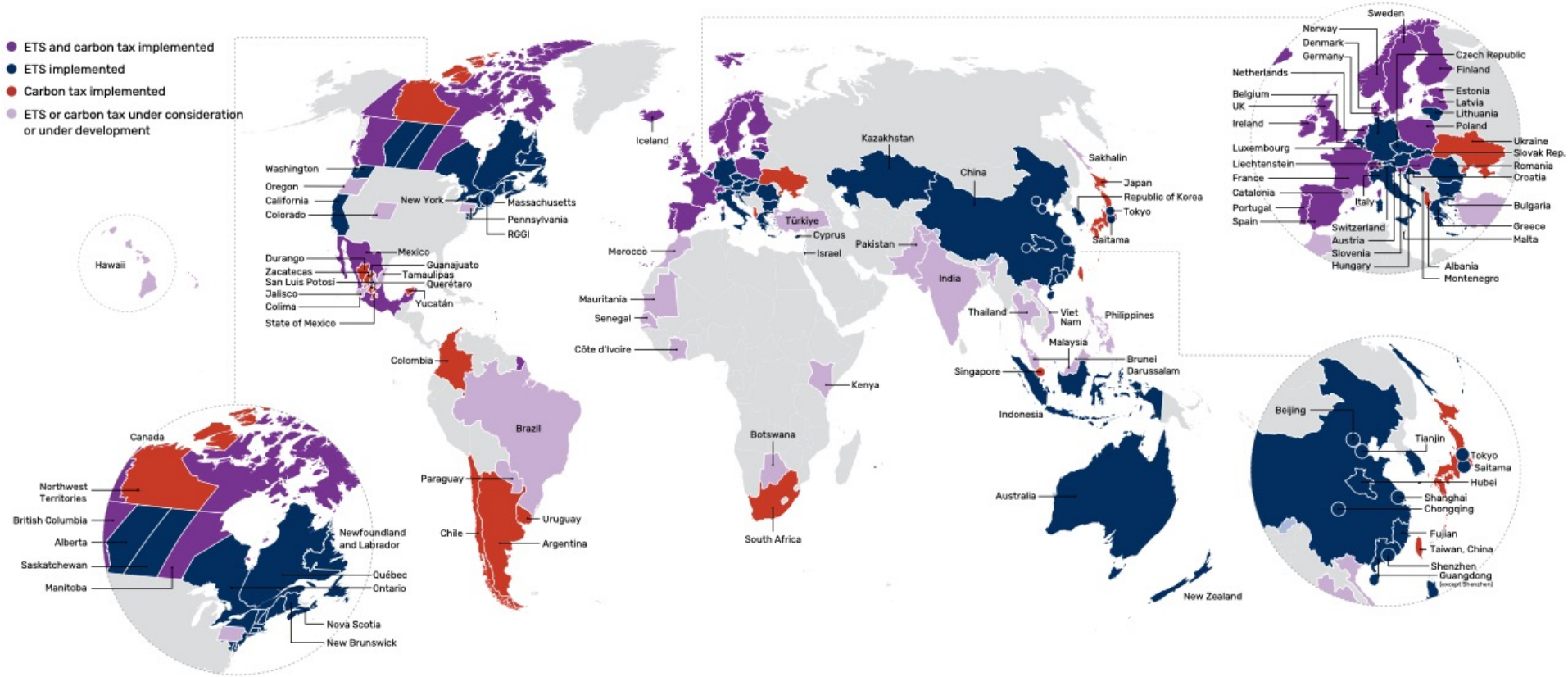
Source: Khan et al. (2023)

Data



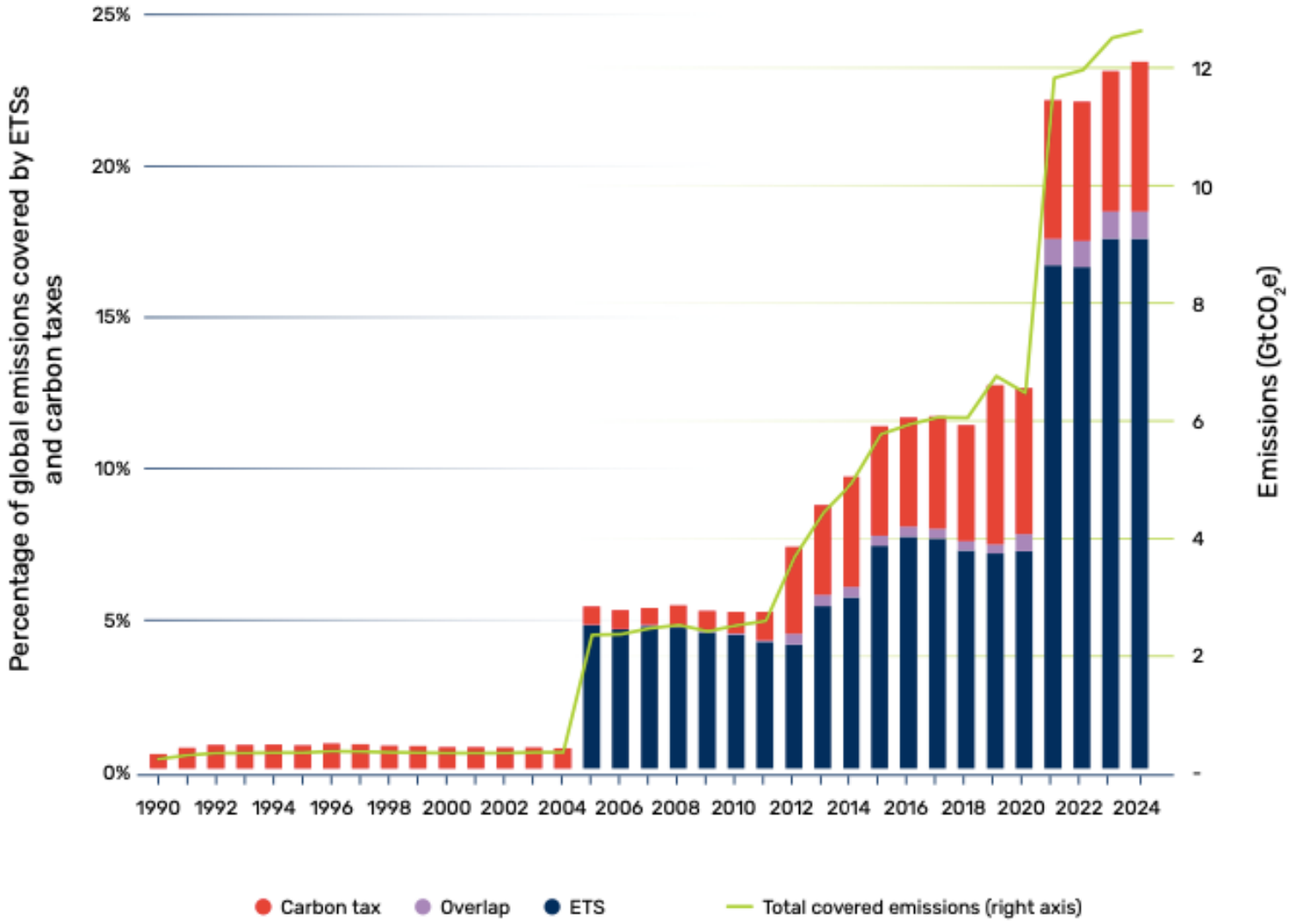
Source: European Commission, 2025. Taxation and customs union. Data on taxation. Tax revenue by economic function.

Carbon pricing across the world



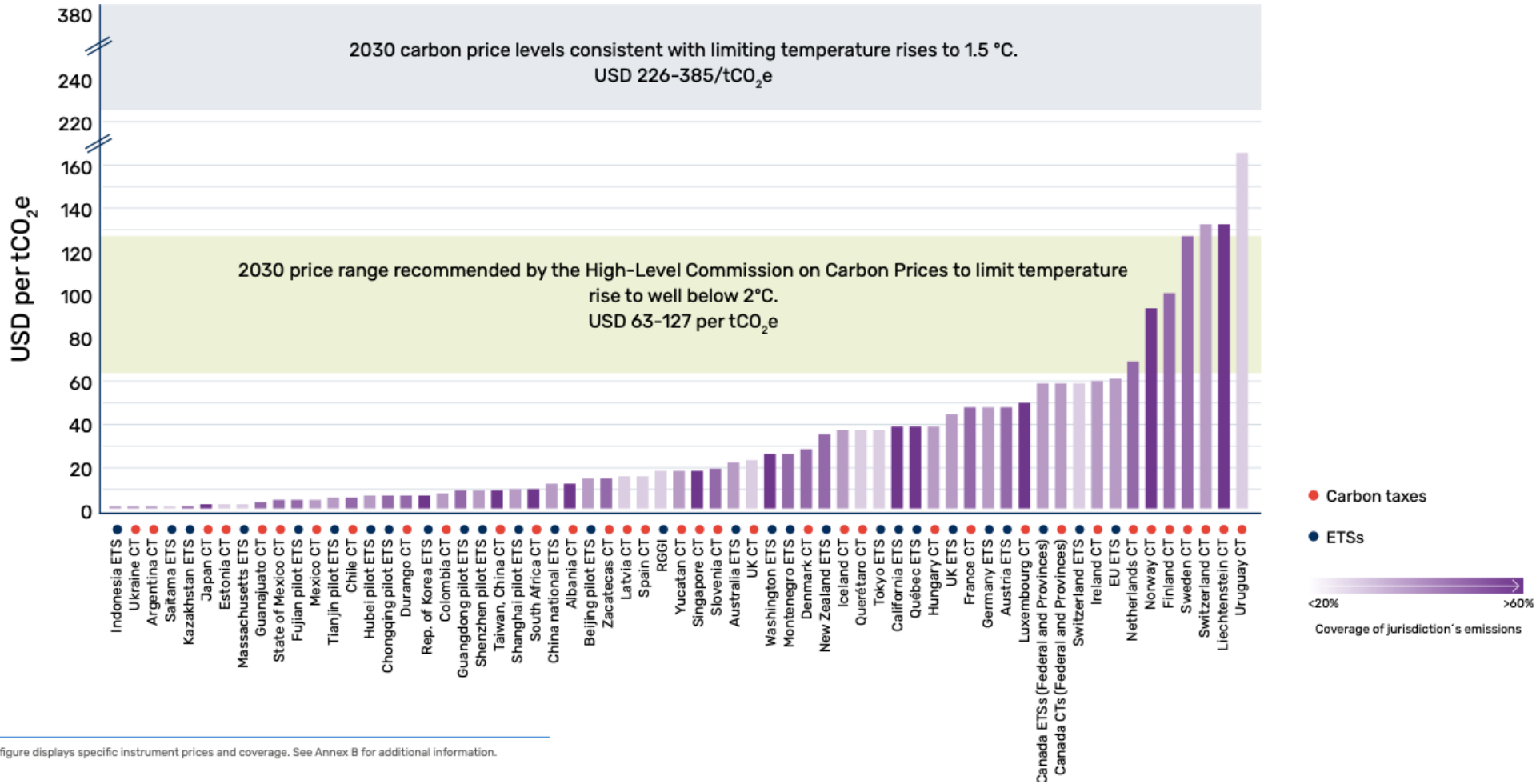
Source: World Bank

Carbon pricing across the world



Source: World Bank

Carbon pricing across the world



The figure displays specific instrument prices and coverage. See Annex B for additional information.

Source: World Bank

The Economic Journal, 101 (July 1991), 938–948
Printed in Great Britain

THE ROLE OF CARBON TAXES IN ADJUSTING TO GLOBAL WARMING

David Pearce

I. INTRODUCTION

In August 1990, Working Group 1 of the United Nations Intergovernmental Panel on Climate Change (IPCC) published its assessment of the scientific evidence on global warming (Houghton, Jenkins and Ephraums, 1990). Referring to the greenhouse effect as a natural phenomenon, the Working Group was none the less of the opinion that:

> emissions resulting from human activities are substantially increasing the atmospheric concentrations of the greenhouse gases: carbon dioxide, methane, chlorofluorocarbons (CFCs) and nitrous oxide. These emissions will enhance the greenhouse effect, resulting on average in an additional warming of the Earth's surface. The main greenhouse gas, water vapour, will increase in response to global warming and further enhance it.

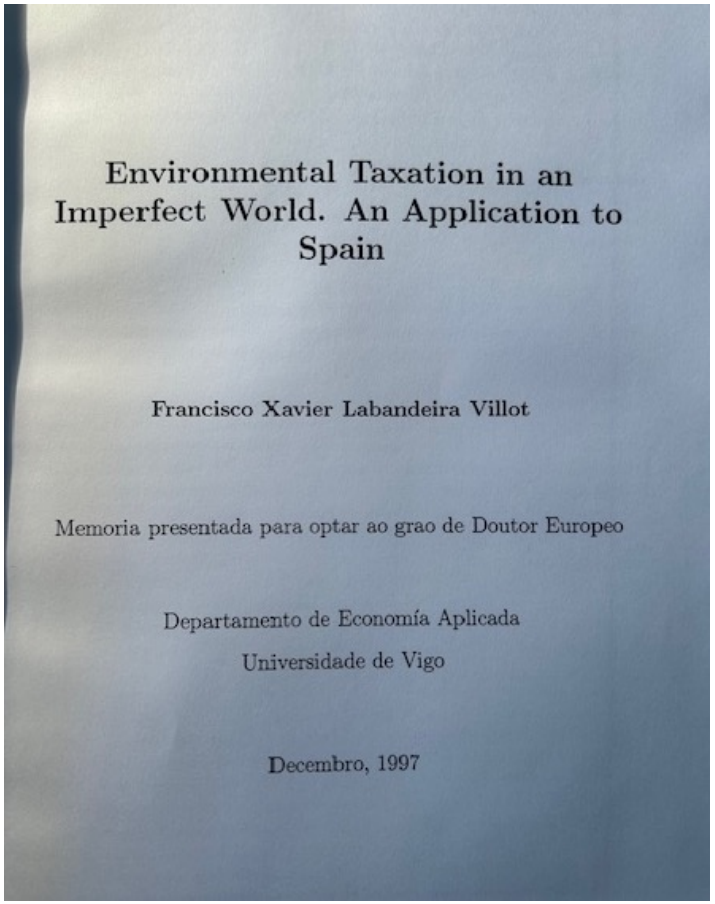
Scientific opinion continues to differ on the extent to which global warming is 'real', although the IPCC report poses a formidable challenge for anyone choosing not to believe it.[1] From the economic standpoint, the uncertainty is unlikely to alter the appropriate policy stance, provided certain conditions are met. These are:

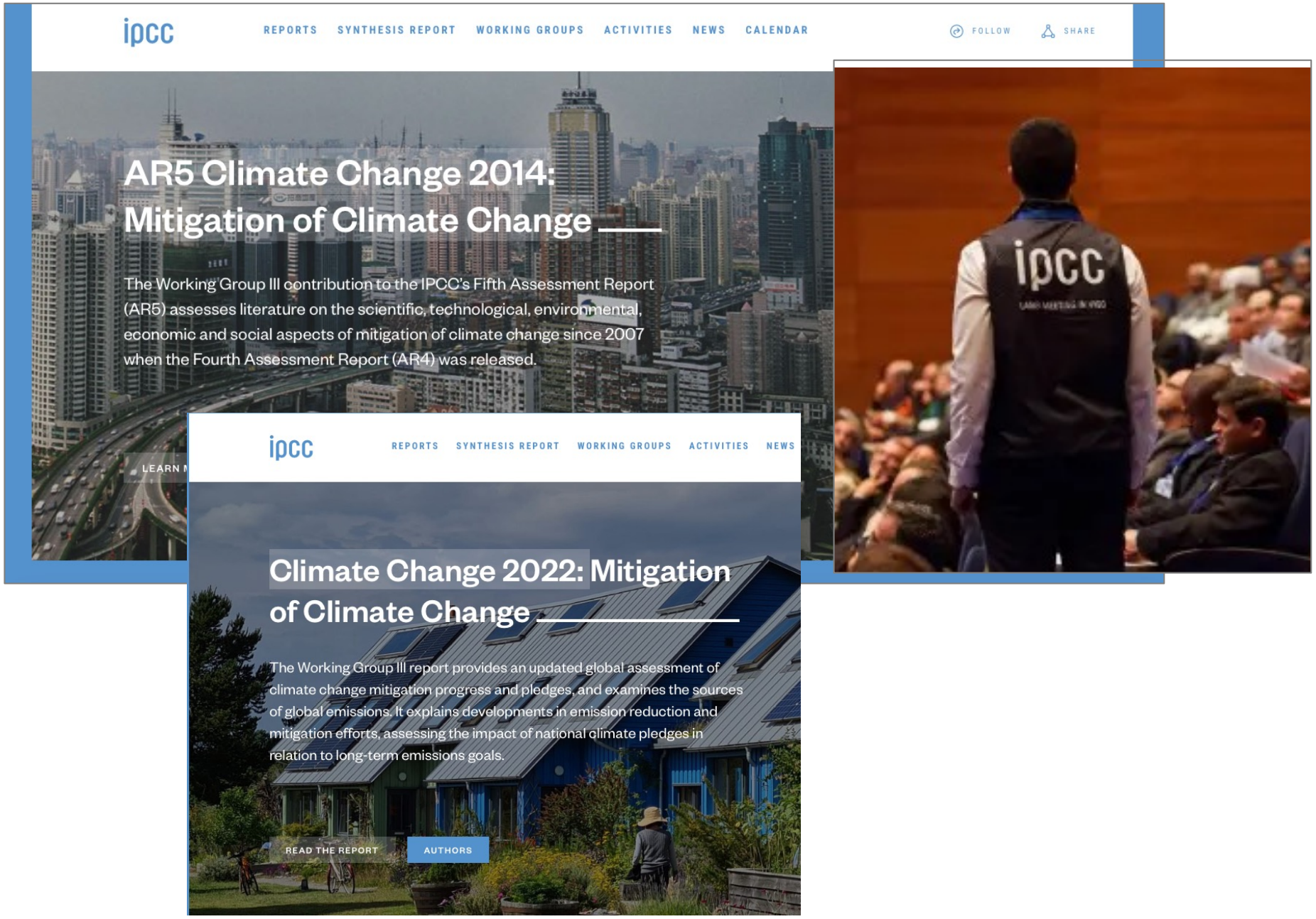
(*a*) That if warming occurs it will impose significant damage;
(*b*) that the damage is irreversible;
(*c*) that the *initial* costs of controlling greenhouse gas emissions are low,
(*d*) that greenhouse gas controls bring incidental or joint benefits besides the containment of global warming.

As the previous two papers have shown, the evidence about these conditions is itself disputed. However, even the central projections of global warming in the IPCC scenarios take the world into *rates* of warming, and, eventually, *levels* of warming outside the known tolerances of ecosystems in which mankind has a stake. If so, there is genuine uncertainty which alone should dictate a cautious stance in policy terms.[2]

Moreover to all intents and purposes, global warming is irreversible. Damages ought therefore to attract a higher weighting than comparable costs, either (*a*) through the inclusion of damage costs over very long time horizons (technically, to infinity) – in which case the issue of the choice of the appropriate discount rate arises, or (*b*) through some premium on costs for

[1] The main challenge to IPCC has come from the George C. Marshall Institute, *Scientific Perspectives on the Greenhouse Problem*, George C. Marshall Institute, Washington D.C., 1990. For a severe critique of this report see J. Gribbin, 'An Assault on the Climate Consensus'. *New Scientist*, 15 December 1990, 26–31.
[2] For a discussion, see Pearce (1990).

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The Working Group III contribution to the IPCC's Fifth Assessment Report (AR5) assesses literature on the scientific, technological, environmental, economic and social aspects of mitigation of climate change since 2007 when the Fourth Assessment Report (AR4) was released.
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LIBRO BLANCO SOBRE LA REFORMA TRIBUTARIA

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COMITÉ DE PERSONAS EXPERTAS PARA ELABORAR EL LIBRO BLANCO SOBRE LA REFORMA TRIBUTARIA

EL PAÍS

Clima y Medio Ambiente

EMERGENCIA CLIMÁTICA > | OPINIÓN

Fiscalidad ambiental: se agotan las excusas y el tiempo para actuar

El Congreso bloquea una medida necesaria para conseguir la reducción y eliminación del uso de los combustibles fósiles, causa principal del cambio climático

Vista gener

XAVIER LABANDEIRA

28 NOV 2024 - 13:29 CET

- **Why such unfulfilled expectations?**
  - Emphasis on efficiency?
  - Too optimistic double dividend ideas
  - Limited coverage: Substitution by ETS
  - Pervasive Barriers
    - Distributional concerns
    - Competitiveness issues
    - Lobbyism and opposition
  - Low tax rates and large exemptions

American Economic Review 2025, 115(4): 1258–1300
https://doi.org/10.1257/aer.20230501

Fighting Climate Change: International Attitudes toward Climate Policies†

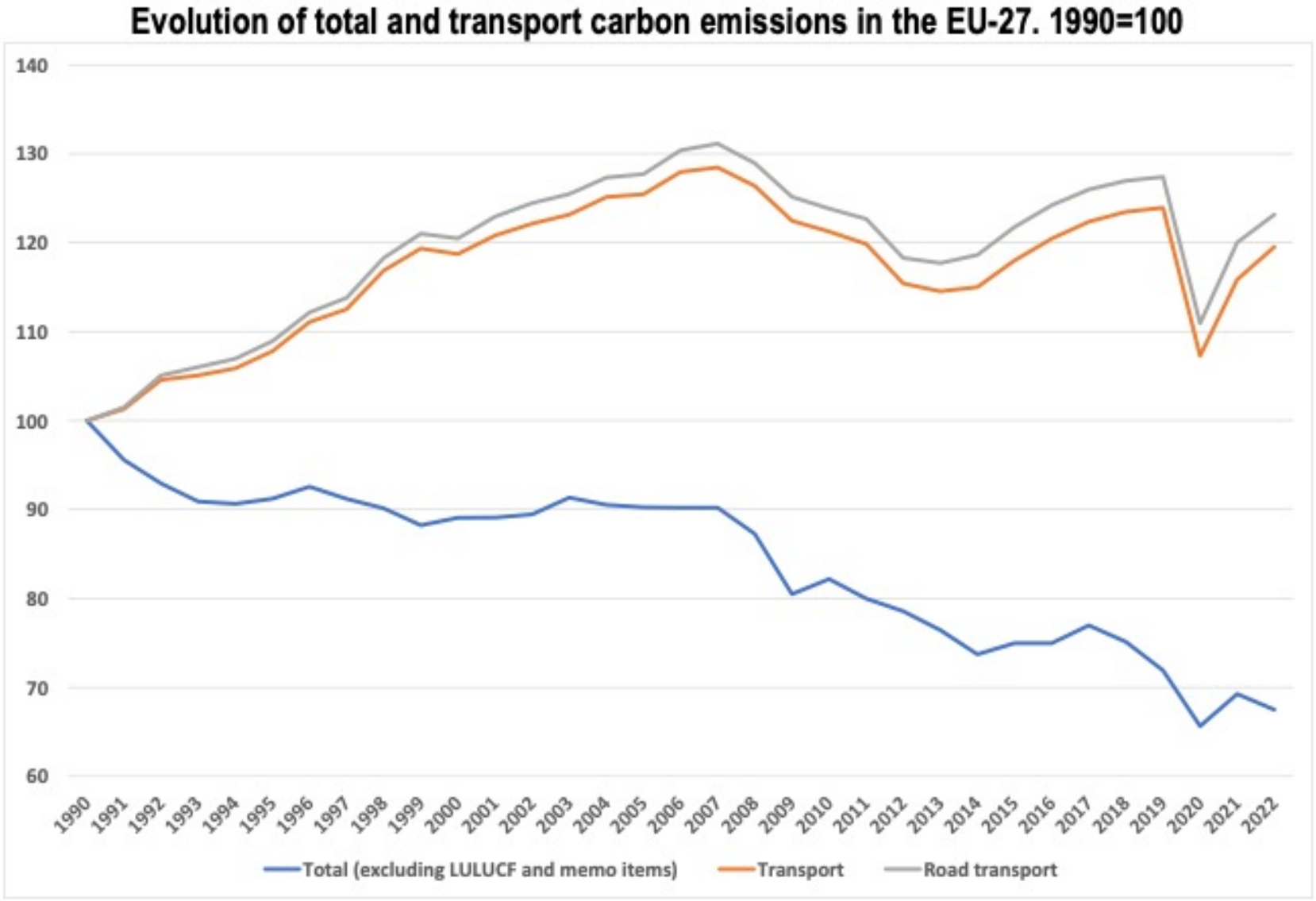
By Antoine Dechezleprêtre, Adrien Fabre, Tobias Kruse, Bluebery Planterose, Ana Sanchez Chico, and Stefanie Stantcheva*

This paper explores global perceptions and understanding of climate change and policies, examining factors that influence support for climate action and the impact of different types of information. We conduct large-scale surveys with 40,000 respondents from 20 countries, providing new international data on attitudes toward climate change and respondents' socioeconomic backgrounds and lifestyles. We identify three key perceptions affecting policy support: perceived effectiveness of policies in reducing emissions, their impact on low-income households, and their effect on respondents' households (self-interest). Educational videos clarifying policy mechanisms increase support for climate policies; those merely highlighting climate change's impacts do not. (*JEL* C83, D83, D91, Q54, Q58)

Limiting the average temperature increase to less than 2°C above preindustrial levels requires drastically reducing global emissions by 2050 (IPCC 2021). Judging by publicly announced long-term commitments and goals, policymakers appear to be taking this imperative seriously. Over 140 countries representing 90 percent of global greenhouse gas (GHG) emissions have so far adopted or announced climate neutrality targets (Wallach 2021) implying net-zero GHG emissions by midcentury. However, while climate mitigation ambitions are robust, bold policy measures to achieve them are strikingly lagging. Global energy-related and industrial process

A change of mood?

- Geopolitical shifts
  - Less fossil-fuel dependence
  - More tax revenues needed
  - Competitiveness and tariffs
- How much time left for flexible approaches?
- Sizeable room for expansion in transport



Source: Eurostat

A detour (1): Simultaneous rationales

- Some environmental taxes might have other relevant objectives (one instrument with several purposes, vs one purpose with several instruments)
- This is particularly the case in taxes on energy products
  - Environmental component
  - Pure revenue raising (Ramsey)
  - Energy dependence (to keep part of the resource rent)

A detour (2): Revenue use

- Sizable revenue potentials even with only environmental objectives
- It raises the debate of revenue use
  - Environmental Earmarking
    - Social acceptance; political marketing
  - Ecological transition: RE, EE, etc.
  - Distributional compensations
  - (Green) Tax reform
    - Theory of double dividend
      - Strong and weak (interactions effects)

A detour (3): Distribution

- Tax revenues (and abatement costs) are distributed across households, sectors, regions, etc.
- Need of proper tax incidence analysis
- How to compensate?
- However, discussions should focus beyond environmental taxes:
  - The costs of doing nothing
  - The costs of sub-optimal policies
  - Compensations with pricing approaches

Viernes 18 de junio de 2021 ELPAÍS 13

OPINIÓN

Una compensación justa en la transición verde

XAVIER LABANDEIRA

Para proteger los avances hacia la sostenibilidad se debe minimizar la desigualdad en el reparto de costes de la política climática, dando ayudas no en general, sino de manera selectiva a los más afectados

En las últimas semanas ha quedado claro que el camino a la descarbonización de nuestras economías no será fácil. A pesar de que la población de los países avanzados declara una preocupación creciente por los problemas del cambio climático, se multiplican las protestas ante el aumento de los precios energéticos causados por las políticas climáticas y en algunos lugares empieza a discutirse la acelerada expansión de las renovables. El fenómeno, que empieza a sentirse con fuerza en España, es generalizado; como botón de muestra, el resultado negativo del referéndum suizo del pasado domingo sobre la ley de cambio climático, avalada por casi todas las fuerzas políticas. En la disparidad entre deseos y praxis de la población, sin duda las cuestiones distributivas (quiénes, aparentemente, se benefician y quiénes asumen los costes de la transición) representan un papel fundamental.

No deja de sorprender que la solución a un problema esencialmente distributivo como el cambio climático, causado por las mayores emisiones de los más pudientes y

tuación correctora de la política climática; deben concentrarse exclusivamente sobre los más vulnerables (territorios, sectores y grupos de renta); y deben ser capaces de revertir íntegramente los efectos negativos en el corto plazo y de resolver el problema distributivo en el medio plazo.

No tiene sentido, por ello, retrasar el progreso de la transición manteniendo artificialmente bajos los precios de los productos energéticos, en particular los combustibles fósiles, para proteger a los que menos tienen. Primeramente, porque esto evita que se adopten los cambios de comportamiento e inversión necesarios para la corrección climática, engordando aún más la bola de nieve a la que me referí antes. Por si fuera poco, estas medidas tan burdas acaban beneficiando, con la excusa de proteger a ciertas capas sociales, a los que más tienen por sus elevados consumos energéticos. Precisamente, por eso no tienen sentido estrategias compensatorias generalizadas, de *café para todos*, y urge ser muy selectivo en su aplicación. Entre ellas destaca lo que podríamos denominar *cheque verde*, una cantidad monetaria que sirva para

https://n9.cl/aumbl


economics for energy
WP 01/2018
Road Transport Taxation: Crisis and Reform
Alberto Gago
Xavier Labandeira
Xiral López-Otero

Transport taxation: conventional approach

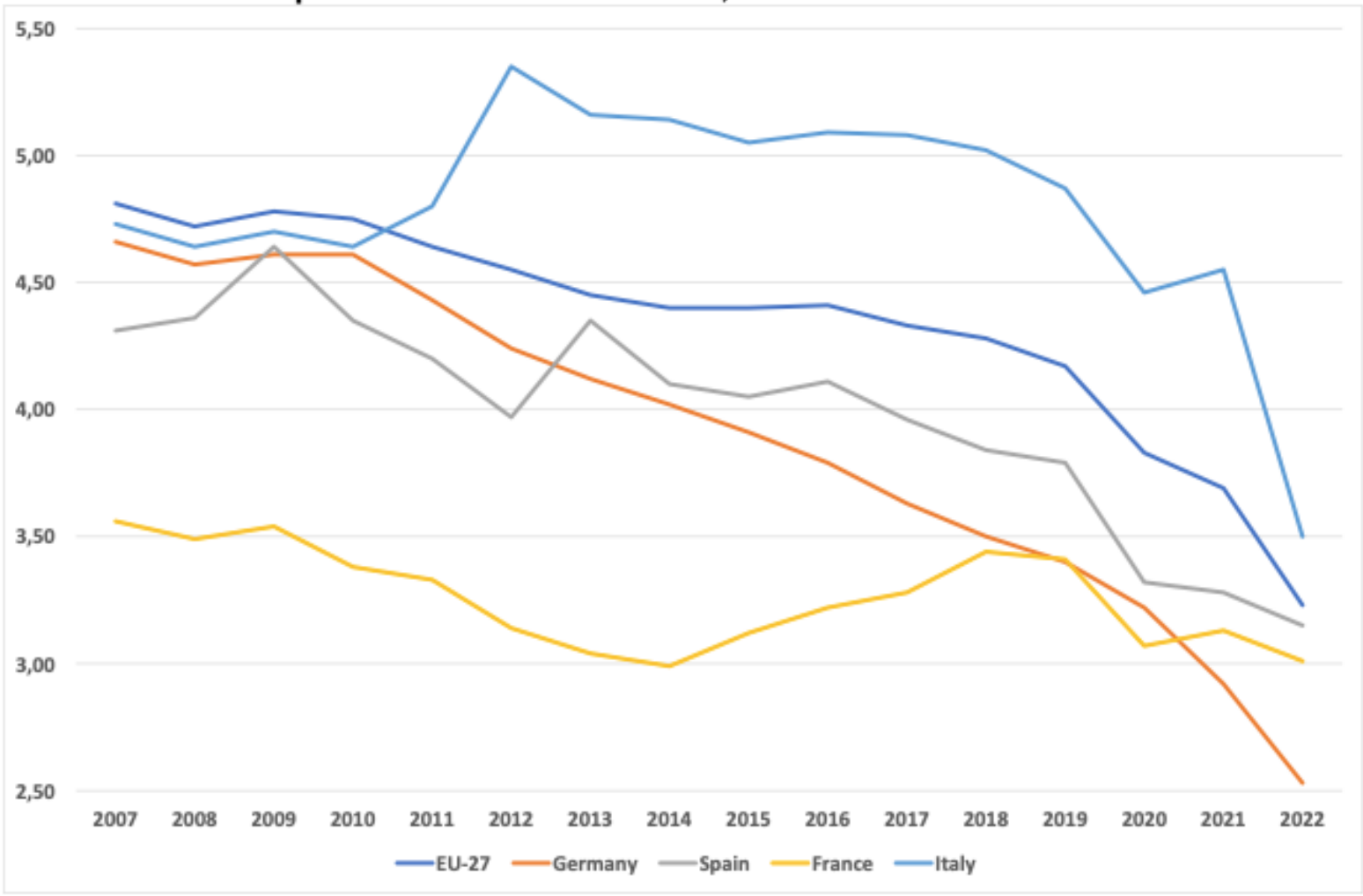
- Revenue Raising (Ramsey)
- Externality correction
  - Global and local environmental problems
  - Congestion
  - Accidents, etc.
- Energy dependence

Taxes on registration, circulation, fuels + congestion charges

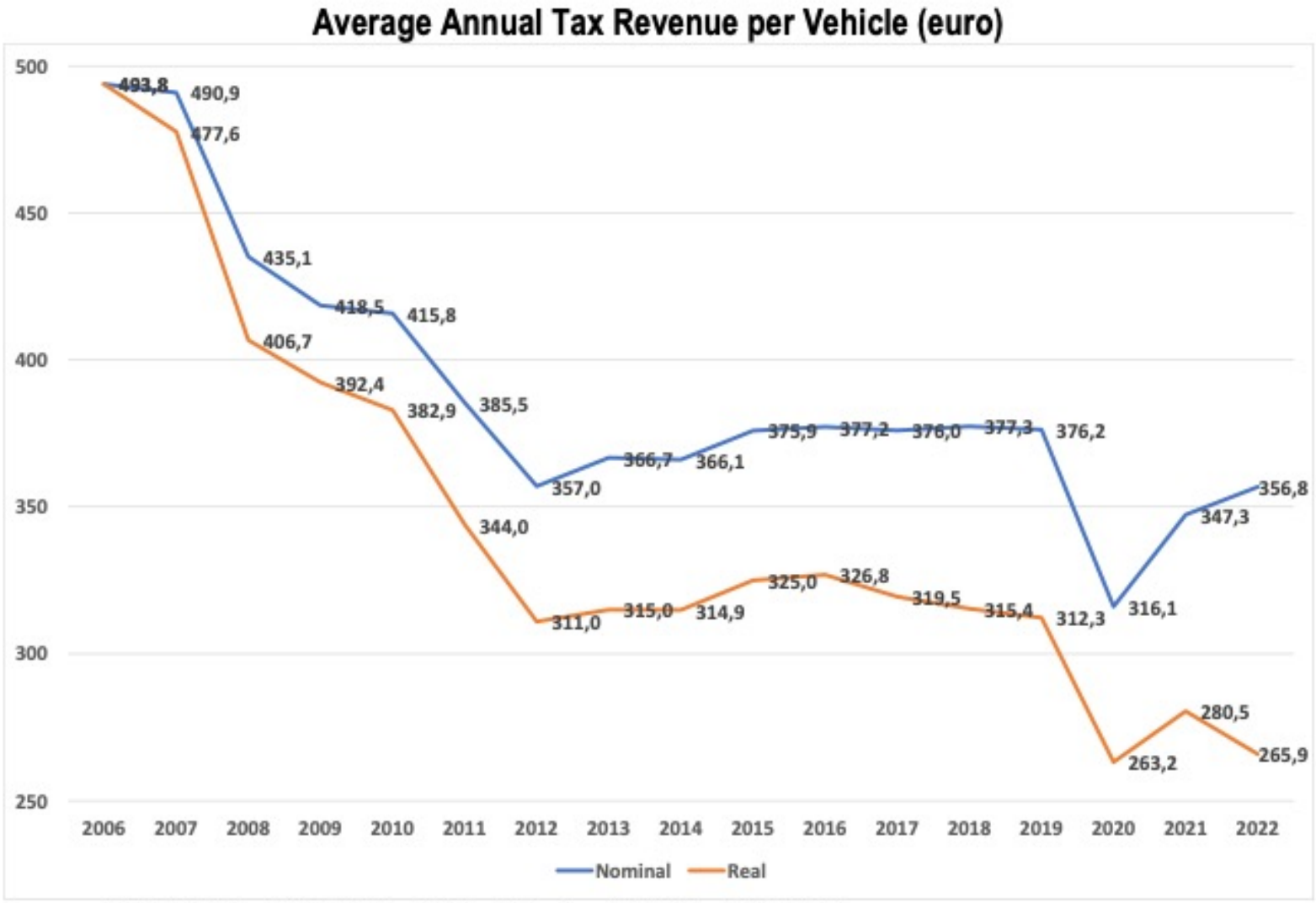
Changes in transport

- Energy efficiency remarkable improvements (and potentials)
- Alternative technologies (EV, etc.)
- Less interest in property?
- Digitalization and new transport alternatives:
  - Car sharing
  - Self-driving cars

Crisis



Source: European Commission, 2025. Taxation and customs union. Data on taxation. Tax revenue by economic function.



Sources: AEAT (2025a, 2025b), Ministerio de Hacienda (2025), DGT (2025)

External costs of transport

Type		Paper	Year	Country	% GDP
Congestion		Delucchi (1997)	1991	U.S.	0.55-**2.36**
		Winston and Langer (2006)	1996	U.S.	0.32
		Van Essen et al. (2011)	2008	EU, Norway and Switzerland	1.10-1.80
		Cravioto et al. (2013)	2006	Mexico	1.04-1.05
		BITRE (2015)	2010	Australia	0.94
		BITRE (2015)	2015	Australia	1.13
		Schrank et al. (2015)	1982	U.S.	0.59
		Schrank et al. (2015)	2014	U.S.	0.92
		Keller (2018)	2015	Switzerland	**0.29**
Air Pollution	**Local**	DMT (2004)	2000	Denmark	**0.15**
		Fisher et al. (2007)	2001	New Zealand	0.24
		Van Essen et al. (2011)	2008	EU, Norway and Switzerland	0.39
		Cravioto et al. (2013)	2006	Mexico	0.61-0.62
		OECD (2014)	2010	OECD	**1.97**
		Guo et al. (2010)	2004	China	0.52
		Guo et al. (2010)	2008	China	0.58
	Global	DMT (2004)	2000	Denmark	**0.11**
		Van Essen et al. (2011)	2008	EU, Norway and Switzerland	0.97
		Cravioto et al. (2013)	2006	Mexico	0.99-**1.00**
		Ivkovic et al. (2018)	2013	Serbia	0.20
	Total	GEA (2018)	2008	Germany	**1.93**
		GEA (2018)	2014	Germany	**1.78**
Accidents		López et al. (2004)	1997	Spain	1.35
		DMT (2004)	2000	Denmark	**0.49**
		Van Essen et al. (2011)	2008	EU, Norway and Switzerland	**1.75**
		Cravioto et al. (2013)	2006	Mexico	1.32-1.34
Noise		DMT (2004)	2000	Denmark	**0.65**
		Van Essen et al. (2011)	2008	EU, Norway and Switzerland	**0.13**
		Cravioto et al. (2013)	2006	Mexico	0.42-0.43

How to proceed?

- (1) Giving up
- (2) Trying to fix the current system
  - Adjusting fuel taxes to all pollutants
  - Salience through registration tax? Feebates?
  - Extending congestion charges
- Still, not an easy task: Spain these days…
  - Low tax levels but…
  - Diesel taxes seen as unfair, sometimes on 'clean' cars
  - Huge exemptions advanced
  - Revenue effects?

How to proceed?

- (3) A new system for taxing road transport
  - Heavily based on vehicle characteristics
  - Able to discriminate in time and location
  - Able to act as a km tax
  - Able to keep revenues
- Not writing on a blank sheet:
  - Singapore (1975): Technical feasibility
  - Stockholm (2006): How to get public support
  - Oregon (2015): The importance of testing and transition

Marginal external costs of vehicle use

Externality	Fuel	Type of road	MEC (€ct/vkm)
Congestion	All	Motorway (metropolitan)	26.8-61.5
		Main (metropolitan)	141.3-181.3
		Other (metropolitan)	159.3-242.6
		Main (urban)	48.7-75.8
		Other (urban)	139.4-230.5
		Motorway (rural)	13.4-30.8
		Main (rural)	18.3-60.7
		Other (rural)	42.0-139.2
Local pollution	Diesel	Urban	0.7-10.3
		Sub-urban	0.3-3.4
		Rural	0.2-1.2
		Motorway	0.2-1.3
	Gasoline	Urban	0.4-3.8
		Sub-urban	0.1-3.5
		Rural	0.1-2.8
		Motorway	0.1-3.5
	Electricity	Urban	0.72
		Rural	0.99
Global pollution	Diesel	Urban	1.6-3.0
		Rural	1.1-2.3
		Motorway	1.2-2.7
	Gasoline	Urban	2.4-3.9
		Rural	1.4-2.3
		Motorway	1.5-2.3
	Electricity	Average	1.7
Accidents	All	Motorway	0.1
		Uban	0.3
		Other	0.2
Noise	Conventional	Urban (day)	0.88-2.14
		Urban (night)	1.61-3.89
		Rural (day)	0.01-0.02
		Rural (night)	0.01-0.04
	Electricity	Urban (day)	0.88-2.14
		Urban (night)	0.80-1.95
		Rural (day)	0.01-0.02
		Rural (night)	0.01-0.03

Korzhenevych et al., 2014; Jochem et al., 2016

Comprehensive and Automated Vehicle Tax (CAVT)

	Zone 1 (urban)	Zone 2 (semi-urban)	Zone 3 (non-urban)
Vehicle type A	*Peak* Access charge 1 Time charge 1a (...) km charge	*Peak* Time charge 2a (...) km charge	km charge
	Non-peak km charge	*Non-peak* km charge	
Vehicle type B	(...)	(...)	(...)

Vehicle type A	Payment					
		Congestion	Local P/ noise	Global P	Accidents	Infrastructures
Access charge	Euros	X	-	-	-	-
Time charge 1a	Euros/hour	X	X	-	-	-
km tax	Euros/km	-	X	X	X	X

The White House
@WhiteHouse · **Seguir**

"CONGESTION PRICING IS DEAD. Manhattan, and all of New York, is SAVED. LONG LIVE THE KING!"
–President Donald J. Trump

8:31 p. m. · 19 feb. 2025

- **WB principles and guidelines**
  - Environmental Rationale →
  - Consideration of regulatory setting:
    - '*Fit for 55*'
    - Spanish jurisdictional framework

Table 1. Spanish Environmental Commitments and Current Situation

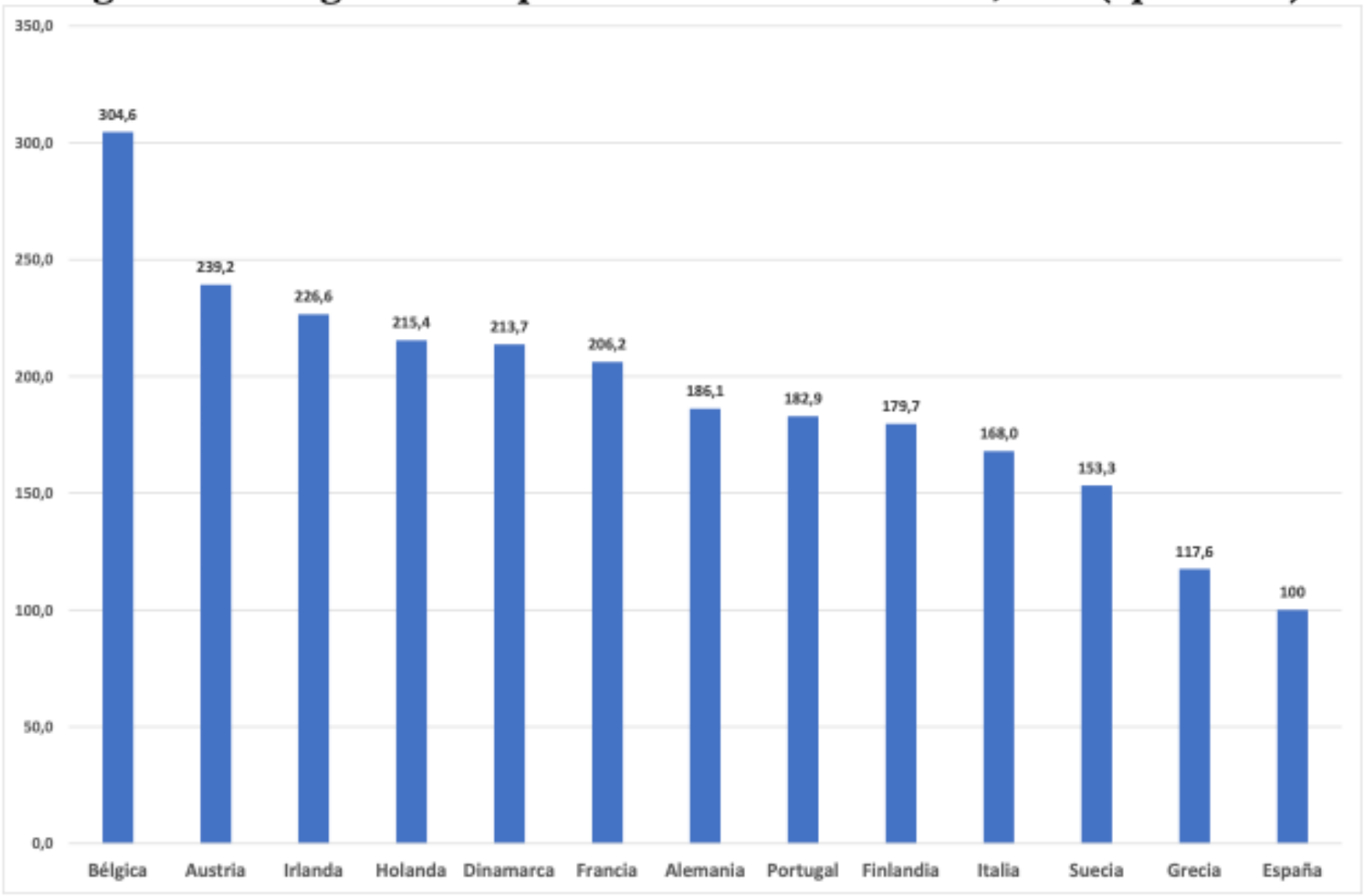
Environmental Problem / Reference Year	Target	Latest data
1. Greenhouse Gas Emissions (GHG) / 1990	-23% in 2030	+8,5% (2019)
1b. GHG emissions diffuse sectors/2005	-26% in 2030 (-37.7% in 2030, *Fit for 55*)	-15,1% (2019)
2. Emissions of Nitrogen Oxides (NOx) / 2005	-41% between 2020-2029 -62% from 2030	-50,3% (2019)
3. Emissions of Volatile Organic Compounds other than Methane (NMVOC) / 2005	-22% between 2020-2029 -39% from 2030	-23,3% (2019)
4. Ammonia (NH3) Emissions / 2005	-3% between 2020-2029 -16% from 2030	-2,8% (2019)
5. Particulate Matter 2.5 ($PM_{2,5}$) Emissions / 2005	-15% between 2020-2029 -50% from 2030	-8,6% (2019)
6. Energy efficiency (Mtoe)	Primary energy: 122.6 (2020); 98.5 (2030) Final Energy: 87.23 (2020); 73.60 (2030)	Primary energy: 120.75 (2019) Final energy: 86,30 (2019)
7. Weight of waste produced / 2010	-10% in 2020 -15% by 2030	-8,1%* (2018) -6,9%** (2018)
8. Household and similar wastes destined for preparation for reuse and recycling.	50% by 2020	35%*** (2018)
9. Non-hazardous construction wastes destined for preparation for reuse and recycling.	70% in 2020	47%**** (2018)
10. Recovery of the costs of water-related services.	100%	67,9%

Data sources: MITECO, *Inventario Nacional de Emisiones a la Atmósfera*; INE, *Estadísticas sobre Recogida y Tratamiento de Residuos*; MITECO, *Memoria Anual de Generación y Gestión de Residuos*; European Commission, *Commission Assessment for Spain's NECP*; Eurostat, Energy Efficiency; MITECO, *Síntesis de los Planes Hidrológicos Españoles. WFD Second Cycle (2015-2021)*

Notes: * Amount of non-hazardous and hazardous waste managed; ** Amount of municipal waste collected; *** Weight of waste recycled and composted out of total municipal waste collected; **** Weight of waste destined for recovery and backfilling operations out of total non-hazardous waste.

- Effectiveness: good praxis in tax design
- Priority Areas:
  - 'Sustainable Electrification'
  - **'Mobility compatible with ecological transition'**
  - 'Increase in circularity'
  - 'Recognition of environmental costs associated to water use'

Figure 4. Average revenue per vehicle in EU countries, 2019 (Spain=100)



Sources: Revenue from motor vehicles (VAT on sales, services and repairs, sales and registration taxes, road taxes, fuel taxes, and others) from ACEA (2021a) divided by vehicle stock from Eurostat (2021d).

ANFAC La Movilidad del Futuro

ACTUALIDAD VEHÍCULO ELÉCTRICO Y ALTERNATIVO MOVILIDAD

MARTES, 5 DE ABRIL DE 2022

TIEMPO DE LECTURA **5** MIN

Tribuna de opinión firmada por José López-Tafall, director general de ANFAC; Marta Blázquez, vicepresidenta ejecutiva de Faconauto; José Portilla, director general de Sernauto; José María Riaño, secretario general de Anesdor y Jaime Barea, director corporativo de Ganvam publicada en Expansión el 5 de abril de 2022

Imagen diseñada por Freepik

La ciudadanía está viviendo un claro proceso de cambio en sus opciones para ejercer el derecho a la movilidad. Como sabemos, este cambio nace vinculado a dos elementos fundamentales: **el desarrollo tecnológico y la transición ecológica y digital.**

En este contexto, donde la reflexión y el análisis riguroso deben adquirir un protagonismo sustancial, acabamos de conocer el contenido del **"Libro Blanco para la Reforma del Sistema Tributario"**, elaborado por el comité de expertos seleccionado por el Gobierno de España. En lo que respecta a nuestro sector, la puesta en marcha de esta iniciativa suponía una oportunidad para aportar certidumbre y definir unas nuevas bases sobre las que avanzar hacia la descarbonización de la movilidad, que es el objetivo compartido por todos. Sin embargo, consideramos que no ha sido así.

Desde nuestro punto de vista, **la reforma fiscal planteada por el comité de expertos parte de una lectura equivocada del proceso y, en consecuencia, ofrece un diagnóstico erróneo y una solución inconveniente, al menos para España**. Se propone una fiscalidad que se limita a incrementar todos los costes de la movilidad para los ciudadanos y compromete la hoja de ruta de la descarbonización asumida por España y la Unión Europea. Más aún, creemos que pone en riesgo el futuro desarrollo de la automoción, un sector que hoy es estratégico para la economía y el empleo de nuestro país.

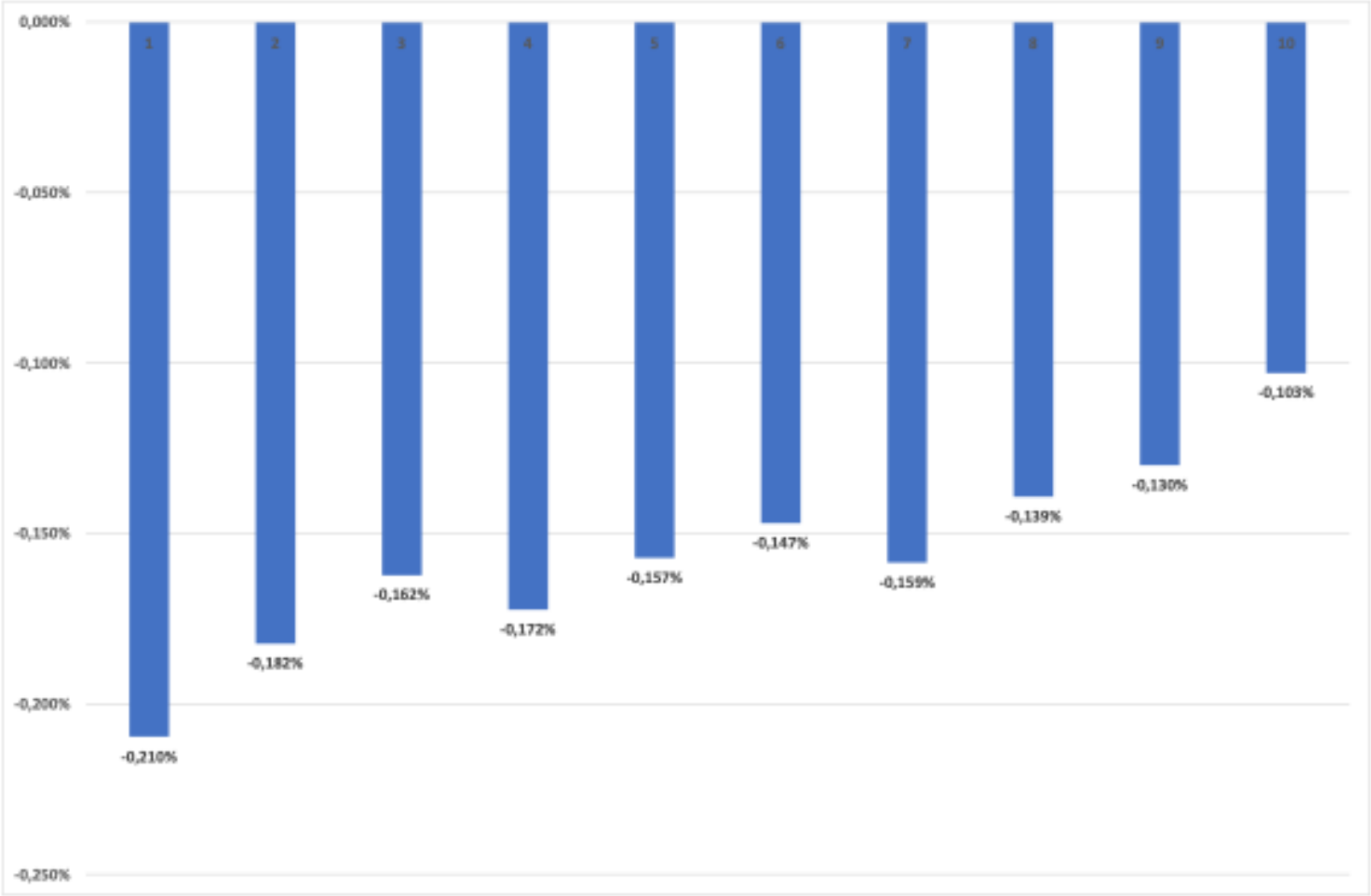
«La reforma fiscal planteada por el comité de expertos pone en riesgo el futuro desarrollo de la automoción, un sector que hoy es estratégico para la economía y el empleo de nuestro país»

Table 8. Impacts on prices, demand, emissions and revenues of P5

	Final price (%)	Consumption (%)	CO_2 emissions (%)	Additional revenues (Millions of euros)		
				I.E.H	VAT	Total
Residential diesel	9,34%	-1,88%	-1,88%	1.471	266,24	1.737,24 (17,0%)
Non-residential diesel	9,82%	-1,97%	-1,97%	884,08	-	884,08 (25,9%)
Total	-	-1,65%	-1,60%	2.355,09	266,24	2.621,33 (14,5%)

Source: Spanish WB on Tax Reform (2022)

Figure 7. Distributional impact by income deciles of equivalent income of P5



Note: Average percentage change in equivalent income by income deciles.

Source: Spanish WB on Tax Reform (2022)

ECONOMÍA >

Bruselas congelará fondos europeos si no se aprueba antes de marzo la subida fiscal al diésel

La Comisión aprueba una nueva adenda con retrasos y cambios en el plan de recuperación

Una gasolinera en Madrid, el 2 de septiembre de 2024.
CLAUDIO ÁLVAREZ

ANTONIO MAQUEDA

Madrid - 20 DIC 2024 - 05:45 | Actualizado: 20 DIC 2024 - 17:22 CET

18

Accisas sobre los carburantes de automoción y los combustibles para calefacción en los países europeos y diferencia con las accisas mínimas. Sector residencial. 2025

	Gasolina (€/1000 l)	Diésel (€/1000 l)	Gas Natural Calefacción (€/GJ)	Gasóleo Calefacción (€/1000l)	Diferencia con la accisa mínima			
					Gasolina (€/1000 l)	Diésel (€/1000 l)	Gas Natural Calefacción (€/GJ)	Gasóleo Calefacción (€/1000l)
Accisa mínima	**359,00**	**330,00**	**0,3**	**21**	-	-	-	-
Alemania	654,50	470,40	1,53	61,35	295,50	140,40	1,23	40,35
Austria	482,00	397,00	0,30	98,00	123,00	67,00	0,00	77,00
Bélgica	600,16	600,16	0,77	17,26	241,16	270,16	0,47	-3,74
Bulgaria	363,02	330,30	0,00	330,30	4,02	0,30	-0,30	309,30
Chipre	429,00	400,00	2,60	74,73	70,00	70,00	2,30	53,73
Croacia	512,31	406,13	1,08	56,14	153,31	76,13	0,78	35,14
Dinamarca	626,53	410,54	9,23	331,03	267,53	80,54	8,93	310,03
Eslovaquia	514,00	368,00	0,37	368,00	155,00	38,00	0,07	347,00
Eslovenia	496,93	458,78	2,01	195,22	137,93	128,78	1,71	174,22
España	472,69	379,00	0,65	96,71	113,69	49,00	0,35	75,71
Estonia	563,00	399,00	1,41	399,00	204,00	69,00	1,11	378,00
Finlandia	685,40	503,80	5,85	265,10	326,40	173,80	5,55	244,10
Francia	682,90	594,00	2,35	156,20	323,90	264,00	2,05	135,20
Grecia	700,00	410,00	0,30	280,00	341,00	80,00	0,00	259,00
Hungría	399,17	373,93	0,00	373,93	40,17	43,93	-0,30	352,93
Irlanda	541,84	425,72	2,81	47,36	182,84	95,72	2,51	26,36
Italia	728,40	617,40	1,19	403,21	369,40	287,40	0,89	382,21
Letonia	532,00	440,50	1,06	108,50	173,00	110,50	0,76	87,50
Lituania	466,00	466,00	0,30	60,00	107,00	136,00	0,00	39,00
Luxemburgo	559,08	452,55	2,53	116,96	200,08	122,55	2,23	95,96
Malta	359,00	330,00	0,84	172,09	0,00	0,00	0,54	151,09
Países Bajos	789,10	516,25	16,58	516,25	430,10	186,25	16,28	495,25
Polonia	422,65	391,12	0,32	54,14	63,65	61,12	0,02	33,14
Portugal	481,26	337,21	0,31	337,21	122,26	7,21	0,01	316,21
R. Checa	508,07	393,72	0,34	26,12	149,07	63,72	0,04	5,12
Rumanía	508,20	465,76	0,47	465,76	149,20	135,76	0,17	444,76
Suecia	451,63	378,36	9,93	378,28	92,63	48,36	9,63	357,28

Fuente: European Commission (2025) y elaboración propia

Table 14. Current IEDMT tax rates and proposals 7A and 7B

Current (gCO/km_2)	Current tax rate	Proposal (gCO/km_2)	Tax rate P7A	Tax rate P7B
≤ 120	0%	≤ 55	0%	0%
> 120-≤ 160	4,75%	>55-≤ 127	0%	5%
> 160-≤ 200	9,75%	>127-≤ 152	5%	10%
>200	14,75%	>152-≤ 175	10%	15%
		>175	15%	20%
		Vehicle weight	**Type**	
		>1800 kg	10 €/kg additional	

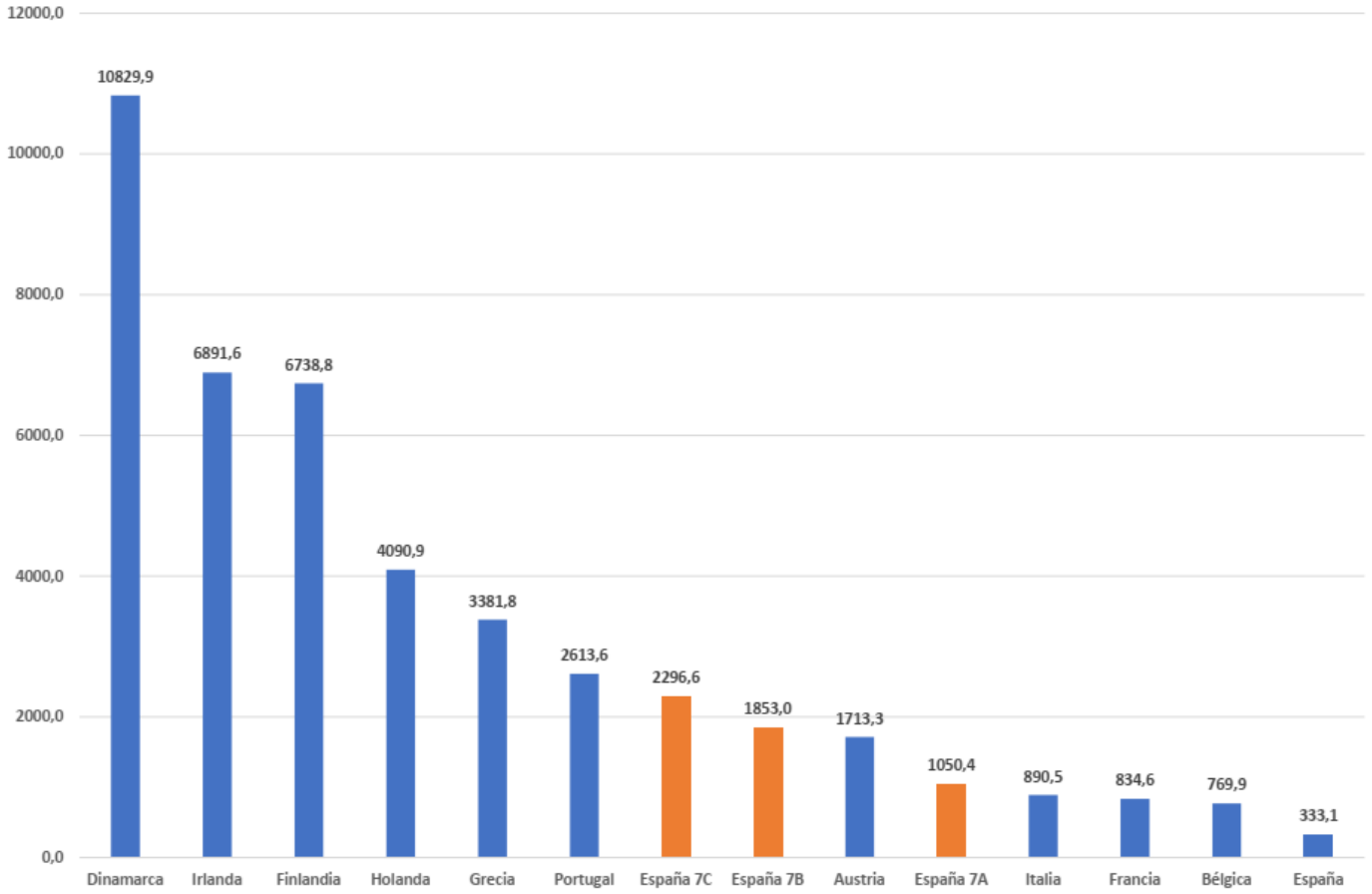
Table 15. IEMDT as a unitary tax on expected emissions (P7C)

Emissions (g/km)	Tax rate (euros per g/km)
0	-
1-86	0,33
87-111	20
112-155	44
156-172	72
≥173	144
Car weight	**Tax rate**
> 1800 kg	10 €/kg additional

Source: Spanish WB on Tax Reform (2022)

Gráfico II.19

Recaudación del impuesto de matriculación en ciertos países de la UE, junto a P7A, P7B y P7C en 2019 (euros por vehículo)



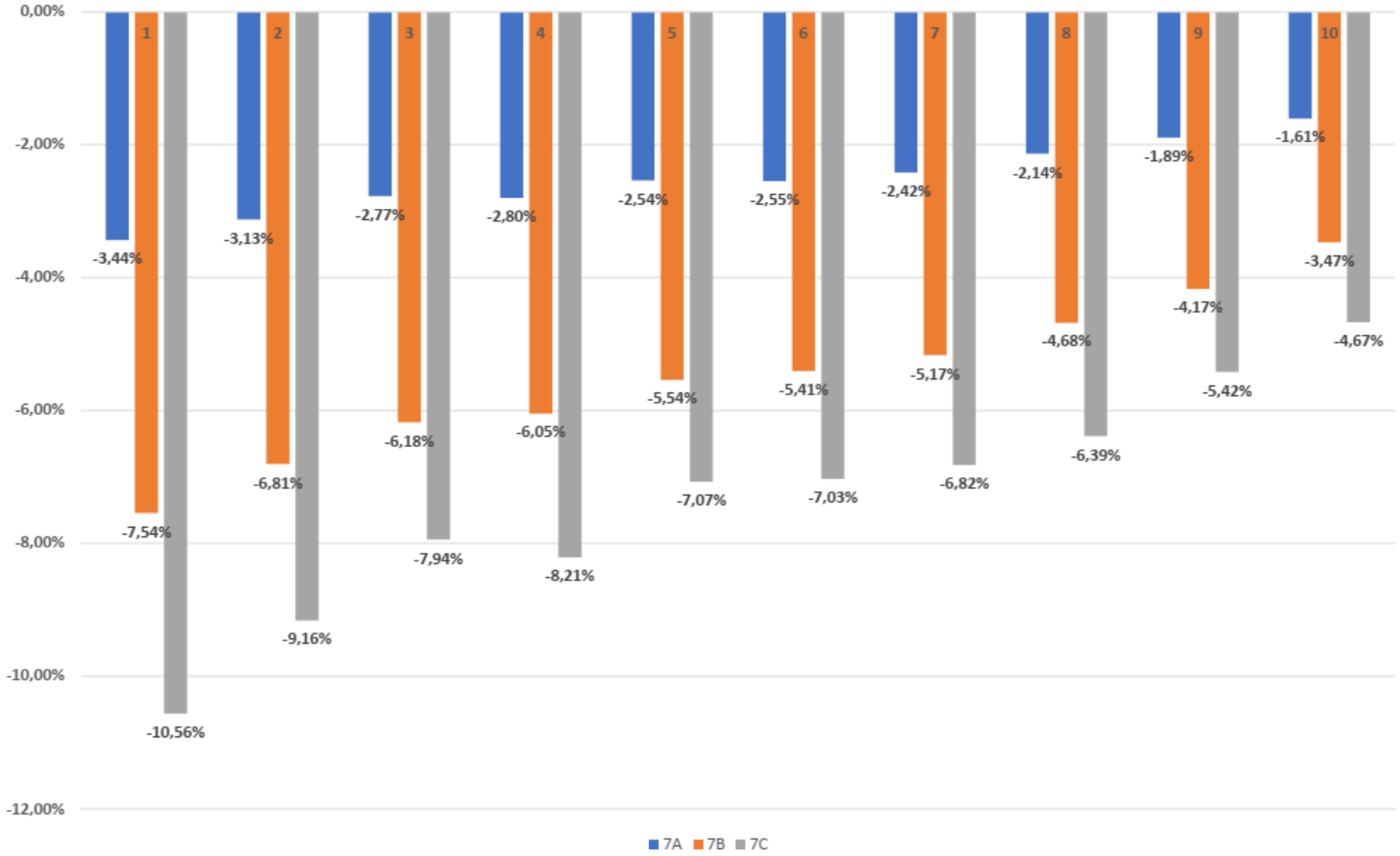
Fuentes: ACEA (2021a,b).

Notas: Los datos de Austria y Grecia son de 2020, el de Dinamarca de 2018.

Los datos de las simulaciones para España solo consideran la recaudación derivada de los automóviles.

Gráfico II.18

Impacto distributivo por decilas de renta equivalente de P7A, P7B y P7C



Nota: Porcentaje de variación medio en la renta equivalente por decilas de renta.

Change in household income by decile from clean vehicle subsidies in Spain, 2023

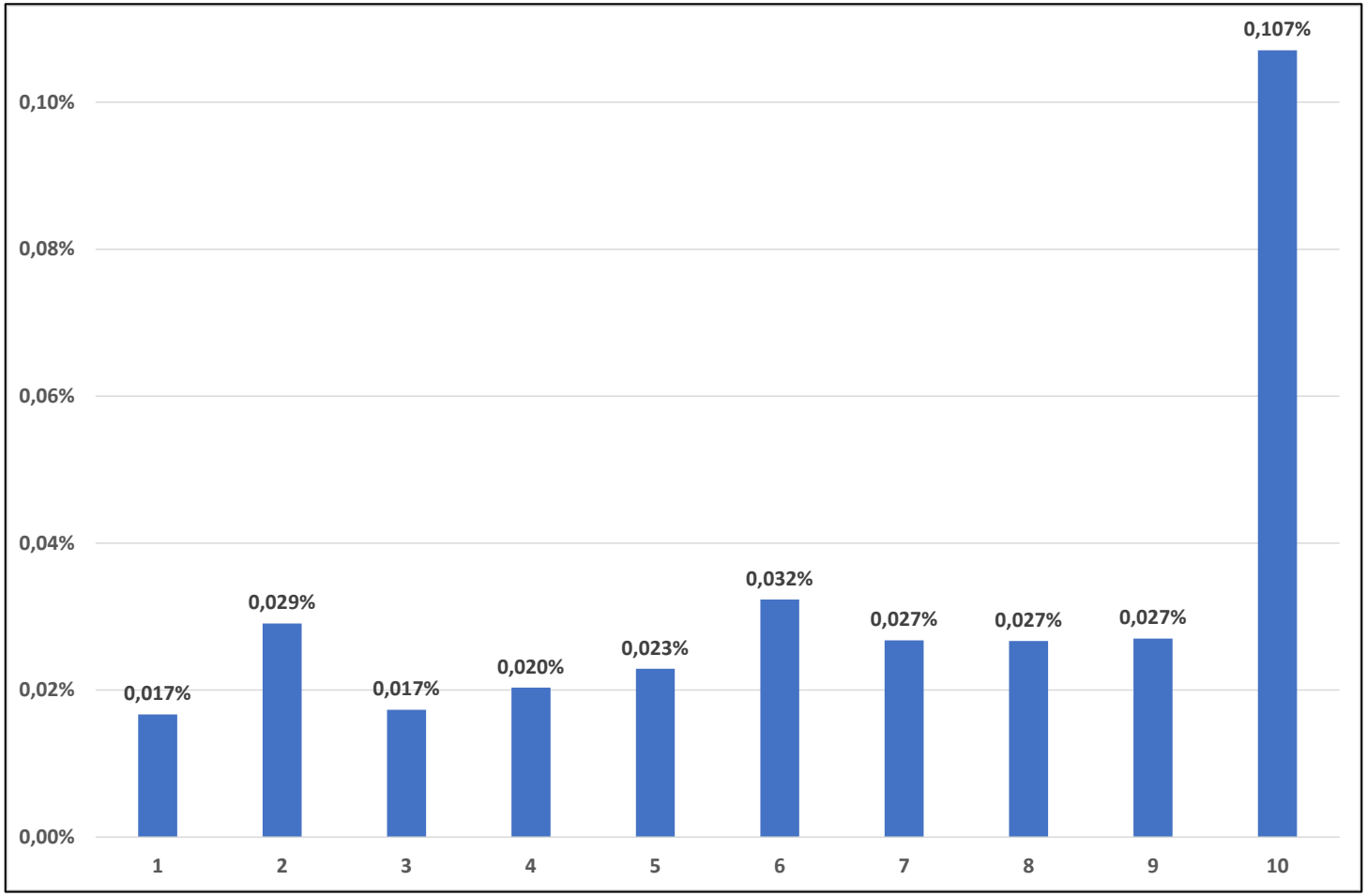


Tabla II.17

Incremento de cuota del IVTM según emisiones

Emisiones de CO_2 (gCO_2/km)	Número de turismos	Recaudación inicial (millones euros)	Aumento Cuota (euros)		Incremento recaudatorio (millones euros y % sobre inicial)	
			P8A	P8B	P8A	P8B
≤ 55	98.329	8,16	0,0	0,0	0,00	0,0
≤ 55	98.329	8,16	0,0	0,0	0,00	0,0
>55-≤ 127	2.481.215	206,00	0,0	10,0	0,00	24,82
>127-≤ 152	5.566.065	462,11	10,0	20,0	55,66	111,32
>152-≤ 175	2.724.510	226,20	15,0	30,0	40,87	81,74
>175	3.398.287	282,14	20,0	50,0	67,97	169,92
Matriculados antes de 2007	11.147.833	925,53	10,0	20,0	111,47	222,96
Total	25.416.239	2.110,14	--	--	275,97 (13,08%)	610,76 (28,94%)

Nota: la recaudación de 2019 se distribuye por vehículo asumiendo la cuota media anual de 83,02 euros.

Tabla II.19

Ingresos potenciales del tributo sobre uso de vehículo

Costes por uso de vehículo	Recaudación Millones euros (% de total)
Congestión	7.114,64 (22,4%)
Contaminación atmosférica local	2.136,01 (6,7%)
Contaminación atmosférica global	2.571,55 (8,1%)
Accidentes	13.655,76 (43,0%)
Ruido	3.261,08 (10,3%)
Coste de la infraestructura	2.994,42 (9,4%)
Total	31.733,45

Fuentes: Van Essen *et al.* (2019), Schroten *et al.* (2019a), Ministerio de Transportes (2021a) y MITECO (2021a).

LA VANGUARDIA

LOS EXPERTOS DE HACIENDA LO RECOMIENDAN

Las aerolíneas presionan para frenar el impuesto de 7,85 euros por billete

• Garamendi defiende la ampliación de El Prat y reclama un impulso decidido al Perte del sector

Las aerolíneas presionan para frenar el impuesto de 7,85 euros por billete (Dani Duch)

FERNANDO H. VALLS
26/09/2022 15:04 | Actualizado a 26/09/2022 15:26

AEROLÍNEAS >

Las aerolíneas denuncian que las nuevas medidas fiscales costarán 11 millones de turistas y 430.000 empleos

Solo la tasa de 7,85 euros por billete que propone Hacienda disminuiría el gasto turístico en 12.000 millones hasta 2030, según un informe de Deloitte

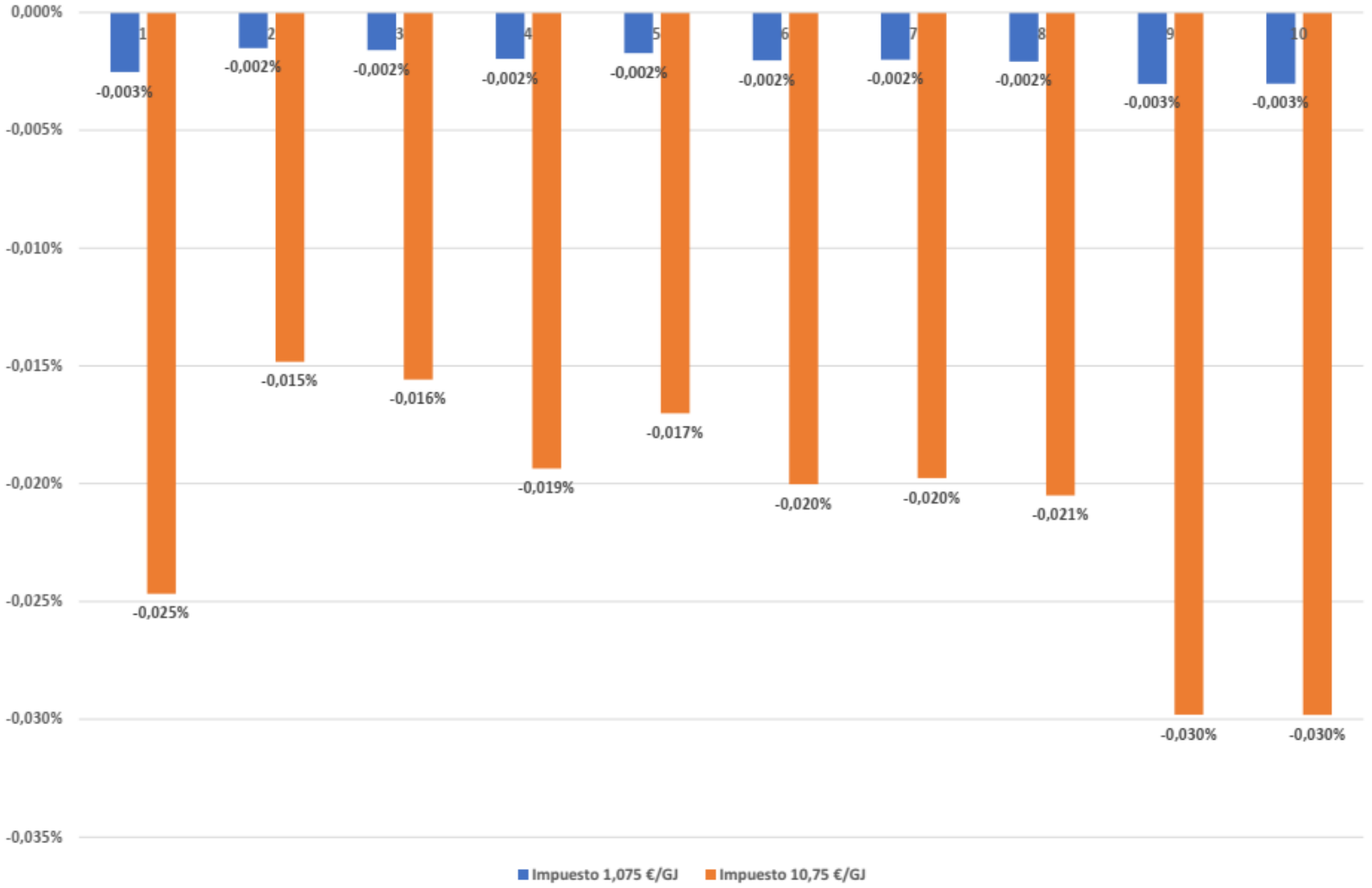
Un avión de Iberia reposta con queroseno de Cepsa.

RAMÓN MUÑOZ

Madrid - 26 SEP 2022 - 17:28 CEST

Gráfico II.6

Impacto distributivo por decilas de renta equivalente de P4A



Nota: Porcentaje de variación medio en la renta equivalente por decilas de renta

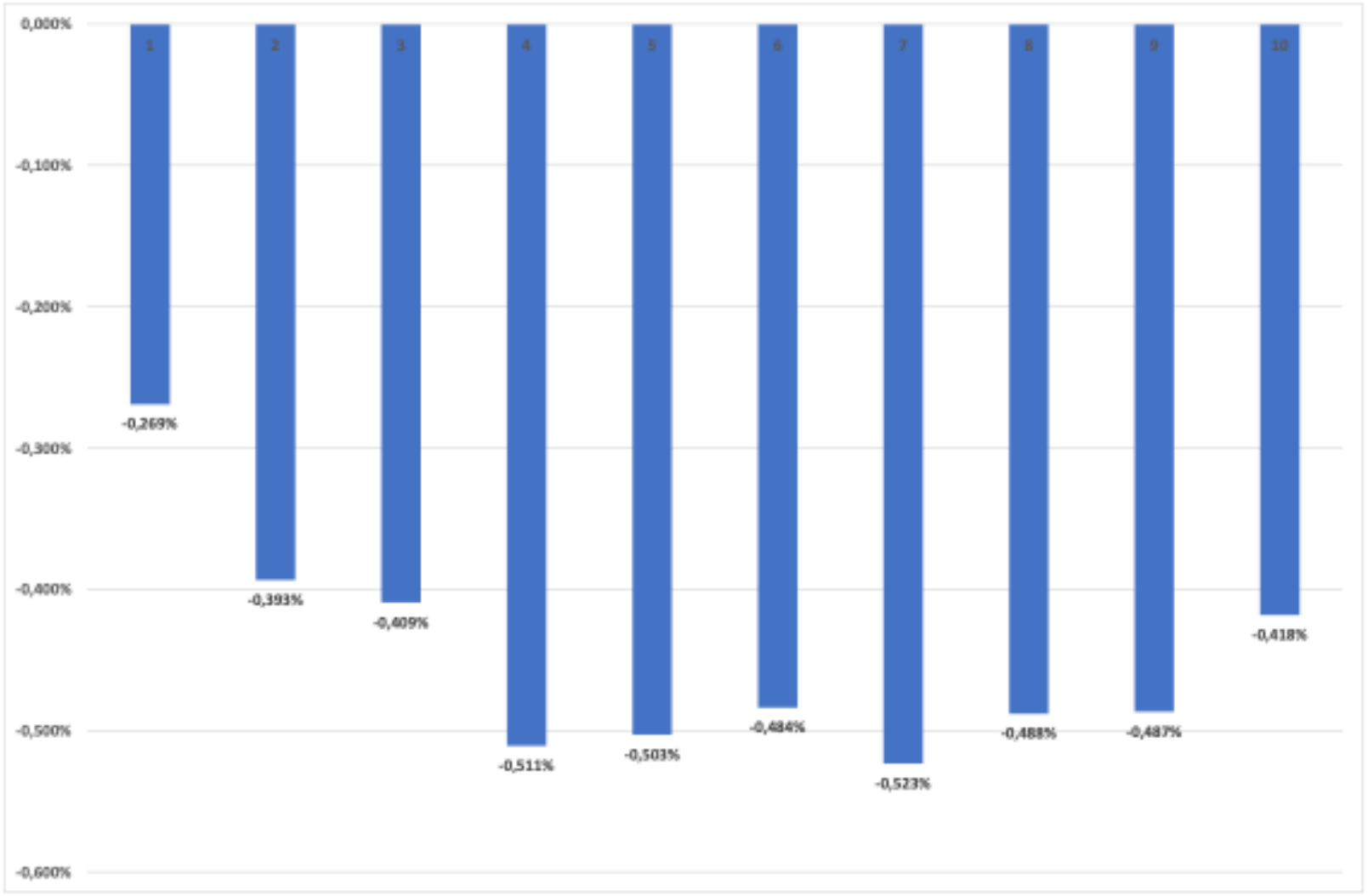
Table 13. Impacts on prices, demand/emissions and revenues of P1, P3 and P6

	Final price (%)	Consumption and CO_2 emissions (%)	Additional revenues (Millions of euros)					
			IVPEE	I.EE	I. CO_2	FNSSE	VAT	Total
Residential electricity	-11,63%	2,36%	-372,31	-731,47	--	-912,12	-318,47	-1.422,25 (-31,7%)
Non-residential non-electro-intensive electricity	-17,37%	3,53%	-468,88	-583,69	--	-1.255,29	--	-1.052,57 (-94,8%)
Non-residential electro-intensive electricity	-14,18%	2,88%	-286,86	-53,60	--	-762,46	--	-340,45 (-98,5%)
Gasoline 95	15,47%	-3,91%	--	-116,63	692,87	311,42	155,37	1.043,03 (23,7%)
Residential diesel	27,76%	-5,58%	--	1.167,48	2.183,67	841,72	753,69	4.946,57 (48,4%)
Non-residential diesel	29,19%	-5,87%	--	713,21	1.300,58	501,32	--	2.515,11 (73,6%)
Residential natural gas	21,81%	-5,28%	--	42,58	503,48	276,64	129,76	952,45 (97,2%)
Non-residential natural gas Non-EU ETS sectors	48,55%	-11,75%	--	218,05	755,03	414,85	--	1.387,94 (2.733,8%)
Non-residential natural gas EU-ETS sectors	22,25%	-5,39%	--	311,72	--	583,91	--	895,63 (1.343,7%)
Total	--	-3,07% -3,90%*	-1.128,04	967,66	5. 435,63	--	720,34	8.925,47 (35,6%)

Note: *Change in CO_2

Source: Spanish WB on Tax Reform (2022)

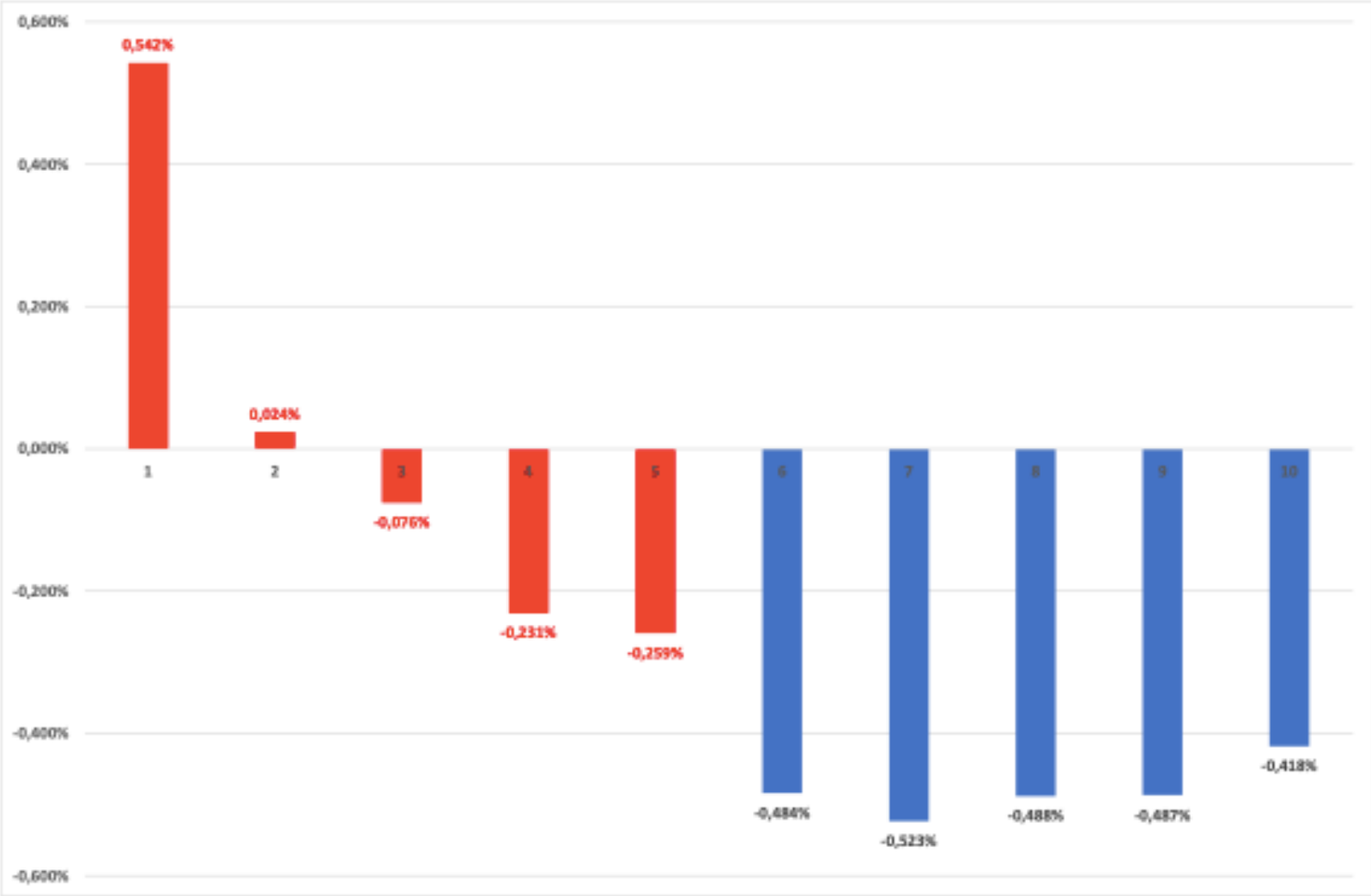
Figure 15. Distributional impacts by equivalent income deciles of P1, P3 and P6



Note: Average percentage change in equivalent income by income deciles.

Source: Spanish WB on Tax Reform (2022)

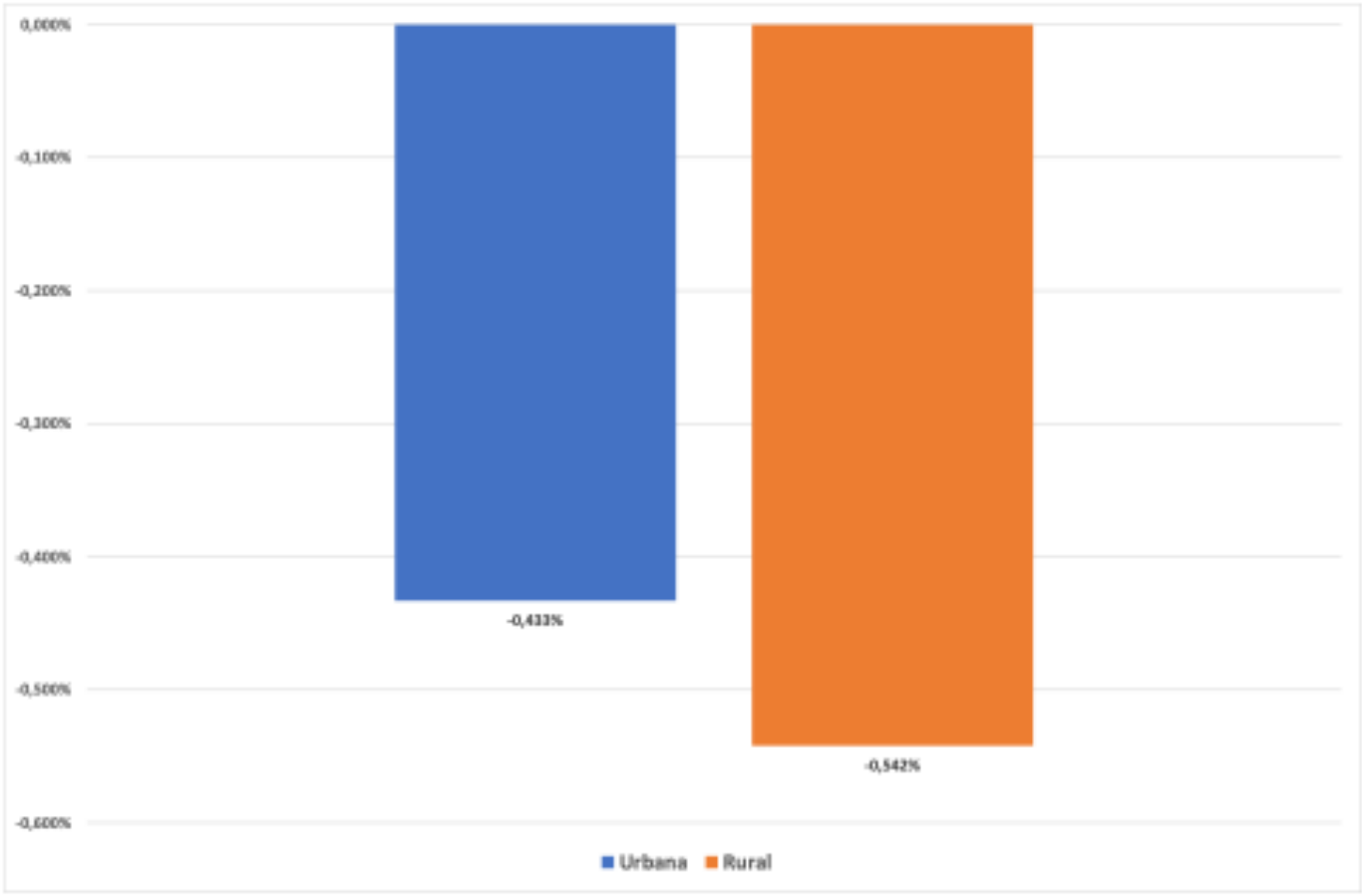
Figure 16. Impacts with compensation by equivalent income deciles of P1, P3 and P6



Note: In red the deciles in which there is variation because of the compensatory scheme.

Source: Spanish WB on Tax Reform (2022)

Figure 17. Impact on the equivalent income of rural/urban areas of P1, P3 and P6



Note: Average percentage change in equivalent income by income deciles.

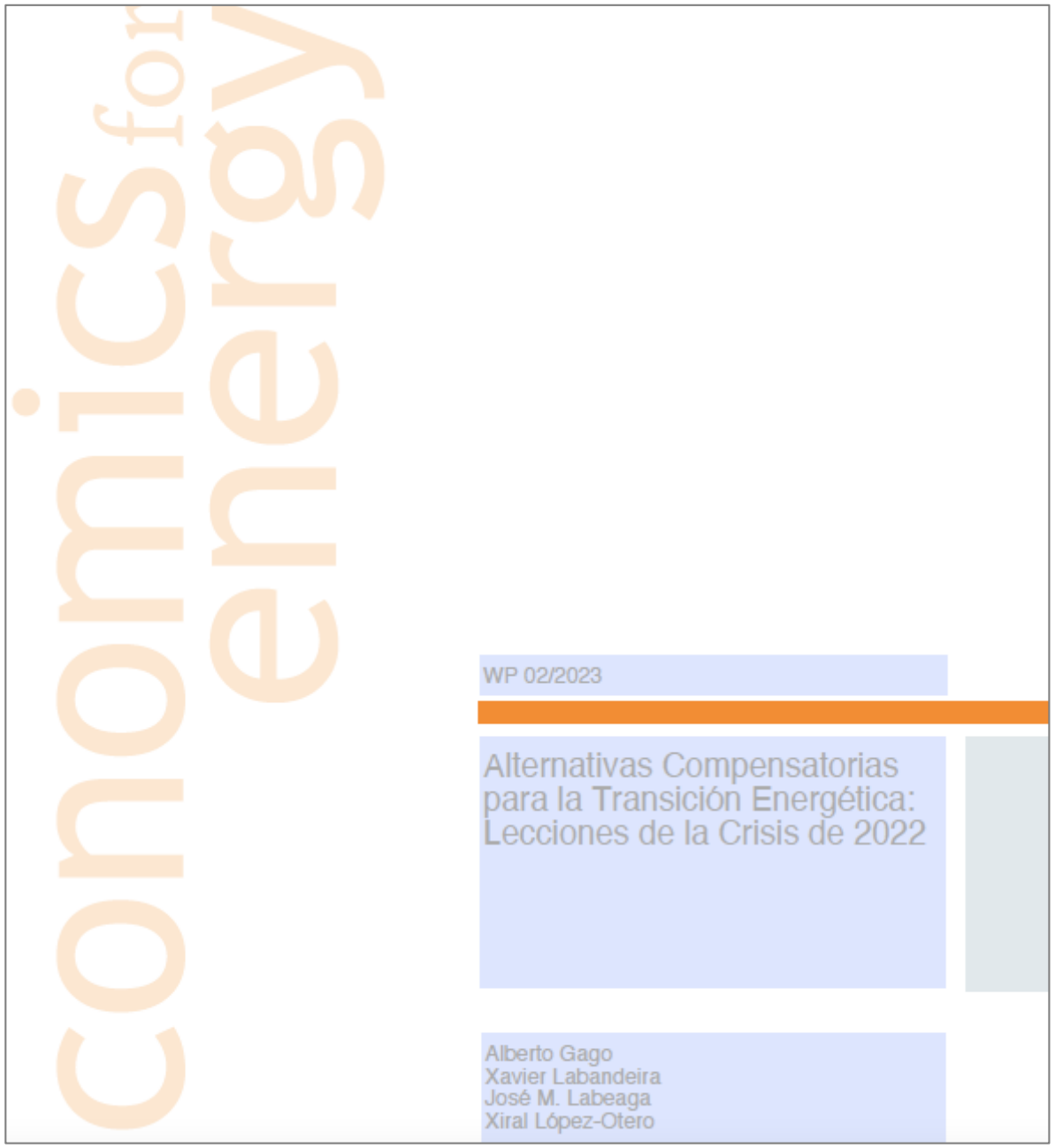
Source: Spanish WB on Tax Reform (2022)

Constraints in practice…

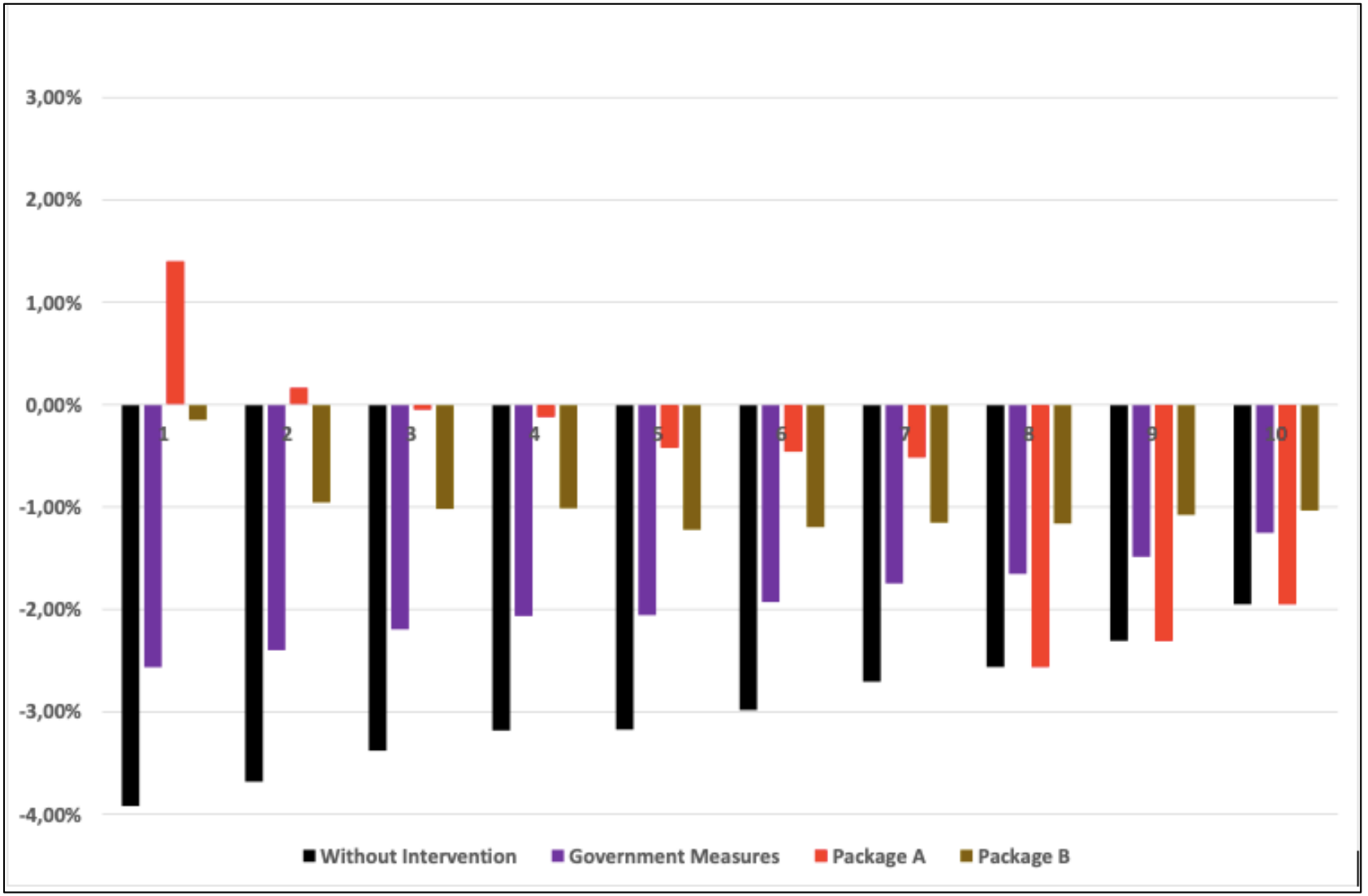
Measures implemented by European countries to tackle the 2022 energy crisis and expenses

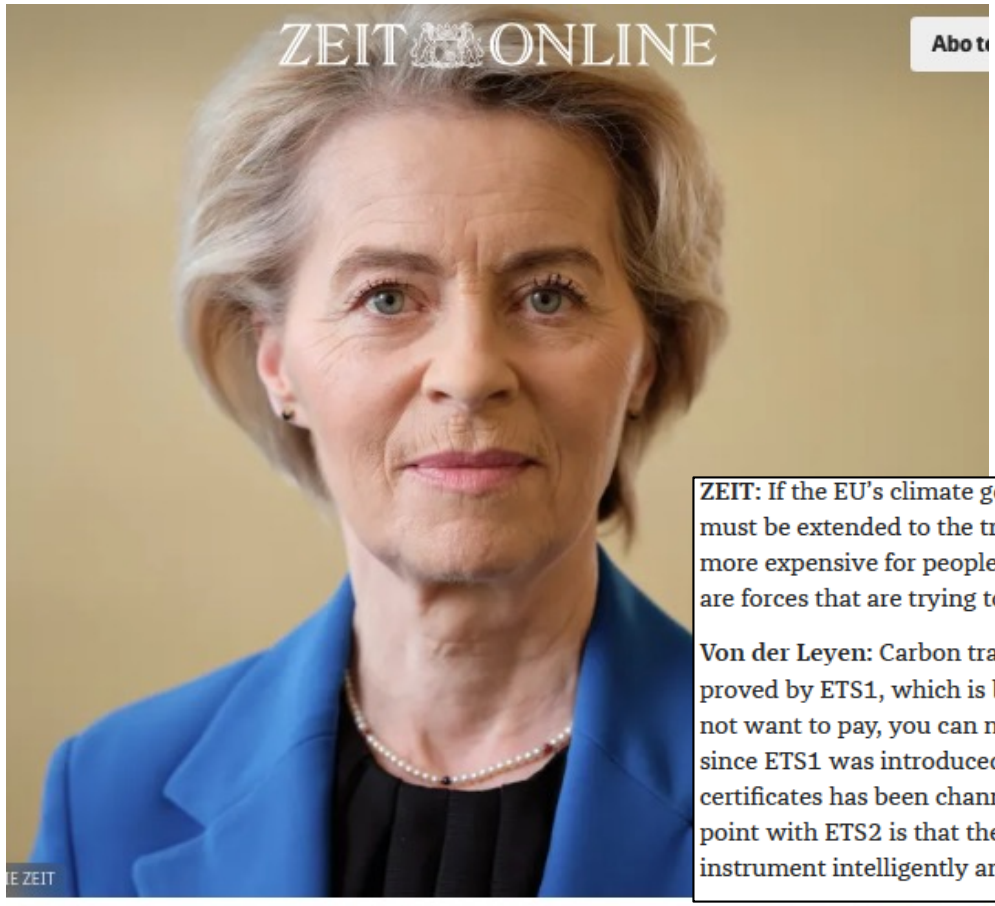
	Reduced energy tax/VAT	Retail price regulation	Wholesale price regulation	Transfers vulnerable groups	Mandates to state-owned firms	Windfall profits tax/regulation	Business support	Other	Expenses (% GDP)
Austria	X	X		X			X	X	2.6
Belgium	X	X		X			X	X	0.8
Bulgaria	X	X		X		X	X		5.3
Croatia	X			X			X		4.2
Cyprus	X			X	X				0.8
Czech R.	X	X		X			X	X	3.4
Denmark	X	X		X					2.1
Estonia	X	X		X			X		1.0
Finland	X			X			X	X	0.5
France	X	X	X	X	X		X	X	2.8
Germany	X	X		X			X		7.4
Greece	X			X	X		X		5.7
Hungary	X	X				X	X		-
Ireland	X			X		X	X	X	0.9
Italy	X			X		X	X		5.1
Latvia	X			X			X		3.2
Lithuania				X			X	X	6.6
Luxemburg	X	X		X			X		3.3
Malta			X		X				7.0
Netherlands	X	X		X					5.1
Norway	X			X			X		2.0
Poland	X	X		X		X			2.2
Portugal	X		X	X	X		X		3.3
Romania	X	X		X		X	X		3.5
Slovakia		X		X	X		X		3.7
Slovenia	X			X			X		1.0
Spain	X	X	X	X			X		3.2
Sweden	X			X		X		X	0.3
United Kingdom	X	X		X			X	X	3.5

Source: Sgaravatti *et al.* (2022)


conomics for energy
WP 02/2023
Alternativas Compensatorias para la Transición Energética: Lecciones de la Crisis de 2022
Alberto Gago
Xavier Labandeira
José M. Labeaga
Xiral López-Otero

Comparison of distributional outcomes





ZEIT: If the EU's climate goals are to be met, then in two years' time, as planned, the carbon trading system must be extended to the transport and construction sectors, under the name of ETS2; in simple terms, it will be more expensive for people to fill up their vehicles and heat their homes. Are you still committed to that, as there are forces that are trying to undermine it?

Von der Leyen: Carbon trading is definitely one of the smartest instruments of climate policy. This has been proved by ETS1, which is based on the principle of the market economy. If you pollute, you pay, and if you do not want to pay, you can make your contribution through innovation in clean technology. It has worked. Ever since ETS1 was introduced, the economy has expanded, emissions have fallen and the revenue from trading in certificates has been channelled into innovation and research. In other words, exactly what we want. The key point with ETS2 is that there should be a social safety net from the start. We need to develop this valuable instrument intelligently and carefully.

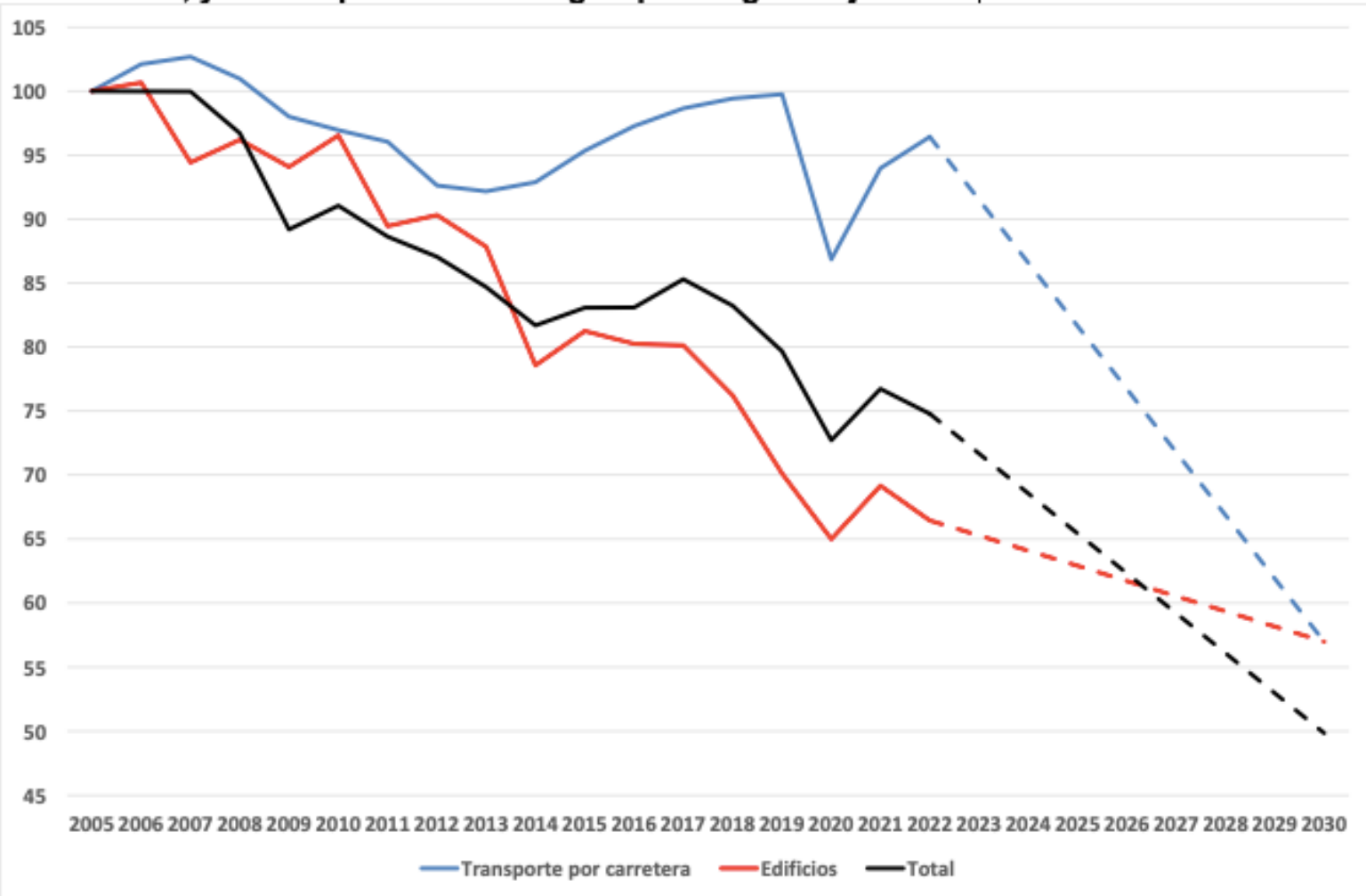
Ursula von der Leyen

"We have no bros and no oligarchs"

Donald Trump's second term has brought "historic changes", says EU President Ursula von der Leyen. In our interview, she explains how Europe

ETS-2

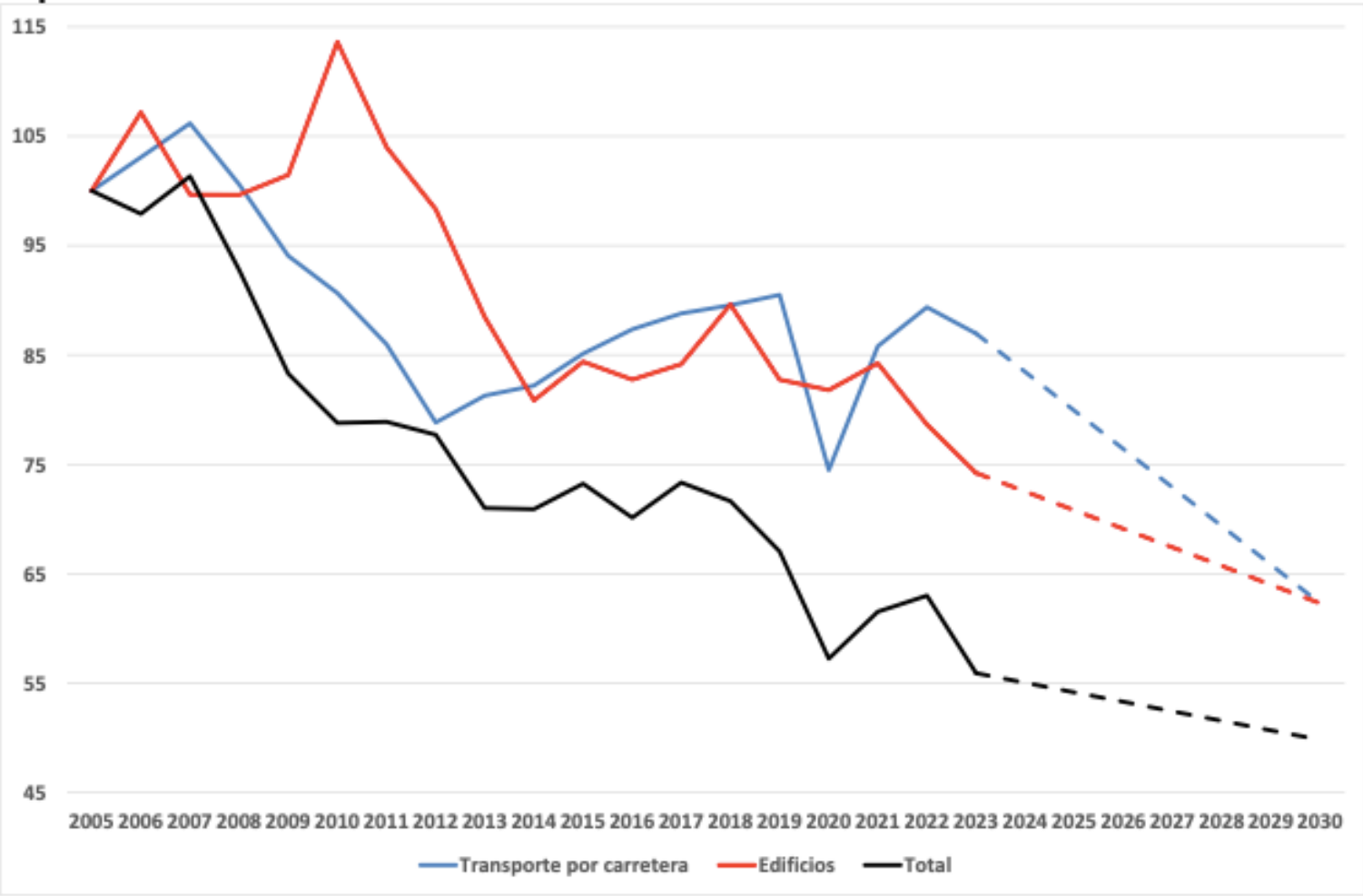
Evolución (2005-2022) de las emisiones de GEI totales, del transporte por carretera y de los edificios, y senda que deberían seguir para lograr objetivos a 2030. UE-27. 2005=100



Fuente: EEA (2024a, 2024b) y elaboración propia

Nota: En el caso de las emisiones totales, se consideran las emisiones netas, una vez deducidas las absorciones. El objetivo de reducción del 55% de las emisiones totales netas de GEI con respecto a 1990 se traduce en una reducción del 50,1% con respecto a 2005.

Figura 2. Evolución (2005-2023) de las emisiones de GEI totales, del transporte por carretera y de los edificios, y senda que deberían seguir para lograr los objetivos en 2030. España. 2005=100



Fuente: EEA (2025a), MITECO (2025) y elaboración propia
Notas: Se consideran como emisiones de los edificios las emisiones del sector residencial y comercial
En el caso de las emisiones totales, se consideran las emisiones netas, una vez deducidas las absorciones. El objetivo de reducción del -23% de las emisiones totales netas de GEI con respecto a 1990, establecido en la Ley 7/2021 de cambio climático, se traduce en una reducción del -50,2% con respecto a 2005.
Fuente: EEA (2025a)

Tabla 1. Precios de los derechos de emisión del ETS2 en la literatura (€/tCO2)

Artículo	Precio	Año
European Commission (2021)	35[a]	2025
	48[a]	2030
	53[a]	2025
	80[a]	2030
Braungardt et al. (2022)	50[b]	2026-2032
	70[b]	2026-2032
	110[b]	2026-2032
Eden et al. (2023)	70[b]	2027-2032
Rickels et al. (2023)	297	2030
Abrell et al. (2024)	175-360[c]	2030
Graichen y Ludig (2024)	45[b]	2027-2032
	100[b]	2027-2032
	200[b]	2027-2032
Günther et al. (2024)	71[d]	2030
	160[d]	2030
	261[d]	2030
Kettner et al. (2024)	45	2027-2036
	45	2027
	180	2036
	180	2027-2036
	80	2027
	300	2036

Fuente: Elaboración propia a partir de la literatura citada
Notas: a) € de 2015; b) precio medio; c) € de 2021; d) € de 2022

Tabla 2. Medidas compensatorias en la literatura

Artículo	Años	País	Política	Destinatarios	Impacto distributivo
Brenner et al. (2007)	1995	China	Transferencias de suma fija	Todos los hogares	Progresivo
Bureau (2011)	2003-2006	Francia	Transferencias de suma fija	Todos los hogares	Progresivo
				Todos los hogares en función de su tamaño	Progresivo
			Transferencias proporcionales al nivel de renta del hogar	Todos los hogares	Regresivo
Borenstein & Davis (2016)	2005-2012	EE.UU.	Subsidios a climatización de viviendas y otras mejoras de eficiencia energética en las viviendas	Todos los hogares	Regresivo
			Subsidios a la instalación de paneles solares y sistemas de calefacción solar		Regresivo
			Subsidios a la compra de coches híbridos, de gas natural, hidrógeno y otros vehículos alternativos		Regresivo
			Subsidios a la compra de coches eléctricos e híbridos enchufables		Regresivo
Coffman et al. (2016)	2005-2010	EE.UU.	Créditos fiscales para para la instalación de paneles solares	Todos los hogares	Regresivo
Neveu & Sherlock (2016)	2006-2008	EE.UU.	Créditos fiscales para mejoras de eficiencia energética en las viviendas	Todos los hogares	Regresivo
Rivers & Shiell (2016)	2007-2011	Canadá	Subsidios renovación de sistemas de calefacción de gas natural	Todos los hogares	Regresivo
Rubin & St-Louis (2016)	2010-2015	EE.UU.	Descuentos compra vehículos eléctricos, de pila de combustible e híbridos enchufables	Todos los hogares	Regresivo
Irvine (2017)	2013-2015	EE.UU.	Subsidios a vehículos eléctricos	Todos los hogares	Regresivo
Kirchner et al. (2018)	2009-2010	Austria	Transferencias de suma fija	Todos los hogares	Progresivo
				Hogares de las 3 decilas de menor renta	Progresivo
Tovar Reaños & Sommerfeld (2018)	2002-2014	Alemania	Subsidios compra vehículos eléctricos y de gas natural comprimido	Todos los hogares	Regresivo
			Transferencias de suma fija		Progresivo
Berry (2019)	2012	Francia	Transferencias de suma fija	Todos los hogares	Progresivo
				Todos los hogares ajustadas por su tamaño	Progresivo
				Todos los hogares ajustadas por su localización (urbana/rural, zonas climáticas)	Progresivo
				Todos los hogares ajustadas por nivel de renta	Progresivo
				3 decilas de menor renta	Progresivo
De Bruin et al. (2019)	2014-2030	Irlanda	Transferencias de suma fija	Todos los hogares	Progresivo
Ju et al. (2020)	2010-2017	EE.UU.	Descuentos compra vehículos eléctricos, de pila de combustible e híbridos enchufables	Todos los hogares. En 2016 se introdujo un límite de	Regresivo. Menos regresivo tras la introducción de un límite de
					como subsidios mayores para los hogares de baja renta
	2015-2017		Descuentos compra vehículos eléctricos, de pila de combustibles, híbridos enchufables, híbridos no enchufables, de combustión interna de bajas emisiones y vehículos usados eficientes	Hogares de renta baja y media. Mayores subsidios para los hogares de renta baja y las comunidades desfavorecidas	Progresivo
Lekavičius et al. (2020)	2016	Lituania	Subsidios para la instalación de fuentes de energía renovable en edificios residenciales y para la sustitución de calderas de biomasa antiguas	Todos los hogares	Regresivo
Egner et al. (2021)	2019	Noruega	Subsidios mejora energética de los edificios	Todos los hogares	Regresivo
Gago et al. (2021)	2018	España	Transferencias de suma fija	Todos los hogares	Progresivo
				5 decilas de menor renta	Progresivo
				Hogares en situación de pobreza	Progresivo
Guo & Kontou (2021)	2010-2018	EE.UU.	Descuentos compra vehículos eléctricos, de pila de combustible e híbridos enchufables	Todos los hogares. En 2016 se introdujo un límite de ingresos para recibirlos	Regresivo. Menos regresivo tras la introducción de un límite de ingresos
Labeaga et al. (2021)	1994-2014	México	Transferencias de suma fija	Todos los hogares	Progresivo
			Transferencias de suma fija	Hogares en situación de pobreza	Progresivo
			Transferencias inversamente proporcionales al nivel de renta del hogar	Hogares en situación de pobreza	Progresivo
Bigler & Radulescu (2022)	2019	Suiza	Subsidios compra vehículos eléctricos	Todos los hogares	Regresivo
Caulfield et al. (2022)	2018-2020	Irlanda	Subsidios compra vehículos eléctricos	Todos los hogares	Regresivo
Wu et al. (2022)	2011	China	Transferencias de suma fija	Todos los hogares	Progresivo
Duma et al. (2023)	2022-2032	Bulgaria Alemania Hungría Polonia Rumanía	Transferencias de suma fija	Todos los hogares	Progresivo
Hennessy & Syal (2023)	2010-2020	EE.UU.	Subsidios compra vehículos eléctricos	Todos los hogares	Regresivo
Fernández et al. (2024)	2021	Holanda	Subsidios mejora de la eficiencia energética en edificios	Todos los hogares	Regresivo
Kettner et al. (2024)	2036	UE-27 Austria Polonia	Transferencias de suma fija	Todos los hogares	Progresivo

Fuente: Elaboración propia a partir de la literatura citada

Tabla 3. Incrementos en los precios de la energía con un precio de los derechos de emisión de 50 €/tCO2

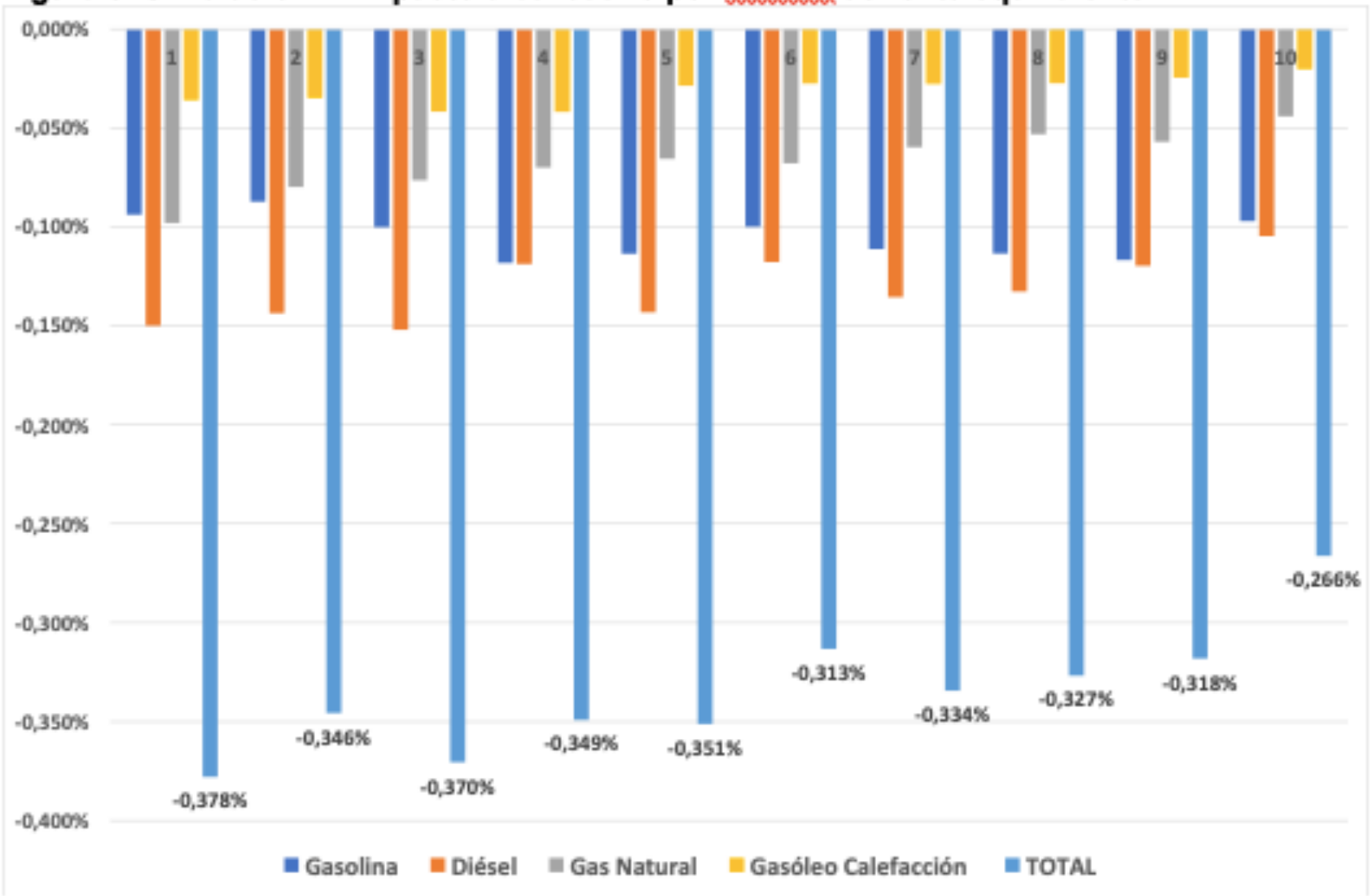
Producto energético	Incremento
Gasolina	0,1141 €/l
Diésel	0,1298 €/l
Gas Natural	9,1 €/MWh
Gasóleo Calefacción	0,1361 €/l
GLP	0,1379 €/Tm

Tabla 4. Simulación 1. Impactos sobre los precios, los consumos y la recaudación

	Precio final (%)	Consumo y Emisiones (%)	Variación en la recaudación (Millones de euros)			
			Derechos de emisión	Impuesto especial	IVA	Total
Gasolina 95	8,46%	-2,14%	818,10	-74,07	127,39	871,41
Diésel	9,40%	-1,89%	2196,24	-154,04	366,72	2408,91
Gas Natural	10,47%	-2,53%	438,64	-2,93	69,24	504,95
Gasóleo A	12,88%	-1,82%	203,76	-2,68	36,64	237,72
TOTAL	--	-2,05%[a] -2,02%[b]	3656,73	-233,73	599,99	4023,00

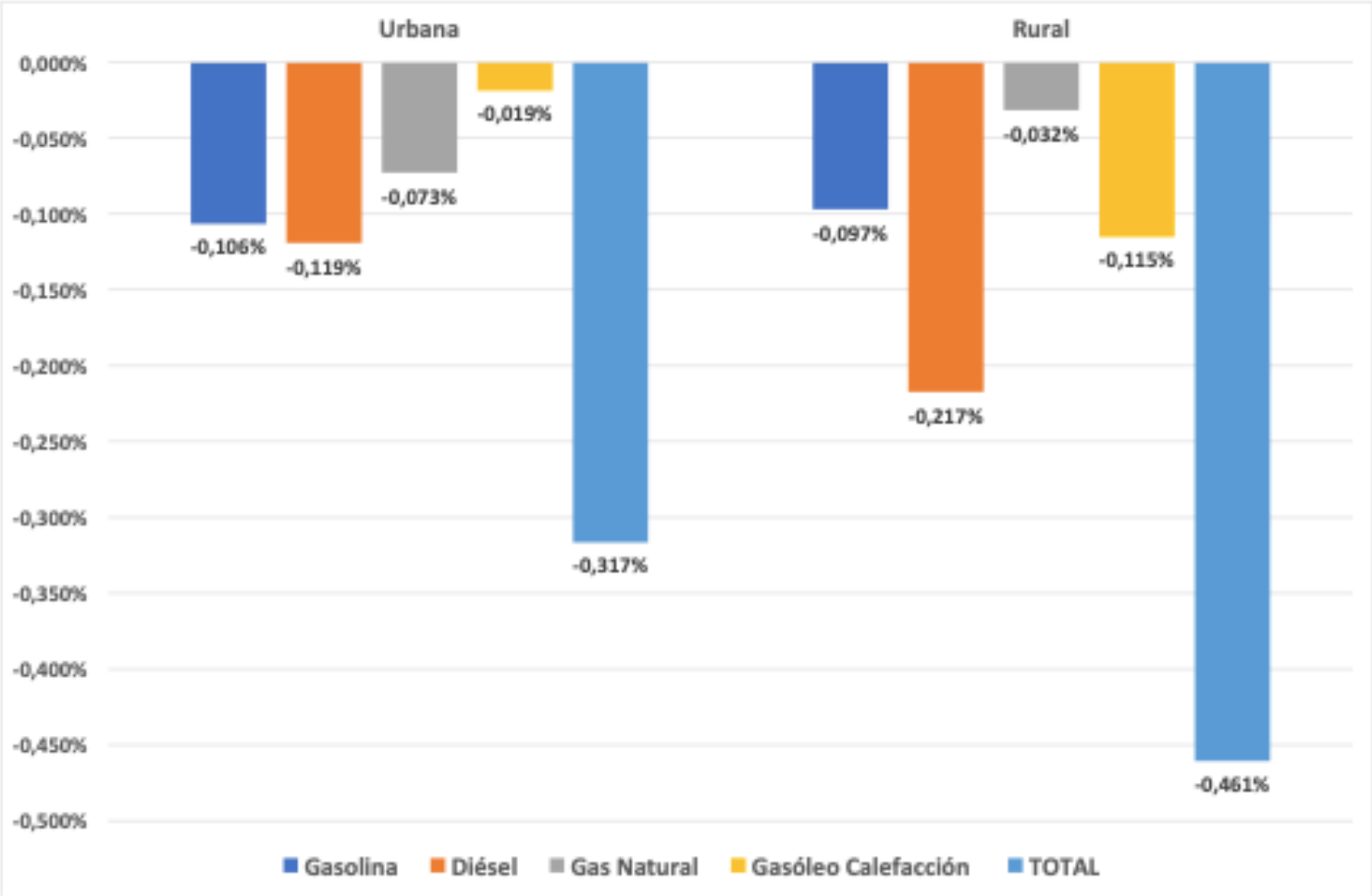
Notas: a) Variación en el consumo de energía; b) Variación en las emisiones
Fuente: Elaboración propia

Figura 3. Simulación 1. Impacto distributivo por decilas de renta equivalente



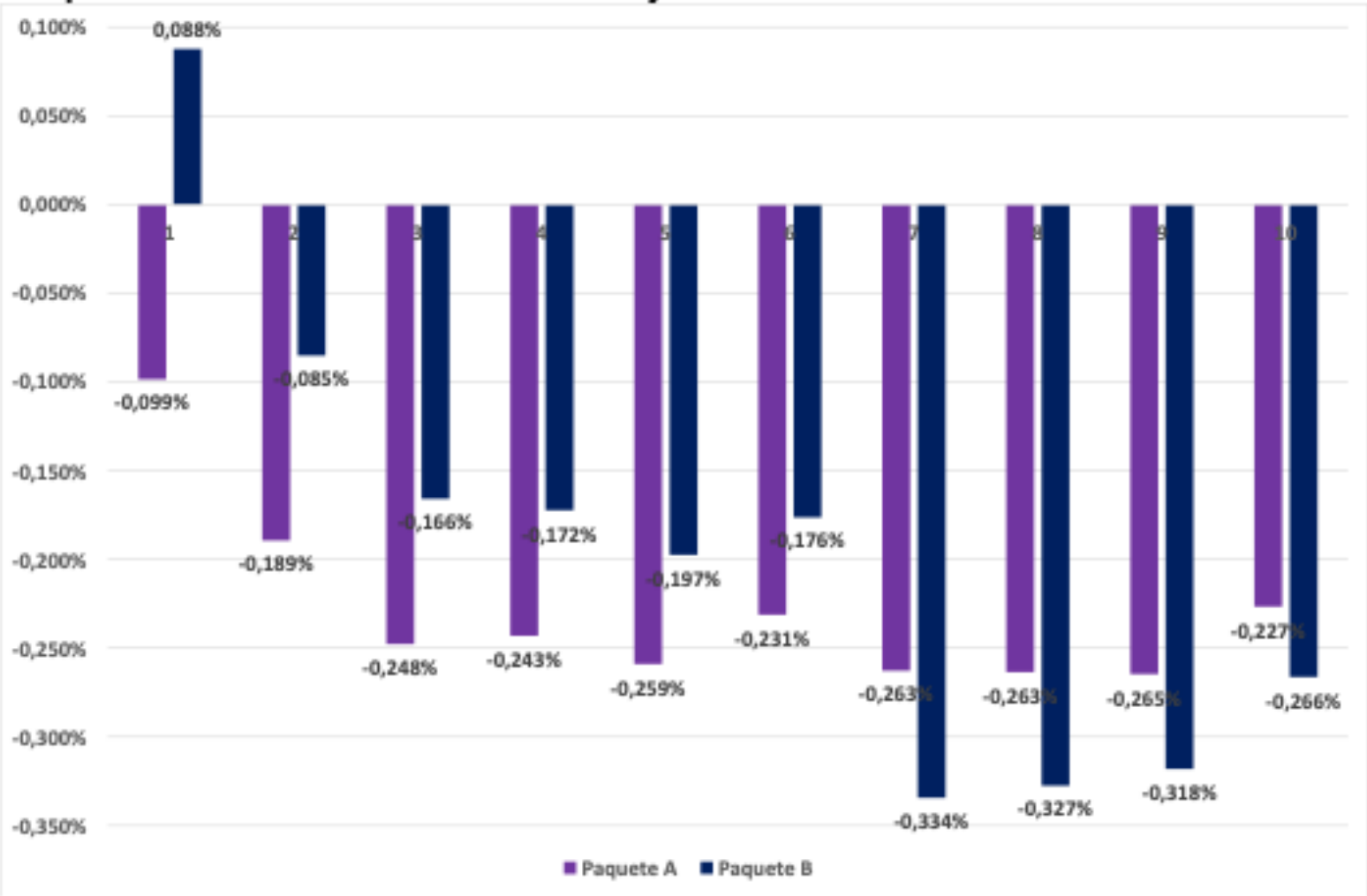
Fuente: Elaboración propia

Figura 4. Simulación 1. Impacto medio sobre la renta equivalente de zonas urbanas y rurales



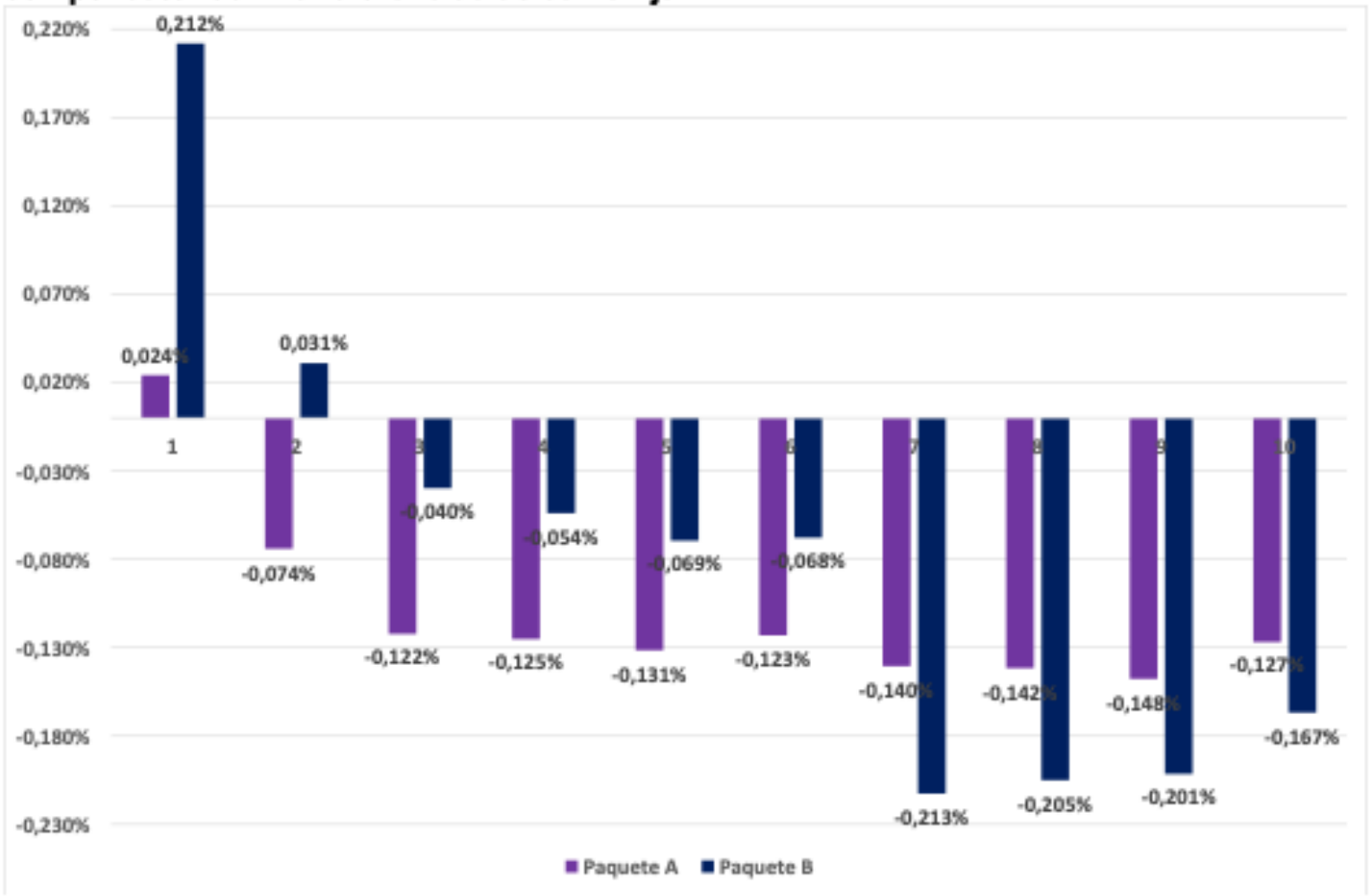
Fuente: Elaboración propia

Figura 7. Simulación 1. Impacto distributivo por decilas de renta equivalente con medidas compensatorias. Transferencias de suma fija



Fuente: Elaboración propia

Figura 8. Simulación 2. Impacto distributivo por decilas de renta equivalente con medidas compensatorias. Transferencias de suma fija



Fuente: Elaboración propia

- **Fiscalidad Ambiental: necesaria para una transición exitosa**
- **No se han cumplido expectativas, por varias razones**
- **El tiempo para soluciones flexibles puede agotarse**
- **Grandes necesidades en el ámbito del transporte.**
- **Nuevas realidades geopolíticas pueden hacerla más viable en ciertos territories**
- **EUETS-2?**

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