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THE GLOBAL REGULATORY OUTREACH OF THE EUROPEAN UNION: THE CASE OF THE EMISSION TRADING SYSTEM IN THE AVIATION SECTOR

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INTRODUCTION

This study aims to examines the external regulatory power of the European Union (hereinafter EU), understood as the EU's ability to influence third countries through the economic incentive of access to its market. External regulatory power refers to the EU's ability to establish itself as a global regulatory centre, extending the extraterritorial effectiveness of its policies.

Following the economic integration process within the EEC in the 1970s, François Duchêne coined the term "*Civilian Power*" to describe the Community's ability to influence its surrounding environment through diplomatic, economic, and legal instruments without military power. This concept refers to the capacity of the EEC to export a model of security and stability similar to the one developed in Europe[1]. While some scholars have highlighted the EU's capacity to externalise its principles and values[2], others have focused on its ability to externalise its regulatory standards and policies in commercially significant sectors, driven by the attractiveness and size of the European single market[3].

"Normative Power", a power capable of influencing the normative standards of international politics[4], flourished during a period of easing geopolitical tensions and global trade liberalisation, in which market interconnectivity played a fundamental role.

According to Damro, the tendency of the EU's internal regulations to be externalised impacted not only economic operators directly but also third countries themselves[5]. Damro specifically highlighted the dissemination of European standards regarding air traffic safety and the trading of fossil fuel emission allowances[6].

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[1] Duchêne, F. (1972). 'Europe's Role in World Peace' in Richard Mayne (ed.), *Europe Tomorrow: Sixteen Europeans Look Ahead*, London: Fontana/Collins.

[2] Manners, I. (2002). 'Normative power Europe: A contradiction in Terms', *JCMS Journal of Common Market Studies*, Vol 40, 235-258.

[3] Damro, C. (2012). 'Market Power Europe', *Journal of European Public Policy*, Vol 19, pp. 682-699.

[4] Manners, I. (2002). 'Normative power Europe: A contradiction in Terms', *JCMS Journal of Common Market Studies*, Vol 40, 235-258.

[5] Damro, C. (2012). 'Market Power Europe', *Journal of European Public Policy*, Vol 19, pp. 682-699.

[6] *Ibidem.*

However, the market fragmentation induced by the war in Ukraine and the subsequent deterioration of international relations have led to the emergence of trade blocks, which may undermine the stability and even the very existence of a European "*Normative Power"*.

The interdependencies and interconnectedness of economic globalisation are governed through regulations shaped and implemented by various public and private actors. Additionally, they are managed through standards, guidelines, and best practices that foster the sharing of rules of conduct[7].

The literature agrees[8] that various national legal systems pursue strategies aimed at endowing their regulations with extraterritorial influence, albeit through different means.

The United States has developed a form of external regulatory power primarily based on the use of coercive instruments (e.g., trade sanctions, military superiority) to secure the value and regulatory alignment of third countries[9].

China has adopted a more pragmatic approach, focused on penetrating third-country markets and establishing economic dependency (e.g., the Belt and Road Initiative, the Asian Infrastructure Investment Bank) to project its regulatory influence[10].

According to Anu Bradford[11], the EU has developed a distinct form of external regulatory power, labelled as the Brussels Effect, through which it influences companies and jurisdictions in third countries.

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[7] Simoncini, M. (2019). 'Il Passaporto del Cittadino Globale. Prolusione per l'apertura dell'anno accademico', *LUISS School of Government,* ISSN: 2282-4189.

[8] Manners, I. (2002). 'Normative power Europe: A contradiction in Terms', *JCMS Journal of Common Market Studies*, Vol 40, 235-258.

Diez T. (2005). 'Constructing the Self and Changing Others: Reconsidering Normative Power Europe', *Millennium: Journal of International Studies*, Vol. 33, 613–36.

[9] *Ibidem.*

[10] Wang H. (2019). 'China's Approach to the Belt and Road Initiative: Scope, Character and Sustainability', *Journal of International Economic Law*, Vol. 22, 29-55.

Shaffer G., Gao H. (2020). 'A New Chinese Economic Order?', *JIEL: Journal of International Economic Law*, Vol.23 607–635.

[11] Bradford, A. (2012). 'The Brussels Effect', *Northwestern University Law Review* 107 (1), 1-68.

Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press.*

The EU unilaterally sets standards that, while applying its own jurisdiction, ultimately exert influence globally. This occurs because access to the internal market becomes a tool for leveraging the "migration" of its often-stringent norms to other regions[12] across various sectors.

This work aims to investigate the EU's external regulatory influence beyond its borders in the field of climate change mitigation. More specifically, it focuses on the tools adopted by the EU to reduce greenhouse gas emissions (GHG), particularly in the civil aviation sector. By analysing the unilateral regulation of the EU Emission Trading System (ETS) and the international cooperation of the EU in the sector, the dissertation aims to understand whether the EU unilateral strategy has changed after the adoption of an international market-based instrument (CORSIA) at the ICAO level.

Thus, it aims to answer the following research question:

Has the integration of ICAO CORSIA marked the end of the EU's unilateralism in aviation GHG emissions reduction policies and its transition to a multilateral approach at the international level?

The aviation industry was incorporated into the EU Emission Trading System (EU ETS) under Directive 2008/101[13], which amended the framework initially established by Directive 2003/87[14]. This system aligns with the broader set of initiatives developed in response to the 1997 Kyoto Protocol, aimed at reducing GHG emissions. Under its provisions, from 1 January 2012, the EU ETS was set to apply to all aviation operators (both European and non-European) conducting flights within the EU.

The EU ETS operates as a cap-and-trade system, establishing a limit on GHG emissions permitted within the European territory. A corresponding number of emission allowances is allocated, which can be traded on a dedicated carbon market, incentivising cost-effective emissions reductions.

[12] Scott, J. (2014). 'Extraterritoriality and Territorial Extension in EU Law', *The American Journal of Comparative Law* 62 (1), p. 88.

[13] Directive (EC) 2008/101 of the European Parliament and of the Council of 19 November 2008 amending Directive (EC) 2003/87.

[14] Directive (EC) 2003/87 of the European Parliament and of the Council of 13 October 2003.

The EU launched an ambitious, controversial, and high-risk experiment to extend the reach of its climate change law[15].

According to Bradford, had it been fully enforced, the Directive (EC) 2008/101 would have stood as one of the most striking illustrations of the Brussels Effect in action[16].

However, foreign governments successfully curtailed the EU's unilateral attempts to extend the ETS to international aviation. This demonstrates that the Brussels Effect has limitations, particularly when the EU pursues "*aggressive unilateralism in a domain that is both economically significant and politically contentious*"[17].

The prorogation of the "Stop the Clock Decision"[18], further extended by Directive (EU) 2023/958[19] until 31 December 2026, illustrates how the EU has abandoned the idea of enforcing its scheme on extra-EEA flights.

On the other hand, the threat of EU unilateralism was sufficient to initiate multilateral negotiations, ultimately leading to an international agreement to regulate emissions in the aviation industry, an outcome that "*would have been unlikely had the EU not sought to drive regulatory change"*[20].

The Paris Agreement provided the global framework within which the ICAO (International Civil Aviation Organization), the United Nations agency responsible for regulating international civil aviation, developed its initiative to limit net GHG emissions: the CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation).

The CORSIA is the first global measure aimed at addressing growing concerns related to the projected expansion of international air traffic and the consequent increase in CO2 emissions, to stabilise them at 2020 levels. The program is based on a cross-sectoral offsetting mechanism and applies exclusively to international civil flights.

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[15] Scott, J., Rajamani, L. (2012). 'EU Climate Change Unilateralism', *The European Journal of International Law* Vol. 23 no. 2., p.469.

[16] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press.* p. 359.

[17] *Ivi,* p. 373.

[18] Decision (EU) 2013/377 of the European Parliament and of the Council of 24 April 2013.

[19] Directive (EU) 2023/958 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC.

[20] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press,* p.373

Although unsuccessful in promoting regulatory alignment through the *de facto* Brussels Effect, the EU has managed to achieve it through two variations[21] of the *de jure* Brussels Effect[22].

The activation of this broader form of the *de jure* Brussels Effect in aviation through the adoption of ICAO CORSIA is peculiar because it was not driven by lobbying from companies in third countries but rather by the active influence of European regulations and institutions, especially the CJEU and the Commission, which are currently determined to persist with the European Green Deal.

Moreover, the EU retains a degree of unilateralism in assessing the "equivalent measures" stipulated in Article 25*a* of Directive (EC) 2003/87 and Recital 17 of Directive (EC) 2008/101, which foreign states adopt in order to secure exemption from the EU ETS.

This study updates the previous work of Bradford and Scott in light of the newly enacted Directive (EU) 2023/958, which grants the EU a reservation of power to assess the ambition level of the international ICAO CORSIA mechanism.

In particular, the Commission retains the power to assess the ICAO CORSIA system and to submit an evaluation to the Council and Parliament in light of the objectives of the Paris Agreement.

According to Article 1, paragraph. 10, Directive (EU) 2023/958, if specific criteria contained therein are not met[23], the EU ETS will be extended to flights departing from aerodromes located within the EEA to aerodromes outside the EEA (the "full scope"), thus following the CJEU ruling[24].

The first chapter will present the theoretical framework of the global normative outreach of the EU, and it specifically builds upon the Brussels Effect as developed by Anu Bradford. In particular, it focuses on Bradford's definition of *de jure* and *de facto* Brussels Effect and analyses the conditions framing the EU's unilateral regulatory power. It also explains Scott's definition of territorial extension as a concept which qualifies how the EU applies its regulation unilaterally.

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[21] See Chapter 1.1.

[22] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press.* p. 373.

[23] See Chapter 3.3.

[24] See Chapter 2.2.

The second chapter analyses the legal framework and judicial decisions, which have contributed to shaping the unilateral application of ETS in the aviation sector. Specific attention will be paid to the litigation before the CJEU and the conflicts between the EU and the US on the application of ETS to American airlines and the conflict between the indiscriminate approach and the principle of common but differentiated responsibilities and respective capabilities (CBDRRC) under the United Nations Framework Convention on Climate Change (UNFCCC)[25] and Article 3 of the Kyoto Protocol[26]. In addition, the chapter analyses the most recent developments, such as the "Stop the Clock" decision[27], the implementation of the ICAO CORSIA with the EU ETS, and the most recent Directive (EU) 2023/958.

Finally, the third chapter examines whether the EU has abandoned (or not) its unilateral approach after the implementation of the ICAO CORSIA instrument. It particularly focuses on the reservation of power to evaluate the effectiveness of the international ICAO CORSIA as provided in Article 1, paragraph 10, Directive 2023/958.

[25] United Nations, (1992) Rio Declaration on Environment and Development. https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_CONF.151_26_Vol.I_Declaration.pdf

[26] UNFCCC, Kyoto Protocol to the United Nations Framework Convention on Climate Change. https://unfccc.int/resource/docs/convkp/kpeng.pdf

[27] Decision (EU) 2013/377 of the European Parliament and of the Council of 24 April 2013.

1. THE THEORETICAL FRAMEWORK

1.1 The Brussels Effect

In the contemporary global regulatory landscape, the "Brussels Effect", defined by Anu Bradford[28], illustrates the EU's capacity to set unilaterally standards that, while applying within its jurisdiction, ultimately exert global influence.

This EU approach to regulation challenges, or at least provides a valid exception to, the theory that Europe's international influence, which began with the geographical explorations of the XV century, declined after World War II and the Suez crisis of 1956[29]. There is no doubt that, since the Cold War, Europe has lost its hegemonic status and reduced its influence in international affairs[30], facing competition first from the United States and the USSR (and now Russia) and more recently from China, India, and other emerging powers.

Despite this, by uniting and creating a large single market, European countries have succeeded in imposing their regulatory power, establishing the Union itself as one of the most influential economic actors[31].

Even before Bradford's theory, Stefano Rodotà affirmed that European regulations, although formally binding on a limited number of nations (at the time, the European Community comprised fifteen member states), possessed an inherent expansionary force[32]. The European Union has demonstrated political initiative and technical expertise, as exemplified by its approach to data protection, exhibiting a strong capacity to influence other regions of the world, from Australia to Latin America[33]. In fact, the regulatory

[28] Bradford, A. (2012). 'The Brussels Effect', *Northwestern University Law Review* 107 (1), 1-68.
Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press.*

[29] Ferraro, F. (2022). 'L'evoluzione della politica ambientale dell'Unione: effetto Bruxelles, nuovi obiettivi e vecchi limiti', *AISDUE Associazione Italiana Studiosi del Diritto dell'Unione Europea,* 170-193.

[30] Walt, S. (2011). 'The Coming Erosion of the European Union', *Foreign Policy Journal.*

[31] Bradford, A. (2012). 'The Brussels Effect', *Northwestern University Law Review* 107 (1), 1-68.
Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press.*

[32] Rodotà, S. (2005). 'Il Codice civile e il processo costituente europeo', *Rivista critica del diritto privato.*

[33] *Ibidem.*

framework established by Directive (EC) 95/46[34], "on the protection of individuals with regard to the processing of personal data", has become a global reference point in privacy regulation[35].

Since the 1960s, the supranational regulatory framework of the EU, which was established to create and oversee an integrated, liberalised, and competitive market in Europe and was, therefore, primarily dedicated to addressing internal challenges, maintained a political agenda with a predominant focus on domestic matters[36]. However, since the 1990s, a shift has emerged in the EU's agenda, which has become "*deliberately externally oriented*"[37].

Increasing efforts to address "global governance" in various forms have led to greater regulatory cooperation and multilateral decision-making on adopting standards[38]. Many domestic regulations have come to be regarded as non-tariff barriers, thereby prompting multilateral interventions aimed at their removal[39].

Building upon the theory of David Vogel on the "California Effect"[40], to illustrate this "*ability of the Union (...) to unilaterally regulate the global market*"[41], Bradford highlights that multinational companies seeking to sell goods and services within the European market must align their production with the stringent regulations imposed by the Union.

This outcome may occur both in the practice (*de facto*) and in the law (*de jure*). A *de facto* Brussels Effect, driven by the voluntary initiatives of global private enterprises, materialises when firms are economically incentivised to select EU regulations to govern

[34] Directive (EC) 95/46 of the European Parliament and of the Council of 24 October 1995.

[35] Navone, G. (2022). 'Diritto europeo, mercato e globalizzazione delle regole'*, Rivista di scienze sociali*, vol. 2, 2, p. 41.

[36] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 47.

[37] *Ibidem.*

[38] *Ibidem.*

[39] *Ibidem.*

[40] Vogel, D. (1997). 'Trading Up and Governing Across: Transnational Governance and Environmental Protection'*, Journal of European Public Policy,* 4:4 556-71.

[41] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 24.

their operations, thereby extending EU standards transnationally across their supply chains, regardless of the policies of other governments.

Alternatively, the *de jure* Brussels Effect occurs when the same firms exert pressure on the governments of third countries to adopt sectoral regulations analogous to those of the EU, enabling them to operate within a harmonised legal framework outside Europe[42].

In other words, the *de facto* Brussels Effect occurs when multinational corporations have incentives to standardise their production according to EU rules globally. Instead, the *de jure* Brussels Effect happens when foreign domestic governments adopt the same stringent EU standards after being lobbied by export-oriented firms that aim to have intensive trade relations with the EU and have incentives to level the playing field against domestic competitors[43].

Bradford clarifies that the Brussels Effect is triggered only when a multinational company, after adapting its products or operational methods to comply with EU standards, chooses to apply the new standard to its products or methods on a global scale[44], based on a mere cost-benefit assessment, whereby it determines that "*it is more advantageous to produce a single product for multiple markets rather than developing multiple market-specific versions*"[45]. In this way, "*the EU does not need to impose its standards coercively*" or negotiate them multilaterally with other states, "*as market forces alone are often sufficient to transform the European standard into a global one"*[46].

The scenario in which the *de facto* Brussels Effect influences the interests of foreign multinational corporations, prompting them to lobby for regulatory intervention in their domestic markets, aligns precisely with the definition of the *de jure* Brussels Effect. While this process alone may be sufficient for foreign governments to adopt regulations analogous to those of the EU, such decisions are often shaped by multiple factors, not solely attributable to the *de facto* Brussels Effect[47].

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[42] Bradford, A. (2012). 'The Brussels Effect', *Northwestern University Law Review* 107 (1), 1-68.

[43] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 24.

[44] *Ivi*, pp.96-97.

[45] *Ivi*, p. 317.

[46] *Ivi,* p. 14-15.

[47] *Ivi,* p. 25.

When understood in a broader sense, the term "*de jure* Brussels Effect" can also describe a wider range of mechanisms that extend EU regulatory frameworks to other jurisdictions. For instance, the EU frequently exports its regulations through economic and political treaties, and international organisations[48].

The activation of this type of *de jure* Brussels Effect through the adoption of ICAO CORSIA is peculiar because it was not driven by lobbying from companies in third countries but rather by the active influence of European regulations and institutions, especially the CJEU and the Commission, which are currently determined to persist with the European Green Deal.

The EU's unilateral power to regulate outside its borders may manifest voluntarily or involuntarily: European institutions develop legislation for the internal market, yet the economic forces stemming from its size and attractiveness compel external actors to adopt similar regulations[49].

Bradford identifies the conditions necessary for the Brussels Effect to occur within a jurisdiction as follows:

a) Market power

Market power is correlated with the relative size of countries' internal markets. The significance of the market constitutes a necessary but not sufficient precondition for triggering both *de facto* and *de jure* mechanisms that lead to the expansion of a regulatory framework beyond its original jurisdiction. As stated, "*a foreign producer will be incentivized to comply with the standards (...) of the importing jurisdiction when the benefits of market access outweigh the costs of compliance*"[50].

According to Bradford, the larger the market of the (strict) importing country relative to the (lenient) market of the exporter country, the more likely the Brussels Effect will occur. More accurately, the greater the ratio of exports to the (strict) jurisdiction relative to sales in the (lenient) home or third-country markets, the more likely the Brussels Effect will occur.

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[48] *Ibidem.*

[49] Bradford, A. (2012). 'The Brussels Effect', *Northwestern University Law Review* 107 (1), p.9.
Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press.*

[50] *Ivi,* p. 62

b) Significant regulatory capacity

Not all states with large markets become sources of global standards. The state must also have the regulatory capacity to translate its market power into tangible regulatory influence, requiring resources and expertise. Only jurisdictions capable of imposing significant costs by excluding non-compliant firms from their market are able to drive regulatory adjustments. In fact, an important element of regulatory capacity is the authority to impose sanctions in case of noncompliance. The degree to which a country has regulatory capacity sets important limits on its ability to exert global regulatory authority[51].

From this perspective, the EU benefits from institutions that have progressively developed a vast regulatory capacity[52] and have been endowed with broad sanctioning powers, ensuring compliance with its regulations even by the major entities in the digital economy.

c) Preference for strict rules

The domestic preference for strict regulation is more likely to be found in countries with high income levels. Wealthier countries can better afford pursuing consumer protection at the expense of the profitability of their firms.

The jurisdiction must also have the propensity to promulgate strict regulatory standards. While the EU has pursued a stringent regulatory framework[53], in keeping with its commitment to a social market economy and sustainable development, the USA has generally not followed this approach despite holding the world's leading economy position. Instead, the USA has tended to prioritise the reduction of regulatory compliance costs imposed on businesses[54]. According to Bradford, due to the political will to

[51] *Ivi,* p.68.

[52] *Ibidem.*

[53] *Ivi,* p.78.

[54] Navone, G. (2022). 'Diritto europeo, mercato e globalizzazione delle regole', *Rivista di scienze sociali*, vol. 2, 2, p.38.

Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press,* p.78.

safeguard markets and individual states' rights from federal government interference, gaining widespread public support for extensive regulatory action in the USA proves to be a difficult task[55]. This contrast is one of the principal reasons why, at present, the Brussels Effect remains more dominant than the Washington Effect[56].

d) Predisposition to regulate inelastic targets

Bradford's definitions of "elastic" and "inelastic" do not align with their traditional usage in the field of economics.

The term "inelastic targets" refers to "*products or producers that are not responsive to legislative changes and, as a result, are not tied to a specific regulatory regime*"[57].

The inelastic nature of consumer markets does not allow producers to choose favourable jurisdictions without losing access to the regulated market: this renders "*the producer an inelastic target or, in other words, immobile*"[58]. Food producers or data controllers cannot select which regulatory framework to adhere to, making it impossible for them to circumvent the Union's standards[59].

Instead, regulatory "elastic targets", such as capital, exhibit greater mobility and can be relocated to another jurisdiction.

The Brussels Effect operates exclusively in regulatory domains where enforcement is not contingent upon the geographical location of businesses.

Strict domestic regulations can operate as global standards only if such strict regulations cannot be circumvented by moving the regulatory targets to another jurisdiction. In other words, the ability to override another state's preference for lenient standards is compromised if the target can escape the strict regulation by simply relocating. The EU avoids this circumvention of its standards by primarily regulating consumer markets, such

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Paulette Kurzer, P. (2006). 'Transatlantic Risk Perceptions, Public Health, and the Environmental Concerns. Coming Together or Drifting Apart?', *Oxford University Press*.

[55] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p.78.

[56] *Ibidem.*

[57] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p.90.

[58] *Ibidem.*

[59] *Ibidem.*

as consumer health and safety and personal data protection, rather than elastic markets like capitals[60].

e) Non-divisibility of standards

The above conditions only ensure that the strict jurisdiction can regulate extraterritorially. Meeting these conditions does not, by itself, mean that the strict standard will be globalized. The Brussels Effect is only triggered when the exporter, after aligning its products or business practices with EU's strict standards, decides to apply them globally to its products or operations.

The "non-divisibility" of production processes refers to the practice of standardising, rather than customising, production across different jurisdictions, thereby implementing a uniform standard to manage the company's global operations[61].

Multinational corporations usually choose to align their entire production with the most stringent regulatory framework for economic reasons. Specifically, this occurs when the economies of scale resulting from the adoption of a single production process outweigh the costs associated with broadly adapting to the most demanding regulatory standards[62].

Scholarship has measured the *de facto* Brussels Effect using a qualitative methodology known as "process tracing", which compares the business strategies implemented by companies before and after the adoption of a given EU regulation[63]. The *de jure* Brussels Effect can be assessed by examining how foreign jurisdictions have responded to EU regulations. If the essential rules from an EU regulation are ultimately included into an

[60] *Ibidem.*

[61] *Ivi,* p.97.

[62] Navone, G. (2022). 'Diritto europeo, mercato e globalizzazione delle regole', *Rivista di scienze sociali,* vol. 2, 2, p.39.

Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World'*, Oxford University Press*, p.97.

[63] Li, S., Schütte, B., Sankari, S. (2023). 'The ongoing AI-regulation debate in the EU and its influence on the emergent economies – a new case for the 'Brussels Effect?', *Elgar Companion to Regulating AI and Big Data in Emerging Economies*, p.26.

Collier, D. (2011). 'Understanding process tracing'. *PS: Political Science & Politics*, 44(4), 823–830.

international framework or emulated by other jurisdictions over time, this may provide some evidence for the existence of a *de jure* Brussels Effect[64].

In contrast, if a company revises its policy to align with EU regulations and ultimately adopts it as the international standard, this indicates the emergence of a *de facto* Brussels Effect.

Lastly, if a company adopts different policies for the EU market and for markets in other jurisdictions, this is more like a reflection of the direct extraterritorial effect in a given EU regulation rather than the Brussels Effect[65]. This situation occurs when companies tailor their systems for the European market to comply with specific regulations while maintaining existing practices in other regions to avoid overcompliance.

Using this methodology, scholars have demonstrated that Regulation (EU) 2016/679, also known as the General Data Protection Regulation (GDPR)[66], possesses the *de facto* Brussels Effect, persuading non-EU undertakings to align their privacy policies with the EU regulation even outside the EU[67]. Instead, Amazon, an exception to this trend, retained a distinct privacy protection standard for its US website[68].

The involvement of dominant tech companies highlights the power of the Brussels Effect, as even strong market dominators such as Meta need to reconsider their terms of service and data commercialisation business model if they want to retain access to the

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[64] Li, S., Schütte, B., Sankari, S. (2023). 'The ongoing AI-regulation debate in the EU and its influence on the emergent economies – a new case for the 'Brussels Effect?', p.26.

[65] *Ibidem.*

[66] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016.

[67] Drewes, H., Kirk, A. (2024). 'Extraterritorial Effects of the Digital Markets Act - The 'Elusive Long Arm' of European Digital Regulation', *SSRN Electronic Journal*, p.7.

Obendiek, A. (2021) 'Take back control? Digital sovereignty and a vision for Europe', *Jacques Delors Centre*, 1-25.

Li, S., Schütte, B., Sankari, S. (2023). 'The ongoing AI-regulation debate in the EU and its influence on the emergent economies – a new case for the 'Brussels Effect?', *Elgar Companion to Regulating AI and Big Data in Emerging Economies*, p.26.

[68] Frankenreiter J. (2022) 'Cost-based California Effects', *39 Yale Journal on Regulation*, 1155-1217.

Drewes, H., Kirk, A. (2024). 'Extraterritorial Effects of the Digital Markets Act - The 'Elusive Long Arm' of European Digital Regulation', *SSRN Electronic Journal*, p.8.

European internal market[69]. This is evidenced by the U-turn performed by Meta, which initially threatened to withdraw platforms such as Facebook and Instagram from the European market but quickly backtracked. Consequently, Meta was compelled to adapt its terms to European standards.

Moreover, Li *et al.* highlighted that, due to increases in operational costs in compliance with the GDPR, the Chinese Internet tycoon Tencent issued its new international version of WeChat. This version included an updated privacy policy for all international users without discriminating against them according to their origin[70], thereby demonstrating the presence of a *de facto* Brussels effect.

Finally, according to Bradford, the EU legislative hegemony remains contingent upon the *rebus sic stantibus* principle, implying that it is not permanent. In fact, the capacity of European regulatory standards to transform de *facto* and *de jure* into global norms may gradually weaken as shifts occur in the five determining conditions[71].

Bradford identifies both internal and external threats that could undermine the Brussels Effect.

Among the internal challenges is the rise of Eurosceptic parties, while external threats include the continuous growth of China and other emerging powers, as well as new technologies that "*could revolutionise industrial processes, enabling greater customisation and localisation of production*"[72]. Nevertheless, the author concludes by predicting a prolonged future for the Brussels Effect.

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[69] Bendiek, A., Stuerzer, I. (2023). 'The Brussels Effect, European Regulatory Power and Political Capital: Evidence for Mutually Reinforcing Internal and External Dimensions of the Brussels Effect from the European Digital Policy Debate'. *DISO* 2:5, p.13.

[70] Li, S., Schütte, B., Sankari, S. (2023). 'The ongoing AI-regulation debate in the EU and its influence on the emergent economies – a new case for the 'Brussels effect?', *Elgar Companion to Regulating AI and Big Data in Emerging Economies*, p.27.

[71] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p.463.

[72] *Ibidem.*

1.2 Extraterritoriality and territorial extension

The definitions of territorial extension and extraterritoriality provided by Scott[73] are particularly relevant to this topic.

Extraterritorial measures impose obligations on persons abroad who do not have any connection with the regulating state. In contrast, territorial extension is triggered by a territorial connection; however, in applying the norm, the regulator is legally required to consider conduct or circumstances abroad[74].

The EU can impose an extraterritorial dimension on its policies by obliging third countries to comply with them (extraterritoriality). Alternatively, it can adopt a more measured approach that respects the principle of territoriality in customary international law by extending its regulatory outreach beyond its borders. This is achieved by leveraging the nexus created by commercial transactions between European and third-country entities (territorial extension)[75].

According to Scott the EU only exceptionally engages in extraterritoriality except when it is nationality-based, meaning that the person in question may be considered present (resident, domiciled, or established) within the territory of the EU, and historically, the EU was often averse to it[76].

The Regulation (EU) 2012/648[77] proved to be the first case of extraterritorial effect: the EU's Derivatives Regulation imposes obligations on contracts concluded between two entities established in one or more third (non-EU) countries, where the imposition of the obligation is necessary or appropriate to prevent the evasion of the provisions contained in the Regulation[78].

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[73] Scott, J. (2014). 'Extraterritoriality and Territorial Extension in EU Law', *The American Journal of Comparative Law* 62 (1), 87 – 125.

[74] *Ivi*, p. 90.

[75] Scott, J. (2014). 'Extraterritoriality and Territorial Extension in EU Law', *The American Journal of Comparative Law* 62 (1), 87 – 125.

[76] *Ivi*, p. 94.

[77] Regulation (EU) 2012/648 of the European Parliament and of the Council of 4 July 2012.

[78] Scott, J. (2014). 'Extraterritoriality and Territorial Extension in EU Law', *The American Journal of Comparative Law* 62 (1), p. 94.

In this case, the Union applies its legislative choices to operations occurring outside its territory, between foreign entities, thus "*irrespective of any territorial connection*"[79] between the regulated subject (the states subject to such obligations) and the regulating authority.

According to Scott, the EU does not often rely on effects-based jurisdiction[80].

Effects-based jurisdiction is a principle in international law that allows a state to exercise jurisdiction over conduct occurring outside its territory when that conduct has significant effects within the state's jurisdiction. The EU Derivatives Regulation imposes obligations on contracting parties' contracts concluded between two entities in third countries where the contract in question has a direct, substantial, and foreseeable effect within the EU[81].

On the contrary, the EU has often adopted the territorial extension doctrine. Scott highlights ten examples of territorial extension in EU law, operating across five diverse policy domains: financial services regulation, climate change, environment, maritime transport, and air transport[82].

According to Scott, the EU can leverage the territorial extension of its policies to expand its influence on the international stage by prompting third countries to align with existing international norms, enforcing compliance with already established international standards, or contributing to the groundwork for future multilateral or bilateral agreements[83].

Scott argues that the European preference for regulatory frameworks based on territorial extension mechanisms stems from the perception that they align more closely with international legal principles compared to equivalent extraterritorial policies.

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[79] *Ibidem.*

[80] *Ivi,* p. 95.

[81] *Ibidem.*

[82] *Ivi*, p. 96.

[83] Scott, J. (2014). 'Extraterritoriality and Territorial Extension in EU Law', *The American Journal of Comparative Law* 62 (1), 87 – 125.

This "international orientation" of territorial extension is grounded in two distinctive features that characterise such EU regulations: their provisional nature and inherent flexibility[84].

The Directive 2008/101 serves as a prime illustration of these characteristics. Its provisional nature is evident in the EU's anticipation of the temporary scope of its legislation, contingent upon the regulatory autonomy of third countries or the conclusion of multilateral or bilateral agreements.

On the other hand, flexibility is evident in the equivalence clause, through which the EU conditions the limitation of the directive's scope on a positive assessment of the equivalence of measures introduced by a third country to achieve the same objective[85].

Nonetheless, this approach does not preclude the prospect of European unilateralism in cases where such events do not materialise or fail to meet the desired level of stringency[86].

EU legislation that gives rise to territorial extension is useful to construct "*concentric spheres of regulatory intervention, delimited by the boundaries of individual transactions, a firm, a country, or the globe market*"[87], meaning that it progressively extends its scope of action to increasingly broader levels.

[84] *Ivi*, p. 116.

[85] *Ivi,* p. 117.

[86] Gattini, A. (2012). 'Between splendid isolation and tentative imperialism: the EU's extension of its Emission Trading Scheme to International Aviation and the ECJ's Judgment in the ATA Case', *International and Comparative Law Quarterly*, 61(4), p. 983.

[87] Scott, J. (2014). 'Extraterritoriality and Territorial Extension in EU Law', *The American Journal of Comparative Law* 62 (1), pp. 105-106.

Sphere	*Definition*
Transaction	The EU regulator is required to take into account conduct or circumstances taking place or prevailing outside the EU in so far as these pertain to a specific transaction.
Firm	The EU regulator is required to take into account conduct or circumstances taking place or prevailing outside the EU in so far as these pertain to a specific firm.
Country	The EU regulator is required to take into account conduct or circumstances taking place or prevailing in a third country.
Globe	The EU regulator is required to take into account conduct or circumstances taking place or prevailing across the entire globe.

Scott, J. (2014). 'Extraterritoriality and Territorial Extension in EU Law', *The American Journal of Comparative Law* 62 (1), p. 107

The EU employs territorial extension to stimulate or induce various forms of legal or behavioural change.

In particular, it utilises territorial extension to encourage a high level of compliance from third-country entities, assessing their performance either based on individual transactions or through the aggregation of multiple transactions at the level of a third country or corporation.

Additionally, territorial extension is often employed as a strategy to encourage the enactment of domestic laws in third countries.

Lastly, the EU frequently resorts to territorial extension to enforce internationally agreed standards of conduct (international standards)[88]. Notably, it sometimes applies such measures even before the relevant international standards have officially come into effect, when those standards remain non-binding, or when only a limited number of states has ratified them. Nevertheless, there are instances where the EU deliberately refrains from extending the territorial scope of its regulations due to the absence of corresponding international standards.

Directive 2008/101 provides an example in this regard, as it stipulates the non-application of the EU ETS in the event of an alternative international agreement for

[88] *Ibidem.*

emission reductions, an agreement which, in essence, ensures its continuation on a global scale[89].

At least in its original form, the EU's Aviation Directive established three distinct levels of regulatory intervention. It created a transaction-specific level of intervention, as the EU regulator had to consider the total global emissions produced by an individual flight departing from the EU[90].

It also established a countrywide level of intervention, requiring the EU regulator to assess whether a third country has implemented its own measures to mitigate the climate impact of aviation[91].

Lastly, it introduced a global level of intervention, as the EU regulator had to evaluate the possibility of amending the Directive if an international agreement was reached to regulate aviation-related climate emissions[92].

The EU's Aviation Directive first pushed companies and then third states to adopt its regulations by leveraging the attractiveness of its market, thereby granting extraterritorial applicability to its regulatory choices[93].

1.3 Primary Law

The EU's regulatory capacity in environmental matters has developed alongside the increasing, yet sometimes ambiguous, awareness of the European public opinion[94].

The Single European Act of 1986 formally incorporated environmental protection into the EU treaties, establishing it as a primary objective. It introduced an explicit legal basis

[89] Cremona M., Scott J. (2019), 'EU Law Beyond Borders, The extraterritorial reach of EU Law', *Oxford University Press.*

[90] Scott, J. (2014). 'Extraterritoriality and Territorial Extension in EU Law', *The American Journal of Comparative Law* 62 (1), p. 106.

[91] *Ibidem.*

[92] *Ibidem.*

[93] Cremona M., Scott J. (2019), 'EU Law Beyond Borders, The extraterritorial reach of EU Law', *Oxford University Press.*

[94] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 344.

and granted EU institutions the competence to adopt measures for environmental protection[95].

The Maastricht Treaty of 1992 acknowledged the importance of "sustainable growth" and introduced the "precautionary principle" to guide environmental decision-making. It also marked the first recognition of the EU's role in promoting multilateral measures beyond its borders[96].

With the Amsterdam Treaty of 1999, European institutions were entrusted with the duty to promote sustainable development by integrating environmental protection into all areas of EU policy[97].

Subsequently, the Lisbon Treaty of 2009 established "combating climate change" as a specific objective of the European treaties, providing climate action with a solid constitutional foundation. It also explicitly recognised that sustainable development should guide the EU's international relations[98].

Currently, the subject is governed by the Treaty on the Functioning of the European Union (TFEU), whose Article 4 establishes that environmental matters fall under the shared competence of the EU and its Member States. The Treaty addresses environmental protection in Title XX (Articles 191–193).

Article 191 outlines several key objectives, including the preservation and enhancement of the environment, the protection of human health, the responsible use of natural resources, and the promotion of international initiatives aimed at environmental protection, particularly concerning climate change mitigation.

Additionally, the provision specifies that EU environmental policy is underpinned by several fundamental principles: the precautionary and prevention principles, the principle of rectifying environmental damage at its source whenever feasible, and the "polluter pays" principle, which ensures that the financial burden of pollution falls on the polluter rather than being distributed across society.

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[95] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 344.

[96] *Ibidem.*

[97] *Ibidem.*

[98] *Ibidem.*

Article 192 TFEU stipulates that the ordinary legislative procedure is the general rule for adopting measures in environmental matters, whereas Article 193 TFEU establishes that the Union's competence in this area is shared.

2. THE REGULATORY OUTREACH OF THE EU ETS SYSTEM

2.1 The EU Emission Trading System (ETS)

The EU ETS represents a pivotal approach to regulating GHG emissions, as global climate challenges necessitate coordinated action. It was introduced by Directive (EC) 2003/87 and has become the principal European instrument for achieving reductions of GHG emissions.

The EU ETS should be seen in the context of the development of international agreements aiming to reduce emissions of GHG, started with the United Nations Conference on Environment and Development (UNCED), also known as the Rio de Janeiro Conference, and the consequent United Nations Framework Convention on Climate Change (UNFCCC) in 1992. These efforts evolved through the Conference of Parties (COP), especially with the Kyoto Protocol of 1997 and finally the Paris Agreement of 2015.

Initially, the EU ETS covered the intensive energy and industrial sectors until aviation was also included by Directive (EC) 2008/101, which came into force in 2012.

Today, after a brief yet turbulent history, the EU ETS for aviation applies only to flights within the European Economic Area (EEA), comprising EU Member States, Iceland, Liechtenstein, UK, and Norway, including domestic flights.

Its cap is defined as 95% of the average historical emissions of the years 2004–2006.

The EU ETS is a market-based instrument, in contrast to the traditional enforcement instrument of "command and control"[99], designed to achieve predefined environmental targets cost-efficiently by pricing emissions to incentivise producers to reduce or remove negative externalities[100].

[99] Maertens, S., Grimme, W., Scheelhaase, J. Jung, M. (2019). 'Options to Continue the EU ETS for Aviation in a CORSIA-World', *Institute of Air Transport and Airport Research, German Aerospace Center* (DLR e. V.), 51147, p.7.

[100] Scheelhaase, J., Maertens, S., Grimme, W., Jung, M. (2018). 'EU ETS versus CORSIA – A critical assessment of two approaches to limit air transport's CO2 emissions by market-based measures', *Journal of Air Transport Management* 67, p.55.

The European Commission is responsible for policymaking and management of the overall EU ETS scheme, with national authorities responsible for the enforcement component[101].

The EU ETS works on the "cap and trade" principle. The cap is defined as 95% of the average historical emissions of the years 2004–2006 and is a limit set on the total amount of GHG that can be emitted by the installations and aircraft operators covered by the system. It is reduced annually in line with the EU's climate target, ensuring that emissions decrease over time. It is expressed in emission allowances, with each allowance granting the right to emit one tonne of CO2 or equivalent. Each year, companies must monitor and report their emissions and surrender enough allowances to fully account for them, otherwise heavy fines are imposed[102].

Within the cap, companies primarily buy allowances on the EU carbon market, although they also receive some allowances for free. They can also trade allowances with each other as needed, thus incentivising virtuous behaviours, innovation, and efficiency.

The EU carbon market determines the price of allowances and is subject to a robust set of oversight rules. The declining EU ETS cap informs companies about the long-term scarcity of allowances on the market while ensuring they retain market value. The carbon price, in turn, provides an incentive for companies to reduce emissions cost-effectively[103].

Since 2013, the EU ETS has raised over EUR 175 billion[104]. Auctioning has been the default method for distributing allowances, and in 2023 alone, the system generated a total of EUR 43.6 billion in auction revenues. This approach enforces the "polluter pays" principle, ensuring that those who emit pollutants pay for the right to do so[105].

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[101] Bonnet-Cantalloube, B. (2024). 'The EU's and ICAO's diverging ambitions to reduce aviation's climate impacts', *Carbon Market Watch.* https://carbonmarketwatch.org/publications/the-eus-and-icaos-diverging-ambitions-to-reduce-aviations-climate-impacts/

[102] European Commission. (2024). 'EU Emissions Trading System (EU ETS). What is the EU ETS'. https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/what-eu-ets_en?prefLang=it

[103] *Ibidem.*

[104] *Ibidem.*

[105] *Ibidem.*

With a particularly contentious move, the EU attempted to compel international action by incorporating aviation emissions into its ETS in 2008 and thereby sought to apply its Aviation Directive on an extraterritorial scale[106].

The Directive 2008/101 required all airlines, including foreign carriers, to purchase emission allowances for all flights departing from or arriving at European airports. In this way, airlines could not restrict their compliance to only the portion of the flight within European airspace, making the scheme indivisible[107].

The Aviation Directive authorised the EU's unilateralism on two fronts:

- Firstly, airlines were exempted from the ETS concerning landings within EU territory (but not for take-offs) if they were subject to "equivalent measures" imposed by the jurisdiction of departure. If national climate regulations in the United States or China adopted equivalent measures, it was ultimately the EU that determined their equivalence through a unilateral decision.
- Secondly, the Directive stipulated that the EU could withdraw its extraterritorial measures if a global agreement on reducing GHG emissions in the aviation sector was reached[108].

2.2 The legitimacy of the EU ETS system in the case of the CJEU

After the implementation of Directive (EC) 2008/101, all non-EU members of the ICAO Council, except for Australia, tabled in October 2011 a Draft Resolution condemning the EU's unilateral move[109].

If fully implemented, the Aviation Directive would have represented one of the most compelling examples of how the Brussels Effect operates[110].

However, foreign airlines, backed by their respective governments, initiated a series of coordinated actions to challenge the EU's unilateral approach. United Airlines,

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[106] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 358.

[107] *Ivi*, p. 359.

[108] *Ibidem.*

[109] ICAO Council, 94th Session, C-WP/13790 17 October 2011.

[110] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 359.

Continental, and American Airlines, supported by the Air Transport Association of America (ATA) brought a claim before British courts against the Secretary of State for Energy and Climate Change to challenge the Directive's transposition in the UK. In July 2010 the British High Court of Justice referred the case to the CJEU for a preliminary ruling, which was issued on 21 December 2011[111].

In line with the opinion previously expressed by Advocate General Kokott[112], the Court upheld the validity of the Directive.

The request for a preliminary ruling concerned, "*on the one hand, the conditions for invoking certain principles of customary international law and certain provisions of international agreements*" (the Chicago Convention, the Open Skies Agreement, and the Kyoto Protocol), "*in the context of a reference for a preliminary ruling on validity*" of Directive (EC) 2003/87, as amended by Directive (EC) 2008/101 to include aviation activities in the EU ETS, "*and, on the other hand, its validity in light of treaty-based and customary international law, to the extent that it provides for the application of the EU ETS to parts of flights conducted outside the airspace of the Member States*"[113].

Therefore, the CJEU evaluated the legitimacy of the Directive 2008/101 in the light of four sources of transnational legal authority: the treaty law provisions derived from international agreements, namely the Chicago Convention of 1944, the Kyoto Protocol of 1997, the US-EU Open Skies Agreement of 2007, and customary international law. The objective was to determine whether and to what extent these norms contained principles an individual could invoke to challenge the validity of an EU secondary law provision.

For the purposes of the preliminary ruling, the provisions of the Chicago Convention were deemed inapplicable, as the Court found no functional succession between the Member States and the Union[114].

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[111] Case C-366/10, *Air Transport Association of America and Others v. Secretary of State for Energy and Climate Change*, Judgment of the Court of Justice (Grand Chamber) of 21 December 2011.

[112] Kokott, J. (2011). 'Opinion of Advocate General Kokott in Case C-366/10, Air Transport Association of America v Secretary of State for Energy and Climate Change', *Court of Justice of the European Union*.

[113] Case C-366/10.

[114] Case C-366/10, para. 71.

The direct effect of the Kyoto Protocol was similarly denied by the Court, given the flexibility of its obligations, which lack the "*unconditional and sufficiently precise nature required to confer on individuals the right to invoke them before a court*"[115].

The Court held that, for the preliminary ruling, airlines could invoke Articles 7, 11, and 15 of the Open Skies Agreement[116] as well as the principles of customary international law[117].

The ATA, various airlines, and international organisations such as the ICAO, also relied on Article 1 and Article 15 of the Chicago Convention, specifically on Article 1, which establishes that every state has complete and exclusive sovereignty over the airspace above its territory, thereby denying the applicability of the ETS Directive to emissions produced outside EU airspace. They also relied on Article 15, which states that "*no fees, dues or other charges shall be imposed by any contracting State in respect solely of the right of transit over, entry into, or exit from its territory*", thereby prohibiting any charges imposed exclusively for take-off or landing within a Member State's territory.

However, an opposing interpretation had already argued that the presence of the term "*solely*" allows States to impose non-discriminatory environmental taxes, as such charges would not be exclusively linked to transit, entry, or exit from state territory[118].

However, according to the Court, it was not possible to assess the validity of Directive 2008/101 in light of the Chicago Convention because the EU is not a contracting party to the Convention, unlike all EU Member States, and it has not fully assumed the competences falling within its scope, which have largely been retained by the Member States. In fact, Member States could declare themselves unbound by the agreement when acting in concert through their EU common institutions[119].

Under Article 351 TFEU, "*in so far as such agreements are not compatible with the Treaties, the Member State or States concerned shall take all appropriate steps to*

[115] Case C-366/10, para. 77.

[116] Case C-366/10, paras. 87, 94, 100.

[117] Case C-366/10, para. 109.

[118] Mendes de Leon, P., Mirmina, S. (1997). 'Protecting the Environment by Use of Fiscal Measures: Legality and Propriety', *62 Journal of Air Law and Commerce,* 792-819.

[119] Havel, B.F., Mulligan, J.Q. (2012). 'The Triumph of Politics: Reflections on the Judgment of the Court of Justice of the European Union Validating the Inclusion of Non-EU Airlines in the Emissions Trading Schemes, *37 AIR & SPACE* L. 3, p.10.

eliminate the incompatibilities established", indicating that the responsibility for removing incompatibilities between EU actions and Member State obligations lies with the Member States themselves[120].

The CJEU also rejected the argument based on the theory of functional succession[121], holding that functional succession requires all EU Member States to be parties to a treaty for which the EU would become the successor and that the EU must have assumed the responsibilities of the Member States under that treaty. Since the Member States continue to exercise competences within the scope of the Convention, the Court concluded that the EU is not bound by its terms.

The CJEU relied entirely on its prior ruling in *Intertanko and Others*[122], that the EU can only be bound by a treaty[123] to which the Member States have previously acceded if the EU has assured, and thus had transferred to it, all the powers previously exercised by the Member States that fall within the treaty[124].

Regarding the Kyoto Protocol, the Court stated that, while its provisions became an integral part of the EU legal order following its approval by the Union, those provisions, which allow contracting parties to fulfil their emission reduction obligations in ways and within timeframes determined by them, including through the ICAO, were not considered by the Court sufficiently clear and unconditional to confer rights on individuals that could be invoked in legal proceedings to challenge the validity of the Directive.

Regarding the issue of the validity of the Directive *de quo*, the CJEU considered it appropriate to examine the case in light of the Open Skies Agreement, which was

[120] *Ivi,* p. 11.

[121] *Ivi,* p.13.

[122] Case C-308/06, *The Queen, on the application of International Association of Independent Tanker Owners (Intertanko) and Others v Secretary of State for Transport*, Judgment of the Court of Justice (Grand Chamber) of 3 June 2008.

[123] Specifically, the United Nations Convention on the Law Of the Sea (UNCLOS).

[124] Havel, B.F., Mulligan, J.Q. (2012). 'The Triumph of Politics: Reflections on the Judgment of the Court of Justice of the European Union Validating the Inclusion of Non-EU Airlines in the Emissions Trading Schemes, *37 AIR & SPACE* L. 3, p.15.

approved on behalf of the Union through Decisions 2007/339[125] and 2010/465[126], thereby making its provisions an integral part of the EU legal order.

As a result, these provisions are capable of conferring rights and obligations on airlines[127], which may be invoked against the parties to the agreement[128].

Specifically, Article 7 establishes a precise and unconditional obligation for the aircraft of a contracting party to comply with the laws and regulations of the other party upon entering and exiting its territory, while Article 15 requires the parties to adhere to environmental protection standards. Finally, Article 11 provides an exemption from duties, taxes, and charges on fuel loaded onto aircraft used for air transport between the EU and the USA.

Similarly, the Court, in a statement of considerable significance[129], considered itself competent to assess the validity of Directive 2008/101 in light of the principles of current customary international law, such as:

1. the principle that each state has complete and exclusive sovereignty over its airspace
2. the principle that no state may validly purport to subject any part of the high seas to its sovereignty
3. the principle of the freedom to fly over the high seas
4. the principle that aircraft overflying the high seas are subject to the exclusive jurisdiction of the country in which they are registered, except as expressly provided for by an international treaty[130].

[125] Decision (EC) 2007/339 of the Council and the Representatives of the Governments of the Member States of the European Union, meeting within the Council of 25 April 2007.

[126] Decision (EU) 2010/465 of the Council and the Representatives of the Governments of the Member States of the European Union, meeting within the Council of 24 June 2010.

[127] Case C-366/10, para. 82.

[128] Case C-366/10, para. 84.

[129] Gattini, A. (2012). 'Between splendid isolation and tentative imperialism: the EU's extension of its Emission Trading Scheme to International Aviation and the ECJ's Judgment in the ATA Case', *International and Comparative Law Quarterly*, 61(4), 977-991.

[130] Case C-366/10, para. 103.

Following this examination, the Court concluded that the review of the Directive 2008/101 did not reveal any elements capable of undermining its validity[131]. Therefore, the CJEU rejected the airlines' challenge against the application of the EU ETS to emissions from foreign air carriers during the portion of their flights outside EU territory, ruling that it did not violate either the obligations contained in the Open Skies Agreement, which are unconditional and sufficiently precise, or the principles of customary international law.

The CJEU did not find any grounds upon which to invalidate Directive 2008/101 as it did not violate either the principle of territoriality or the third states' sovereignty.

Specifically, the Directive does not regulate extraterritorial activities beyond what is justified by a sufficient territorial nexus and does not infringe upon any state's sovereignty over its own airspace: aircraft that are physically on the territory of a Member State are subject to the full sovereignty of the EU.

Moreover, according to the Court, the EU does not impose its regulation on aircraft merely because they overfly the high seas but rather because they are present within the territory of EU Member States at a given moment. Mere overflight of the high seas, in itself, does not entail subjection to the ETS.

In view of the high level of protection that the EU's environmental policy aims to guarantee (Article 191 TFEU), the EU legislature may authorise, within its territory, the pursuit of commercial activities such as air transport, provided that operators comply with the criteria established by the EU, which are intended to meet its objectives in environmental protection, especially with regard to international agreements like the Kyoto Protocol.

According to the Court, there is an EU competence to extend the ETS to all flights departing from or arriving at an aerodrome located within the territory of a Member State[132] without discrimination, obliging aircraft to comply with the Directive 2008/101: the Directive may not apply to aircraft registered in third countries flying over non-EU airspace, it may, however, apply to them when such aircraft are in the territory of a Member State and are departing from or arriving at an aerodrome situated in that territory.

[131] Case C-366/10, para. 157.

[132] Case C-366/10, para. 130.

Some scholars have perceived the assertion of this principle as an undisguised attempt to unilaterally impose EU regulations, specifically on the premise of the superiority of EU environmental law over any other legal source[133].

This reflects an ambition to extend the extraterritorial reach of EU legislation and jurisdictional powers. Critics have contended that the Court failed to provide a solid legal foundation for this extraterritorial application[134]. It has been suggested, instead, that the Court could have invoked the so-called "effects-based jurisdiction", which is frequently employed in case law involving transnational elements.

This doctrine, previously described in Chapter 1, embodies the principle that allows a state to shield itself from harmful repercussions originating abroad. In this context, the EU could have justified its jurisdiction by recognising the protection of climate change mitigation, enshrined in Article 191 TFEU, as a legitimate interest warranting legal protection[135].

Havel and Mulligan interpreted the ruling as a "triumph of politics" for the EU, having consolidated its extraterritorial regulatory power by extending its ETS to flights operated by non-EU airlines[136]. According to them the ETS is triggered by physical contact with EU airports and enters a condition of dormancy (and becomes immune from legal attack) when the aircraft is over high seas or non-EU airspace[137].

Traditionally, the regulation of GHG is production-based, meaning that responsibility for emissions is allocated to the state in which the emissions are generated or produced[138]. The EU rejected the production-based system for aviation since it is not adequate in relation as many emissions are generated in areas which are not subject to the jurisdiction

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[133] Gattini, A. (2012). 'Between splendid isolation and tentative imperialism: the EU's extension of its Emission Trading Scheme to International Aviation and the ECJ's Judgment in the ATA Case', *International and Comparative Law Quarterly*, 61(4), p.980.

[134] *Ibidem.*

[135] *Ibidem.*

[136] Havel, B.F., Mulligan, J.Q. (2012). 'The Triumph of Politics: Reflections on the Judgment of the Court of Justice of the European Union Validating the Inclusion of Non-EU Airlines in the Emissions Trading Schemes, *37 AIR & SPACE* L. 3, 3-33.

[137] *Ivi*, p.19.

[138] Scott, J., Rajamani, L. (2012). 'EU Climate Change Unilateralism', *The European Journal of International Law* Vol. 23 no. 2., p.475.

of any state (e.g., over the high seas), choosing instead a system boundary[139], that posits market access (place of arrival or departure) as the key[140].

The statement of the CJEU seems to be in line with Scott's definition of territorial extension, as it applied only to flights arriving at or departing from an EU airport. While extraterritorial measures impose obligations on persons who do not enjoy a relevant territorial connection with the regulating state, territorial extension is triggered by a territorial connection but when applying the rule, the regulator is required, as a matter of law, to take into account conduct or circumstances abroad[141].

2.3 The indiscriminate approach and the international pressures

However, the USA, China, and India strongly criticised the adoption of the EU ETS, arguing that applying it to their airlines was a unilateral measure by the EU that violated their sovereignty.

The EU has been accused of applying the ETS unilaterally and indiscriminately, allegedly violating the principle of common but differentiated responsibilities and respective capabilities (CBDRRC) under the United Nations Framework Convention on Climate Change (UNFCCC) and Article 3 of the Kyoto Protocol[142].

Principle 7 of the Rio Declaration provides the first formulation of the CBDRRC, stating that: "*In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. Developed countries acknowledge the responsibility that falls upon them in the international pursuit of sustainable development, given the pressures their societies place on the global environment, as well as the technologies and financial resources at their disposal*"[143].

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[139] Peters, G. P: (2008) 'From Production-Based to Consumption-Based National Emission Inventories', *65 Ecological Economics*.

[140] Scott, J., Rajamani, L. (2012). 'EU Climate Change Unilateralism', *The European Journal of International Law* Vol. 23 no. 2., p.476.

[141] Scott, J. (2014). 'Extraterritoriality and Territorial Extension in EU Law', *The American Journal of Comparative Law* 62 (1), p. 106.

[142] Duong T. T. M., Bo Y. (2023). 'Divergences between the European Union and China on reducing international aviation emissions', *Asia Europe Journal*, 21:1–21, p.6.

[143] United Nations, (1992) Rio Declaration on Environment and Development.

According to Article 3 of the Kyoto Protocol, whereas developed countries need to reduce its emissions "*by at least 5 per cent below 1990 levels*"[144], developing ones are not subject to any binding commitment[145].

By comparison, the EU insisted that Directive 2008/101 is fully in line with the international principles and agreements. The CBDRRC is the guiding principle for climate actions amongst states which should not be applied to business activities. Since the EU ETS is implemented in its market and for aviation industries, it does not infringe on this principle[146].

Until 2013, also non-EU airlines should have had to buy allowances for all their flights without the possibility to limit their compliance to the part of the journey that takes place in the European airspace, making the scheme non-divisible[147].

On the other hand, even during the "full scope" of the ETS, according to Directive 2003/87 Article 25*a* and Directive 2008/101 Recital 17, airlines were exempted from the ETS with respect to their flights landing, but not for their flights taking off from the EU, if they were subject to "equivalent measures"[148] in their home jurisdiction.

In fact, beyond the European ETS market, similar initiatives have been introduced at the local level in other parts of the world.

According to data collected by the Grantham Institute at Imperial College London, 39 national and 23 subnational jurisdictions have implemented or plan to implement carbon

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https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_CONF.151_26_Vol.I_Declaration.pdf

[144] UNFCCC, Kyoto Protocol to the United Nations Framework Convention on Climate Change. https://unfccc.int/resource/docs/convkp/kpeng.pdf

[145] Duong T. T. M., Bo Y. (2023). 'Divergences between the European Union and China on reducing international aviation emissions', *Asia Europe Journal*, 21:1–21, p.6

[146] *Ibidem.*

[147] Bradford, A. (2012). 'The Brussels effect', *Northwestern University Law Review* 107 (1), p.30.
Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press.*

[148] Bradford, A. (2012). 'The Brussels Effect', *Northwestern University Law Review* 107, p. 31.
Scott, J., Rajamani, L. (2012). 'EU Climate Change Unilateralism', *The European Journal of International Law* Vol. 23 no. 2., p.482.

trading mechanisms similar to the EU ETS[149]. While many of these jurisdictions are individual EU Member States, they also include countries such as Australia and Switzerland, and regional schemes in Canada, China, Japan, and the United States[150].

The expansion of the ETS is also driven by the possibility of linking the ETS of another jurisdiction with that of the EU, provided that the foreign systems meet the minimum requirements of the European system that justify such a linkage[151].

According to Article 25*a*, "*Where a third country adopts measures for reducing the climate change impact of flights departing from that third country which land in the Union, the Commission, after consulting with that third country, and with Member States within the Committee referred to in Article 22a(1), shall consider options available in order to provide for optimal interaction between the EU ETS and that country's measures. The Commission is empowered to adopt delegated acts (...) to provide for flights arriving from the third country concerned to be excluded from the aviation activities*".

However, whether domestic climate regulation would qualify as an equivalent provision to the ETS was subject to EU's unilateral decision[152].

According to Article 11*a* of Directive 2003/87, towards attaining compliance with obligations under the ETS, beyond EU Allowances (EUAs) are accepted also the "Certified Emission Reductions" (CERs) or offsets originating from the Kyoto Protocol's Clean Development Mechanism and "Joint Implementation" (ERUs); nevertheless, offsets had to comply with the qualitative and quantitative conditions imposed by EU law[153].

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[149] Muûls, M. (2016). 'Evaluating the EU Emissions Trading System: Take it or Leave It? An Assessment of the Data after Ten Years', *Grantham Institute*, briefing paper 21, 1-12.

[150] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 368.

[151] *Ivi,* p. 369.

[152] Bradford, A. (2012). 'The Brussels effect', *Northwestern University Law Review* 107, p.31.
Scheelhaase, J., Maertens, S., Grimme, W., Jung, M. (2018). 'EU ETS versus CORSIA – A critical assessment of two approaches to limit air transport's CO2 emissions by market-based measures', *Journal of Air Transport Management* 67, p.56.

[153] Scott, J. (2014). 'Extraterritoriality and Territorial Extension in EU Law', *The American Journal of Comparative Law* 62 (1), p.98

Moreover, according to Directive 2003/87 Article 25*a,* paragraph 2, and Directive 2008/101 Recital 17, the EU considered amending the Directive 2008/101 if an agreement on global measures to reduce aviation emissions was reached.

This suggests that the EU was not aiming to impose its scheme but was open to dialogue within international institutions to ensure GHG emissions reduction. The EU Commission may have strategically advanced Directive 2008/101 as a bargaining tool in the ICAO negotiations toward a global market-based mechanism for reducing aviation emissions[154].

This openness to other jurisdictions seems to be more in line with the CBDRRC, and in contrast with the "equal treatment" principle of the indiscriminate application of the ETS also to developing countries and their airlines, criticised by Scott and Rajamani[155].

China and India maintained their position and even prohibited national air companies operating in Europe to submit by 31 March 2012 to the EU Commission the detailed statistics of their 2011 emissions[156], facing sanctions from EU[157].

China cancelled its orders for Airbus aircraft and strongly condemned the extraterritorial application of EU regulations, particularly to the detriment of developing countries. In 2012, the Civil Aviation Administration of China (CAAC) also prohibited all Chinese airlines from participating in the EU ETS[158].

Scheelhaase, J., Maertens, S., Grimme, W., Jung, M. (2018). 'EU ETS versus CORSIA – A critical assessment of two approaches to limit air transport's CO2 emissions by market-based measures', *Journal of Air Transport Management* 67, p.56.

[154] Gattini, A. (2012). 'Between splendid isolation and tentative imperialism: the EU's extension of its Emission Trading Scheme to International Aviation and the ECJ's Judgment in the ATA Case', *International and Comparative Law Quarterly*, 61(4), p.990

[155] Scott, J., Rajamani, L. (2012). 'EU Climate Change Unilateralism', *The European Journal of International Law* Vol. 23 no. 2, p.481.

[156] Gattini, A. (2012). 'Between splendid isolation and tentative imperialism: the EU's extension of its Emission Trading Scheme to International Aviation and the ECJ's Judgment in the ATA Case', *International and Comparative Law Quarterly*, 61(4), p.989.

[157] Duong T. T. M., Bo Y. (2023). 'Divergences between the European Union and China on reducing international aviation emissions', *Asia Europe Journal*, 21:1–21, p.6.

[158] Torney, D. (2015). 'European Climate Leadership in Question: Policies Toward China and India', *MIT Press, Cambridge,* p.134.

On 30 September 2011, the Indian Minister of Civil Aviation convened a meeting of 26 countries, which resulted in the signing of the "Delhi Declaration", opposing the European Aviation Directive[159].

Shortly after, on 22 February 2012, China, India, and 21 other countries also convened in Moscow, where they signed the "Declaration on the Inclusion of Civil Aviation in the EU ETS", which "*rejected the EU's action as unilateral and called on the EU to revoke its decision*"[160].

In November 2012, the USA adopted the EU ETS Prohibition Act[161], which conferred on the Secretary of Transportation the power to adopt decisions prohibiting US airlines from participating in the EU scheme, thereby protecting US operators from unilateral foreign impositions.

However, the Act stated that the US Government *"should, as appropriate, use their authority to conduct international negotiations…to pursue a worldwide approach to address aircraft emissions, including the environmental impact of aircraft emissions"*[162].

The application of the EU ETS to non-EU airlines, the attribution of territorial extension and the maintenance of unilateralism in deciding the validity of equivalent measures show how the EU was exercising its external regulatory power.

If the EU Commission had strategically advanced Directive 2008/101 as a bargaining tool in the ICAO negotiations toward a global market-based mechanism for reducing

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Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 360.

[159] Torney, D. (2015). 'European Climate Leadership in Question: Policies Toward China and India', *MIT Press, Cambridge*, p. 158.

Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 360.

[160] Torney, D. (2015). 'European Climate Leadership in Question: Policies Toward China and India', *MIT Press, Cambridge,* p. 134.

Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 360.

[161] European Union Emissions Trading Scheme Prohibition Act PUBLIC LAW 112–200—NOV. 27, 2012.

[162] European Union Emissions Trading Scheme Prohibition Act s3 (a)(1).

aviation emissions[163], this suggests that unilateralism in climate policy was never intended to be a permanent or preferred approach for the EU. Instead, the EU aimed to encourage other jurisdictions to follow its lead, ultimately paving the way for a coordinated global effort to mitigate climate change[164].

2.4 From the "Stop the Clock" decision to the ICAO negotiations

Due to these intense international pressures, in 2013, the EU announced the Decision (EU) 377/2013 or "Stop the Clock" decision[165], which suspended the application of the EU ETS to international extra-European flights, departing or arriving from an extra-EU aerodrome, limiting the ETS to intra-European flights. In other words, a flight from Rome to Paris would have been included, but a flight to New York would not. The EU also temporarily excluded non-EU airlines from its ETS. However, this suspension was conditional upon the ICAO reaching a global agreement on aviation emissions[166].

Shortly after, on 6 October 2016, the ICAO announced that it had reached an agreement on a system known as CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation). The pilot phase of CORSIA started in 2021, but mandatory participation for ICAO member states will not take effect until 2027. Unlike the EU ETS, CORSIA includes exemptions for least developed countries (LDCs), small island developing states (SIDS), landlocked developing countries (LLDCs), and nations with low levels of international aviation activity[167].

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[163] Gattini, A. (2012). 'Between splendid isolation and tentative imperialism: the EU's extension of its Emission Trading Scheme to International Aviation and the ECJ's Judgment in the ATA Case', *International and Comparative Law Quarterly*, 61(4), p.990.

[164] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 368.

[165] Decision (EU) 377/2013 of the European Parliament and of the Council of 24 April 2013.

[166] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 360.

Delreux, T., Happaerts, S. (2016). 'Environmental Policy and Politics in the European Union', *Palgrave Macmillan,* p. 215.

[167] Historic Agreement Reached to Mitigate International Aviation Emissions", ICAO, October 6, 2016, www.icao.int/Newsroom/Pages/Historic-agreement-reached-to-mitigate-international-aviation-emissions.aspx

The prospect that, in the absence of a global agreement, the EU would unilaterally regulate the sector served as a significant incentive for participating countries to reach a consensus on the CORSIA framework[168]. This case exemplifies how the EU can, at times, leverage unilateral action as a strategic tool to advance multilateral cooperation[169].

The extension of the ETS to international aviation highlights how the EU, as a regional organisation, has sought to influence global policies in a specific sector or even assume a leadership role within them[170]. This has been achieved by steering multilateral negotiations while simultaneously establishing itself as a key player in global climate protection policy[171].

The resulting Stop the Clock or "reduced scope" regime of EU ETS was originally planned to last until 2016 only; however, by Regulation (EU) 2017/2392[172] and to allow for a review of the CORSIA implementation, the EU decided to maintain this framework until 31 December 2023, further extending it through Directive (EU) 2023/958 until 31 December 2026.

The EU's decision to suspend the extraterritorial application of the ETS can be interpreted in two distinct ways[173].

On the one hand, it highlights the limitations of the Brussels Effect, demonstrating that when faced with significant international pressure, the EU is willing to make concessions[174].

[168] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 155.

[169] *Ibidem.*

[170] Carpanelli, E. (2015). 'Le emissioni di gas a effetto serra derivanti dall'aviazione civile internazionale: il difficile rapporto tra dimensione universale e dimensione regionale', *Diritto dei trasporti,* Vol. 28:3, 695-738.

[171] *Ibidem.*

[172] Regulation (EU) 2017/2392 of the European Parliament and of the Council of 13 December 2017.

[173] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 361.

[174] *Ibidem.*

On the other hand, the case of the ETS in the aviation sector illustrates how the EU can leverage the Brussels Effect as a tool to facilitate the negotiation of an international agreement[175].

It remains uncertain whether ICAO's political consensus was achieved solely due to the Brussels Effect and the opportunity costs associated with maintaining the EU's unilateral approach. In fact, CORSIA represents a fundamentally different model for regulating emissions compared to the cap-and-trade structure of the EU ETS[176]. However, it ultimately seeks to achieve the same objective while sparing the EU from criticism over its assertive unilateralism[177].

[175] *Ibidem.*

[176] See Chapter 3.

[177] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 360.

3. FROM UNILATERAL TO INTERNATIONAL REGULATION?

3.1 The ICAO CORSIA system

The CORSIA system is an international scheme for regulating GHG emissions from civil aviation, established by the ICAO through Resolution A39, which was adopted by the General Assembly in 2016. This scheme aims to stabilise emissions by offsetting excess emissions through the purchase of credits (Emission Units) generated by programmes or projects that provide environmental benefits.

It is applied to international flights between participating states. Its baseline is less strict than the EU ETS, as airlines must surrender offsets for emissions exceeding average 2019/2020 levels only[178].

In 2018, detailed rules for its implementation were established, including three phases:

1. A pilot phase with voluntary participation (2021–2023)
2. A first phase with voluntary participation (2024–2026)
3. A second phase with mandatory participation for member states (2027–2035).

Between 2019 and 2020, a preparatory phase began, including the identification of operators and the monitoring of emissions.

Table 1. Voluntarily participating CORSIA states (as of 15 July 2019).

1. Albania	22. Estonia	44. Malaysia	66. Serbia
2. Armenia	23. Finland	45. Malta	67. Singapore
3. Australia	24. France	46. Marshall Islands	68. Slovakia
4. Austria	25. Gabon	47. Mexico	69. Slovenia
5. Azerbaijan	26. Georgia	48. Monaco	70. Spain
6. Belgium	27. Germany	49. Montenegro	71. Sweden
7. Bosnia and Herzegovina	28. Ghana	50. Namibia	72. Switzerland
8. Botswana	29. Greece	51. Netherlands	73. Thailand
9. Bulgaria	30. Guatemala	52. New Zealand	74. Turkey
10. Burkina Faso	31. Guyana	53. Nigeria	75. Uganda
11. Cameroon	32. Hungary	54. North Macedonia	76. Ukraine
12. Canada	33. Iceland	55. Norway	77. United Arab Emirates
13. Costa Rica	34. Indonesia	56. Papua New Guinea	78. United Kingdom
14. Croatia	35. Ireland	57. Philippines	79. United States
15. Cyprus	36. Israel	58. Poland	80. Zambia
16. Czech Republic	37. Italy	59. Portugal	
17. Democratic Republic of Congo	38. Jamaica	60. Qatar	
	39. Japan	61. Republic of Korea	
18. Denmark	40. Kenya	62. Republic of Moldova	
19. Dominican Republic	41. Latvia	63. Romania	
20. El Salvador	42. Lithuania	64. San Marino	
21. Equatorial Guinea	43. Luxembourg	65. Saudi Arabia	

[178] Maertens, S., Grimme, W., Scheelhaase, J. Jung, M. (2019). 'Options to Continue the EU ETS for Aviation in a CORSIA-World', *Institute of Air Transport and Airport Research, German Aerospace Center* (DLR e.V.), 51147, p.2.

Maertens, S., Grimme, W., Scheelhaase, J. Jung, M. (2019). 'Options to Continue the EU ETS for Aviation in a CORSIA-World', *Institute of Air Transport and Airport Research, German Aerospace Center* (DLR e.V.), 51147, p. 6.

The pilot phase started in 2021, with 88 member states participating, but the COVID-19 pandemic disrupted normal aviation activities.

The first phase began in 2024, with 115 member states participating; however, compensation mechanisms were not initiated due to the continued effects of the pandemic.

From 2027, participation in CORSIA will be mandatory for all states except small islands (SIDS), least developed countries (LDCs), and land-locked developing countries (LLDCs) unless they volunteer[179].

Unlike the EU ETS, CORSIA is not binding but is voluntary, except during its final phase (2027–2035). It establishes an emission offsetting system based on international flight routes and applies only if both states connected by the route participate in the programme. However, the annual emissions monitoring system, which must be reported to the designated national authority, applies to all international flight operators.

Offsets under CORSIA can be reduced in cases of emission reductions achieved through alternative and sustainable fuels, broadly identified as SAF (sustainable aviation fuel).

In parallel, the EU has adopted the 'REFUELEU AVIATION' initiative, aimed at promoting the adoption and supply of sustainable fuels[180]. Ratified by the EU Council on 9 October 2023, its measures have become mandatory in January 2025.

However, the current prices of biofuels remain significantly higher than those of traditional fuels, making it unlikely that airlines will adopt them without political incentives, such as introducing a mandatory SAF quota, which could stimulate investments and, in turn, lower biofuel production costs[181].

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[179] *Ivi*, p.5.

[180] Ente Nazionale per l'Aviazione Civile Italian Civil Aviation Authority (2024). 'Verso una roadmap per i Sustainable Aviation Fuels in Italia – Sintesi del percorso dell'Enac per la definizione di SAF policy'. https://www.enac.gov.it/pubblicazioni/verso-una-roadmap-per-sustainable-aviation-fuels-in-italia-sintesi-del-percorso-dell-enac/

[181] *Ibidem.*

Regulation (EU) 2017/2392 initiated the process of integrating CORSIA into the EU framework alongside the EU ETS. Essentially, to avoid an excessive administrative burden for airline operators, within the Union, CORSIA is implemented through the ETS.

The monitoring system is governed by Regulation (EU) 2012/601[182] as amended by Regulation (EU) 2018/2066[183] and subsequent Regulation (EU) 2019/1603[184]. Airline operators can, therefore, use a single monitoring plan to fulfil the requirements of both schemes, employing the template published on the European Commission's website.

This plan must include CO2 emissions from extra-EEA routes falling under CORSIA and must be submitted for approval to the national ETS Committee. In Italy, for example, Legislative Decree 147 of 10 September 2024, which transposed Directive 2003/87 as last amended, stipulates that the ETS Committee, acting as the national authority responsible for the Directive's implementation, is based at the Ministry of Environment and Energy Security[185].

The scheme applies if the following conditions are met:

- The operator holds a three-letter ICAO designator
- The operator owns aircraft with an engine weight exceeding 5,700 kg
- The operator conducts international flights
- Such flights result in GHG emissions exceeding 10,000 tonnes (excluding humanitarian, medical, and firefighting flights)[186].

3.2 CORSIA-ETS comparison

As "market-based measures", emission trading and offsetting schemes have an advantage over traditional enforcement instrument of "command and control" because they ensure the achievement of predefined environmental targets cost-efficiently. By

[182] Commission Regulation (EU) 2012/601 of 21 June 2012.

[183] Commission Implementing Regulation (EU) 2018/2066 of 19 December 2018.

[184] Commission Delegated Regulation (EU) 2019/1603 of 18 July 2019.

[185] *Ibidem.*

[186] Ente Nazionale per l'Aviazione Civile Italian Civil Aviation Authority (2024). 'CORSIA – Carbon Offsetting and Reduction Scheme for International Aviation'. https://www.enac.gov.it/ambiente/impatto-ambientale/le-emissioni-gassose/corsia-carbon-offsetting-and-reduction-scheme-for/

putting (directly or indirectly) a price tag on emissions, producers are incentivised to reduce their negative externalities in the most cost-effective way[187].

Both schemes aim to mitigate the net climate impact of aviation by requiring airlines to surrender allowances (EU ETS) or offsets (CORSIA) for particular segments of their GHG emissions, which correspond to reductions achieved in other contexts.

The preceding sections already revealed the fundamental differences between the two schemes. Since CORSIA operates as an offsetting mechanism, whereas the EU ETS functions as a cap-and-trade system, the approaches to determining emission limits, where applicable, and the distribution of allowances inherently differ. In the cap-and-trade system, in fact, participating firms are required to purchase emission permits (allowances) from other sectors for all (or parts of) their sectoral emissions exceeding a predefined cap[188]. An offset scheme like CORSIA operates without a cap but uses a baseline, requiring carriers to offset a designated share of their emissions by purchasing credits from eligible projects, such as reforestation initiatives, which represent emission reductions achieved elsewhere[189].

According to critics, the ICAO CORSIA is not an ambitious scheme[190].

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[187] Maertens, S., Grimme, W., Scheelhaase, J. Jung, M. (2019). 'Options to Continue the EU ETS for Aviation in a CORSIA-World', *Institute of Air Transport and Airport Research, German Aerospace Center* (DLR e.V.), 51147, p.7.

[188] Scheelhaase, J., Maertens, S., Grimme, W., Jung, M. (2018). 'EU ETS versus CORSIA – A critical assessment of two approaches to limit air transport's CO2 emissions by market-based measures', *Journal of Air Transport Management* 67, p.58.

[189] Maertens, S., Grimme, W., Scheelhaase, J. Jung, M. (2019). 'Options to Continue the EU ETS for Aviation in a CORSIA-World', *Institute of Air Transport and Airport Research, German Aerospace Center* (DLR e.V.), 51147, p.7.

[190] Maertens, S., Grimme, W., Scheelhaase, J. Jung, M. (2019). 'Options to Continue the EU ETS for Aviation in a CORSIA-World', *Institute of Air Transport and Airport Research, German Aerospace Center* (DLR e.V.), 51147, pp. 8-9

Diab, K. (2024). 'EU's Emissions Trading System v UN's CORSIA: Which is better for the climate?' *Carbon Market Watch*. https://carbonmarketwatch.org/2024/11/25/eus-emissions-trading-system-v-uns-corsia-which-is-better-for-the-climate/#:~:text=%E2%80%9CThe%20EU%20ETS%20carbon%20price,fatally%20flawed%20UN%20offsetting%20scheme.%E2%80%9D

The EU ETS carbon price is 25 times higher than CORSIA's, which will only be paid when airlines cross a sky-high emission threshold[191]. Despite its many shortcomings, the EU cap-and-trade system is better at tackling the climate impact of flying than the fatally flawed UN offsetting scheme[192]. In 2022-2023, the EU ETS imposed an average carbon price of around €80 per tonne of emissions on airlines flying within the EEA. Instead, the CORSIA's credits were traded at a measly €3.20 per tonne, on average, in 2022[193].

The EU ETS carbon prices result in a ticket price increase of €5 in 2022, which is on course to rise to €21 by 2030 due to the declining upper limit on emissions allowed under this cap-and-trade mechanism[194].

When it comes to CORSIA, the expected ticket price increase is almost non-existent, and it will rise in 2030 to a miserly €0.40 for a transatlantic flight from Brussels to New York[195].

Table 2. Key characteristics of CORSIA and the EU ETS.

Scheme		EU ETS	CORSIA
Fundamental differences	Methodology	Cap & Trade	Baseline & Credit (Offsetting)
	Environmental integrity	Not critical, overall cap is fixed	Dependent on offset quality standards and enforcement
	Need for verification by authorities	Only at emitter level	Both at emitter and at offsetting project level
Differences in actual implementation and application (coverage & baseline)	Cap/Baseline	95% of avg. 2004/2006 emissions; stepwise further reduction of cap envisaged	Avg. 2019/2020 emissions; no further reduction envisaged
	Scope	Intra-EEA including domestic flights	International routes between participating states
	Affected carriers	All airlines operating on covered routes, unless exceptions apply	
	Affected aircraft Types	Fixed wing (>5.7 t MTOM) and helicopters	Fixed wing (>5.7 t MTOM)

Maertens, S., Grimme, W., Scheelhaase, J. Jung, M. (2019). 'Options to Continue the EU ETS for Aviation in a CORSIA-World', *Institute of Air Transport and Airport Research, German Aerospace Center* (DLR e.V.), 51147, p. 7

[191] *Ibidem.*

[192] *Ibidem.*

[193] *Ibidem.*

[194] *Ibidem.*

[195] *Ibidem.*

Finally, differently from the EU ETS, CORSIA also excludes domestic flights since ICAO is the UN Agency responsible for international aviation and domestic aviation falls under the responsibility of the individual states.

3.3 The EU's reservation of power

The regulatory framework was completed with Directive (EU) 2023/958, which amended and supplemented the provisions set out in Directive 2003/87.

These amendments were deemed necessary by the legislator to ensure the effectiveness of the EU ETS as a strategic instrument for achieving the Union's long-term objectives of reducing net greenhouse gas emissions by at least 55% by 2030, attaining climate neutrality by 2050, and subsequently reaching net-negative greenhouse gas emissions[196].

In summary, and insofar as relevant here, the Directive introduced the CORSIA offsetting mechanism within the European framework and established the gradual reduction of free allowances until their complete phase-out in 2026, requiring the full purchase of allowances through auctions or financial markets.

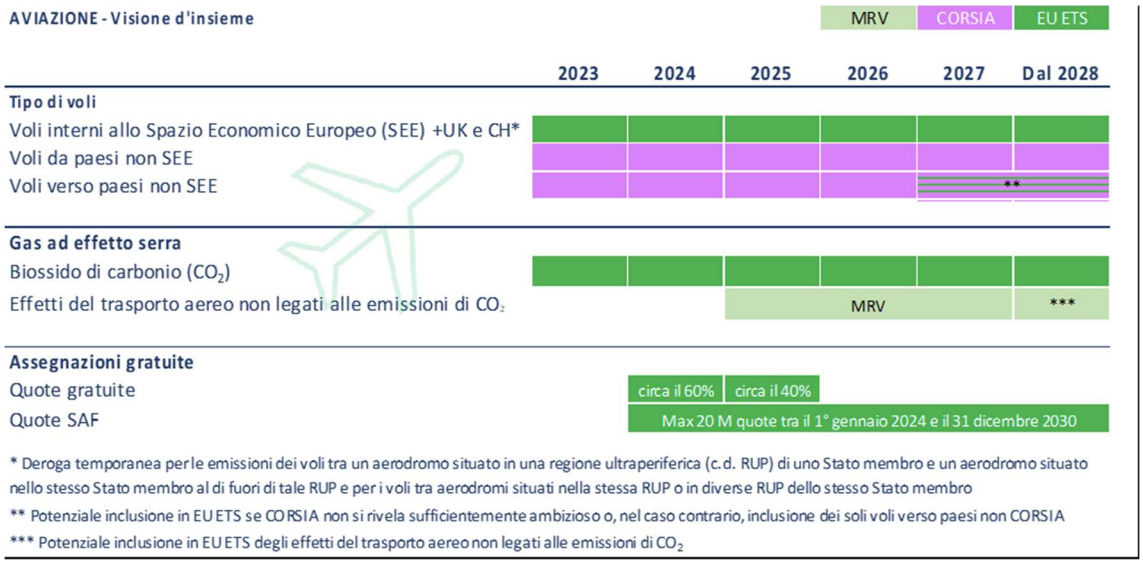
The scope of the EU ETS remains limited to emissions from flights within the EEA and those to Switzerland and the United Kingdom. In contrast, CORSIA applies to emissions from flights departing from non-EEA countries and flights to non-EEA countries.

Through a further extension of the "Stop the Clock" mechanism, it has been established that by 1 July 2026, the Commission must submit to the European Parliament and to the Council a report in which it shall assess the environmental integrity of ICAO's global market-based measure, including its general ambition in relation to targets under the Paris Agreement on climate change.

If CORSIA is found to have failed to deliver tangible results in reducing the impact of emissions, the Commission will propose extending the EU ETS to flights departing from aerodromes within the EEA to those outside the EEA.

[196] Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021, Art. 2, para. 1.

Conversely, if the results are deemed satisfactory, the Commission will propose applying the EU ETS to flights within the EEA, and to flights from EEA, Switzerland, the United Kingdom.



Ministero dell'ambiente e della sicurezza energetica:
https://www.ets.minambiente.it/NovitaEUETS/Aviazione

It is noteworthy that, in this measure, the mechanism employed by the EU to externalise its legislation, aimed at maintaining its leadership in carbon emissions reduction policy, operates in a manner that is the opposite of the previously cited examples.

Instead of measures that are provisional and flexible and set to expire under certain conditions, namely when third countries adopt regulations aligned with the EU's regulatory framework[197] , this approach involves the incorporation of global measures, subject to an assessment of their compliance with specific criteria established by the EU.

In other words, the EU appears willing to forego the unilateral application of its policies only if the rules adopted under international agreements are considered capable of fulfilling its principles and objectives with the level of stringency it deems appropriate.

The consequence for third countries is regulatory harmonisation and trade liberalisation, ensuring that their businesses remain competitive within the global market.

[197] Scott, J. (2014). 'Extraterritoriality and Territorial Extension in EU Law', *The American Journal of Comparative Law* 62 (1), 87-126.

Article 28*b* of Directive 2003/87, as amended by Article 1, paragraph 10, of Directive 2023/958, establishes that before 1 January 2027 and every three years thereafter, the Commission shall report to the European Parliament and to the Council on progress in the ICAO negotiations to implement the global market-based instrument to be applied to emissions from 2021, in particular with regard to:

a) the relevant ICAO instruments, including standards and recommended practices, as well as the progress in the implementation of all elements of the ICAO basket of measures towards the achievement of the long-term global aspirational goal adopted at ICAO's 41st Assembly
b) ICAO Council-approved recommendations relevant to the global market-based measure, including any possible changes to baselines
c) the establishment of a global registry
d) domestic measures taken by third countries to implement the global market-based measure to be applied to emissions from 2021
e) the level of participation in offsetting under CORSIA by third countries, including the implications of their reservations as regards such participation
f) other relevant international developments and applicable instruments, as well as progress to reduce aviation's total climate change impacts[198].

The above-mentioned Article also mandates the Commission to draft a report, which must be submitted to the European Parliament and the Council by 1 July 2026, containing an assessment of CORSIA's environmental integrity. This evaluation must consider its overall ambition in relation to:

- targets under the Paris Agreement
- the level of participation in offsetting under CORSIA
- its enforceability, transparency
- the penalties for non-compliance, the processes for public input, the quality of offset credits

[198] Article *28b* Directive 2003/87 amended by Article 1, para 10. Directive 2023/958.

- monitoring, reporting and verification of emissions, registries, accountability as well as rules on the use of biofuels[199].

If the report establishes that, by 31 December 2025, the ICAO Assembly has not strengthened CORSIA in line with its global objective of achieving net-zero CO2 emissions from aviation by 2050, or if the states other than those in the EEA, Switzerland, and the United Kingdom that apply CORSIA and are included in the list contained in the implementing act adopted by the Commission account for less than 70% of international aviation emissions, the report, where appropriate, must be accompanied by a legislative proposal to amend the Directive. This proposal would provide for the application of the EU ETS to emissions from flights departing from the EEA to non-EEA destinations starting in 2027 while also allowing airline operators to deduct all costs incurred for offsets under CORSIA on such routes to prevent double taxation. Moreover, if a third country does not implement CORSIA from 2027 onwards, the EU ETS should apply to emissions from flights departing from that third country.[200]

The legislator's stated objective is thus to safeguard the Union's acquis, future political prerogatives, the EU's level of climate ambition, and the exclusive role of the European Parliament and the Council in determining the content of Union law[201].

In this regard, particular significance is attached to the requirement, in the Commission's assessment, to verify the transparency of data and public access to information on offsetting. Such information must be made publicly available with the same level of transparency as required under Directive 2003/87[202].

The principle of transparency and its associated rights, such as the right to access documents, are fundamental principles of the EU, enshrined in Articles 10 and 15 of the TFEU.

Equally important is the objective of preventing distortions in competition that could disadvantage EU-based airline operators compared to those based in countries implementing CORSIA less rigorously or failing to enforce CORSIA obligations

[199] *Ibidem.*

[200] *Ibidem.*

[201] Recital 5 Directive 958/2023

[202] Recital 31 Directive 958/2023

uniformly across all operators. This concern applies both to offsetting requirements and the use of sustainable fuels, given the significant price differential, as well as ensuring consistent conditions for the fulfilment of monitoring, reporting, and offsetting obligations. Competition law is also a core element of European integration, enshrined in Articles 101 and 102 of the TFEU. It is designed to enable businesses to compete on equal terms across the markets of all Member States, thereby ensuring the global competitiveness of their products and services.

CONCLUSIONS

The EU ETS is a particular case study for examining the dynamics and limitations of the Brussels Effect. As highlighted in the preceding chapters, the application of the EU ETS to aviation, at least in its original form, exhibited the characteristics outlined by Bradford (such as non-divisibility) and those identified by Scott, namely provisionality and flexibility. This is demonstrated by Article 25*a* of Directive 2003/87 and Recital 17 of Directive 2008/101, which enable the EU to unilaterally recognise equivalent measures adopted by third countries or international agreements pursuing the same objective.

However, the unilateral application of the EU ETS to non-European airlines and extra-EEA flights has provoked strong international opposition. Foreign countries, often hostile to the Brussels Effect, argue that European regulations are costly, protectionist, or infringe upon their sovereignty[203]. While foreign governments have often been unsuccessful in their efforts to curtail the EU's regulatory ambitions in various environmental policies[204], they have been notably effective in constraining its unilateral attempts to extend the EU ETS to international aviation[205].

This suggests that the Brussels Effect has limits, particularly when the EU pursues an assertive unilateralist approach in a policy area that is both economically significant and politically contentious[206].

Following Bradford's definitions, although the EU ETS has not been able to generate the *de facto* Brussels Effect, it has triggered the two forms of the *de jure* Brussels Effect: the broader one, which led to the adoption of the ICAO CORSIA international agreement, and the literal one, which encouraged non-European national jurisdictions to implement equivalent measures[207]. In fact, the threat of EU unilateralism was sufficient to catalyse

[203] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 406

[204] Bradford affirms that, in the cases of hazardous substance management in the electronics industry and animal welfare protection, the *de facto* and the *de jure* Brussels Effect have been particularly strong.

[205] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 373

[206] *Ibidem.*

[207] Albeit imperfectly, as regulatory alignment was not driven by businesses but by the proactive role of the EU.

multilateral negotiations, ultimately leading to an international agreement to regulate aviation sector emissions. This outcome would have been unlikely if the EU had not sought to drive regulatory change[208].

Moreover, despite failing to achieve regulatory alignment through the *de facto* Brussels Effect, the EU successfully influenced third countries to adopt GHG emissions reduction policies for aviation through the *de jure* Brussels Effect, with several countries replicating the ETS at the national level. This highlights an alternative relationship between the *de facto* and *de jure* Brussels Effects: while the *de facto* version often lays the groundwork for the *de jure* counterpart, the latter can also materialise in the absence of a significant *de facto* Brussels Effect, albeit more effectively when the EU actively takes a leading role in promoting it[209].

On the other hand, as highlighted in the report presented by Mario Draghi to the European Commission on 9 September 2024 on the future of European competitiveness, the EU's ability to influence international standards and the *modus operandi* of businesses, which has thus far manifested itself in various sectors, is now being called into question. Indeed, excessive regulation risks hampering European enterprises' competitiveness compared with international competitors[210].

The Draghi report argues that a coordinated plan is needed to revitalise sustainable growth while ensuring that the ambition of achieving CO2 emissions neutrality does not become an obstacle to competitiveness and growth. This plan should include an acceleration in the rate of innovation to maintain the EU's leadership in sustainability and environmental standards and to develop new innovative technologies[211].

Finally, this work has demonstrated that, despite the apparent shift of the EU towards a multilateral approach, the retention of its prerogative to assess ICAO CORSIA and "equivalent measures" indicates that the EU still exercises a form of unilateralism.

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[208] Bradford, A. (2020). 'The Brussels Effect. How the European Union Rules the World', *Oxford University Press*, p. 373

[209] *Ibidem.*

[210] Draghi, M. (2024). 'The future of European competitiveness', *Report by Mario Draghi to the European Commission*.

[211] *Ibidem.*

The Commission's assessment criteria, as provided in Article 1, paragraph 10, of the Directive 2023/958[212], allow for considerable discretion in evaluating the CORSIA system. Therefore, it appears that the Commission will make a political decision based on its willingness and ability to continue the Green Deal in a contentious sector and within a potentially hostile international landscape. In this context, 1 July 2026 is expected to be a crucial date, potentially reigniting a legal battleground at the international level.

[212] See Chapter 3.3.

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