ISTANBUL TICARET UNIVERSITY
INSTITUTE OF GRADUATE SCHOOL
DEPARTMENT OF INTERNATIONAL TRADE
MASTER OF INTERNATIONAL TRADE PROGRAMME

THE EFFECT OF THE EUROPEAN GREEN DEAL ON AMERICAN COMPANIES EXPORTING TO THE EUROPEAN UNION

MA Thesis

Eline DEWANCKELE

ISTANBUL, 2025

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U23TINT803

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ETHICS STATEMENT

I dedicate all the required information in this title “The Effect of the European Green Deal on American Companies Exporting to the European Union” which has been written following academic manners and ethical commitment. I would clarify that all the materials, sources, data, and extra inputs have benefited well throughout the writing procedure of this thesis. All matters contained in this thesis are my opinion and do not reflect the official view of Istanbul Ticaret University.

Eline Dewanckele

ABSTRACT

This thesis analyses how the European Green Deal (EGD) influences American companies exporting to the European Union (EU). It combines a literature review with quantitative data from Eurostat and the United States International Trade Commission (USITC) covering 2017 to early 2025. The literature shows that the EGD is reshaping global trade by introducing carbon reporting, product design rules and sustainability standards. Carbon-intensive sectors are the most exposed. Also exporters from countries with weaker climate policies face growing compliance pressure. Previous studies rarely focus on the United States, so this thesis adds to the understanding of EU – U.S. trade relations. The data indicates that U.S. exports in affected sectors remain stable or even increase. This can be explained by the early stage of enforcement, since most measures currently require only emissions reporting. This stability is only temporary, as stricter EU rules will gradually increase costs and obligations. The findings highlight that U.S. firms have not yet faced direct trade losses, but future competitiveness will depend on early adaptation. The EGD represents a turning point. Companies that prepare now may benefit from new opportunities, while those that delay risk encountering growing trade barriers.

Keywords: *European Green Deal, U.S. exports, Trade barriers, Sustainability*

ÖZET

Bu tez, Avrupa Yeşil Anlaşması'nın (European Green Deal - EGD) Amerika Birleşik Devletleri (ABD) şirketlerini ve Avrupa Birliği'ne (AB) ihracat yapan firmaları nasıl etkilediğini analiz etmektedir. Çalışma, 2017'den 2025 başına kadar Eurostat ve ABD Uluslararası Ticaret Komisyonu (USITC) verilerini kullanarak bir literatür taraması ile nicel analizleri birleştirmektedir. Literatür, EGD'nin karbon raporlaması, ürün tasarımı kuralları ve sürdürülebilirlik standartları getirerek küresel ticareti yeniden şekillendirdiğini göstermektedir. Karbon yoğun sektörler en çok etkilenmektedir. Ayrıca, iklim politikaları daha zayıf olan ülkelerden gelen ihracatçılar artan uyum baskısı ile karşı karşıyadır. Önceki çalışmalar nadiren ABD'yi odak noktası olarak ele almıştır; bu nedenle bu tez, AB–ABD ticaret ilişkilerinin anlaşılmasına katkı sağlamaktadır. Veriler, etkilenen sektörlerde ABD ihracatının istikrarlı kaldığını veya hatta arttığını göstermektedir. Bu durum, çoğu önlemin hâlâ yalnızca emisyon raporlaması gerektirmesiyle açıklanabilir. Ancak bu istikrar geçicidir; AB'nin sıkılaştırdığı kurallar maliyetleri ve yükümlülükleri giderek artıracaktır. Bulgular, ABD şirketlerinin henüz doğrudan ticaret kaybı yaşamadığını, ancak gelecekteki rekabet gücünün erken uyum sağlama kapasitesine bağlı olacağını göstermektedir. EGD bir dönüm noktasıdır. Şirketler şimdiden hazırlık yaparsa fırsatlardan yararlanabilir, gecikenler ise artan ticaret engelleriyle karşılaşabilir.

Anahtar Kelimeler : *Avrupa Yeşil Mutabakatı, ABD ihracatı, Ticaret engelleri, Sürdürülebilirlik*

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LIST OF ABBREVIATIONS

CBAM.	Carbon Border Adjustment Mechanism
EU.	European Commission
EGD.	European Green Deal
ESG.	Environmental, Social & Governance
ETS.	Emissions Trading System
EU.	European Union
HTS.	Harmonized Tariff Schedule
GDP.	Gross Domestic Product
IMF.	International Monetary Fund
JTF.	Just Transition Fund
NAAEC.	North American Agreement on Environmental Cooperation
NAFTA.	North American Free Trade Agreement
TTIP.	Transatlantic Trade and Investment Partnership
U.S..	United States
USD.	United States Dollar
USITC.	United States International Trade Commission
USMCA.	United States-Mexico-Canada Agreement
WTO.	World Trade Organization

INTRODUCTION

Background of the Study

Climate change is no longer a distant concern, it is a lived reality. From extreme weather patterns disrupting agriculture to rising energy prices affecting households and businesses alike. The consequences of climate change are becoming important. In response, governments around the world are taking urgent steps to reduce greenhouse gas emissions and transition towards more sustainable economic models.

In this context, environmental policies are no longer focusing to domestic agendas. They are starting to reshape global trade. Consumers are demanding sustainable products. Environmentally friendly methods are becoming more and more important to investors. Global companies are forced to choose between maintaining their competitiveness and protecting the environment. In order to keep up with the new climate regulations, a small American firm could have to change its production process. A multinational company might have looked at the emissions from its supply chain. Businesses everywhere are being forced to change. Every level of decision-making is being impacted by the move toward sustainability.

With the 2019 launch of the European Green Deal (EGD), the European Union (EU) is leading this transformation. By 2050, it aims to achieve carbon neutrality for the EU. Stricter environmental laws, encouragement of green technologies and adjustments to trade practices are all part of the plan. Although the EU economy is intended to be transformed by these actions, its consequences reach far beyond Europe's borders (European Commission, 2019). The EU-U.S. trade relationship is one of the biggest in the world. It covers sectors such as agriculture, manufacturing, and technology. This trade is worth billions of dollars each year (European Commission, 2025d). Any major change in EU policies has wide-reaching effects. The implications of the EGD goes further than the EU border lines and influence global trade dynamics (Aldaz-Carroll et al., 2024).

A key element of this framework is the Carbon Border Adjustment Mechanism (CBAM), designed to prevent carbon leakage by imposing a carbon price on imports that do not follow with EU climate standards. Products with high carbon emissions, like chemicals, steel, aluminum, and cement, are the focus of this mechanism (World Bank, 2025). CBAM seeks to support the EU's climate goals while ensuring fair competition. The new trade restrictions it imposes, might make trade challenging for American exporters. According to Amendola (2025), this shift may result in unfair competition. Businesses in nations with less strict environmental laws may have a benefit over those exposed to the EU's stricter regulations. Additionally, Marcu et al. (2020) warn that those regulations may encourage firms to relocate their operations to nations with fewer environmental laws.

However, adapting to these evolving regulations is complex. A clear contrast exists between the EU's harmonized carbon pricing system and the United States' (U.S.) more unpredictable and politically dependent climate policies (Van Nostrand & Levinson, 2023). U.S. climate policy has experienced fluctuations over time due to changes in political leadership and ongoing debates about balancing environmental protection with economic growth (Dietz et al., 2015; Bacchus, 2022). This unpredictability adds layers of difficulty for U.S. companies aiming to align with global environmental standards and maintain access to the European market. Because the rules keep changing, companies must constantly evaluate their costs and operations. This is often more difficult for small and medium-sized firms that lack the same resources as larger ones (Wildnerova et al., 2024). As the EU moves forward with stricter environmental rules, tensions may grow. This could pressure the U.S. to change its policies. It may also affect trade relations between the two sides (Mehling, 2024; Goldthau & Sitter, 2019).

There is research on how environmental policies affect trade, but few studies focus on the EGD's impact on U.S. exports. Most look at the EU's internal effects or discuss climate rules in general, without showing how they affect key trade partners. This thesis aims to fill that gap. It examines the specific challenges and opportunities U.S. companies face as they navigate through the EU's changing rules.

Last but not least the topic is timely. The EGD is still being rolled out and its impact is growing. As the EU changes its trade rules, it is important to understand how its relationship with the U.S. is shifting.

Research Objectives

This study provides a clear analysis of how the EGD affects U.S. trade, with a focus on exports to the EU. In order to understand the impact, it is important to take into account how environmental policies changed in the U.S. and Europe between 1990 and 2025. A look at this timeframe indicates how the EGD fits into a larger global trend toward more sustainable and green trading.

Finding the trade barriers brought about by the EGD is a major goal of this study. Because member states face different challenges due to differences in enforcement and implementation, the study also looks at regional differences within the EU. The study takes into account the EGD's wider effects on trade relations with other significant international regions in addition to Europe. For clarity, the regions are arranged according to continents. Understanding how the EGD is affecting trade both inside and outside of Europe is made possible by this more comprehensive viewpoint.

To support the literature review, the study applies a quantitative research approach using trade data. This approach helps identify trends and measure economic effects discussed in the literature, making it easier to connect theory with patterns observed in recent trade flows.

Lastly, this research offers both practical insights and policy-relevant knowledge by combining theory with quantitative analysis. The findings can help businesses and policymakers deal with the challenges of the EGD. They also support better decision-making in a shifting global trade context.

Research Questions

The research has the following questions:

- What are the trade barriers created by the European Green Deal for U.S. exporters?
- What impact do regional differences within Europe have on U.S. exporters?
- What support do U.S. companies need to meet the requirements of the European Green Deal?

Hypothesis

This study looks at how the EGD is starting to affect U.S. exports to the EU The policy is still new and changing. Its full impact on international trade is not yet clear. Also, the available data only cover the first phase of its implementation. Because of this, the research does not begin with fixed hypotheses. Instead, it uses a flexible approach. The focus is on early trade patterns, practical challenges and signs of change. Gaining a better understanding of how the Green Deal is beginning to change transatlantic trade is the aim.

Significance of the Study

This study is useful to a wide range of stakeholders in international trade, environmental policy, and sustainability. As the EGD changes the rules for trade around the world, it's important to know how it will affect countries that aren't in Europe. Knowledge can help people deal with new trade barriers and make economic relations stronger. This research provides valuable insights for governments, businesses, and trade organizations by analyzing the impact of the Green Deal on U.S. exporters and their access to the European market.

For companies trading between the U.S. and Europe, this study shows how new environmental rules can affect export planning, supply chains and market access. These days, sustainability plays a major role in business operations and trade agreements. Businesses must adjust if they want to stay competitive. They can use the findings to plan strategic responses, identify risks and take advantage of new opportunities under the Green Deal. This study supports informed decisions regarding

compliance, green investment and alignment with European standards by examining the economic and regulatory impacts.

A deeper understanding of how green trade policies impact their industries can also be advantageous for trade associations and industry groups. These groups help their members in navigating complicated regulations as representatives of business interests. The data-driven insights from the study help them in trade negotiations, policy discussions and supporting businesses in overcoming the obstacles created by the EGD. Staying informed and engaged is essential for building resilience and long-term success in an evolving global market.

Policymakers on both sides of the Atlantic can use this research to better understand the wider economic and political impact of the EGD. It provides U.S. decision-makers with insights about the impact of the Green Deal on domestic industry and trade relations with Europe. This perspective can facilitate more efficient responds and negotiations. The research further informs existing discussions regarding the balance between environmental goals and economic priorities. It provides concrete strategies for developing trade policies that improve both climate initiatives and export competitiveness.

Scholars interested in sustainability, commerce, or policy will find this paper useful. It fills a need in the literature by delving into previously unexplored topic of the EGD's effects on U.S. trade. Future studies on sustainable trade and regulatory alignment can build on this research by merging policy analysis with real trade data. This opens the way for future research on the topic of non-European responses to the developing green deal.

This study offers both practical and academic insight into how sustainability policies are reshaping international trade. By examining the challenges and opportunities created by the EGD, it provides useful guidance for businesses, policymakers and researchers. Sustainability is becoming an important part of global economic policy. This study helps build a trade system that supports both economic growth and environmental goals.

1 LITERATURE REVIEW

This chapter reviews EGD and international trade literature. The goal is to find out how environmental policies affect global trade flows, specifically U.S. exporters to the EU. The review begins with the origins, goals and instruments of the EGD. Further on it is followed by its broader environmental and economic context. Key differences between the EU and the U.S. are highlighted along with regional implementation patterns. The chapter lays the groundwork for the following quantitative research by pointing out where the existing research is lacking.

1.1 European Green Deal and its Trade Dimension

This section presents the EGD and its main goals. It then outlines how the plan has developed over time and explains the key policy instruments involved. The link between environmental and trade policy is explored, with attention to recent introduced measures of the EGD. The final part discusses possible trade frictions and legal challenges in relation to the WTO.

1.1.1 Objectives and Scope

In December 2019, the European Commission (EC) launched the EGD. It aims to make the EU the first climate-neutral continent by 2050 (European Commission, 2019). This implies eliminating greenhouse gas emissions or balancing them by restoring nature, integrating clean technologies or catching carbon. The goal was legally binding in the European Climate Law. This rule also required a 55% emissions reduction by 2030 compared to 1990 levels (European Commission, 2020a).

The Green Deal isn't just about keeping the planet clean. It's also seen as a new way to make money. It connects action on climate change to fairness, innovation, and creating jobs. The goal is to make the business stronger without hurting the planet. The EU wants everyone to gain from this change and they want to make sure that no one or place is left behind (European Commission, 2019).

The plan is founded on several key areas. Clean energy represents a primary focus, as over 75% of the EU's emissions are related to energy production and consumption

(European Environment Agency, 2021). The EU aims to transition towards a circular economy. This means reducing waste and maximizing the reuse of materials (European Commission, 2020b). Furthermore key goals include the recovery of natural ecosystems, improving of transportation systems, and reduction of pollution in air, water, and soil (European Commission, 2021a).

1.1.2 Timeline of Key Developments

The implementation of the EGD in 2019 marked a new phase in EU policy formulation regarding climate and sustainability. The goals have always been crystal clear, but many of the associated policies are either not yet in the works or are just getting off the ground.

The EU's long-term climate targets became official in 2021 by the European Climate Law. It expects a 55% reduction in greenhouse gas emissions by 2030 from 1990 levels. The EC launched the 'Fit for 55' package, which consists of new laws for energy, transport, and industry, to achieve this aim (Council of the European Union, 2025).

Other projects were the 'Zero Pollution Action Plan' and 'Just Transition Mechanism' expansion. These instruments aim to reduce environmental damage and assist regions that are more exposed to the social and economic challenges of decarbonization (European Commission, 2021a; 2021b).

A number of these measures have already gone into effect, such as the updated Emissions Trading System (ETS). The CBAM is one example of an ongoing project that is expected to attain full operational status by 2026 (European Commission, 2021d). CBAM wants to make things fair by making sure that foreign goods have the same carbon costs as goods made in the EU. This will keep companies from moving production to countries with less strict environmental rules.

This slow process shows that the Green Deal is a flexible and dynamic process that can change as things happen. The introduction of new laws is a continuous process as political, economic and social conditions evolve.

A figure has been given in this section to illustrate the timeframe of this evolving strategy. The timeline in Figure 1 was created based on information provided by the EC and outlines both completed milestones since 2019 and key actions planned for the coming years. It provides an overview of the current planned implementation of the EGD. Still, adjustments may be made as the policy process continues to unfold.

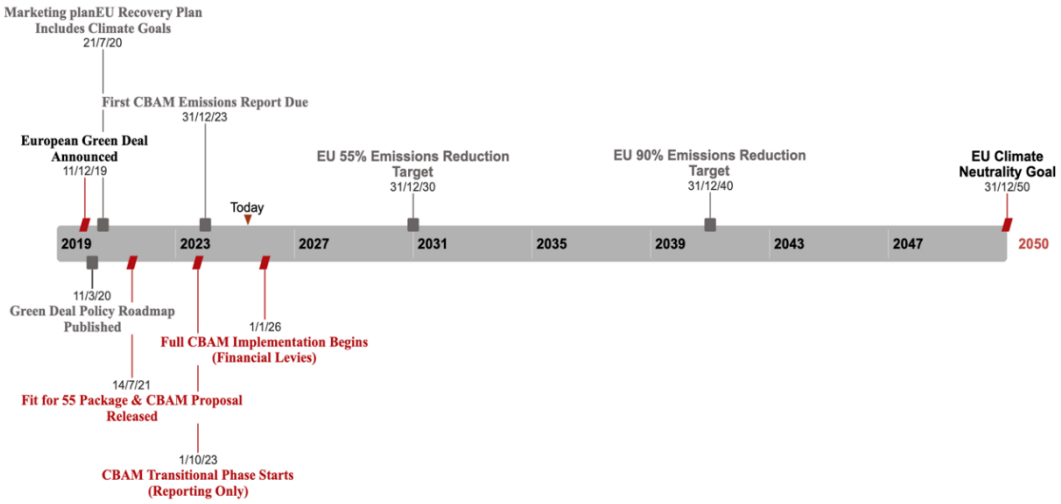


Figure 1: European Green Deal Timeline - Key Events

1.1.3 Core Instruments

The EGD relies on several key tools that work closely together. The EU ETS is one of the most important. It's the biggest carbon market in the world. Not long ago, the ETS was made expanded to include more areas, such as buildings and maritime transport. The European Commission (2021d) says this helps cut down on emissions more efficiently.

The "Fit for 55" deal is the most important part of the EU's climate plan for 2030. New rules are made and old ones are updated. Changes will be made to the Effort Sharing Regulation, the Renewable Energy Directive, and the CO2 standards for cars. The CBAM is an important part of this package. CBAM puts a carbon price on some imported goods. This helps stop companies from moving production to countries with looser climate rules, keeping competition fair (European Commission, 2021d).

Besides rules, the Green Deal also involves big financial and social programs. The Sustainable Europe Investment Plan aims to bring in at least €1 trillion for green projects between 2021 and 2030. These investments go toward clean energy, sustainable transport and new technologies that support the transition (European Commission, 2020c). The Just Transition Mechanism helps regions and workers who will be most affected by the changes by giving them money and training (European Commission, 2021b). This makes sure that the change is fair.

Another important part is the EU Taxonomy for Sustainable Activities. This is a system that defines which economic activities count as environmentally sustainable. It helps guide public and private money to real green projects and fights against greenwashing (European Commission, 2021c).

The EGD's main parts can be seen in Figure 2. It shows how the various components form a coherent whole. The Green Deal is more than just a set of different rules.Instead, it combines economic growth with environmental responsibility. The Green Deal changes the way trade works around the world by promoting clean energy, smart resource use, and new ideas. It also helps Europe and other places grow in a way that lasts (Switch to Green, 2020).



Figure 2: Policy Areas of EGD
Source: Switch to green, 2020

1.1.4 CBAM and Sectoral Implications

The EGD, introduced by the EC in December 2019, sets out the goal of making Europe the first climate-neutral continent by 2050. It aims to cut greenhouse gas emissions, restore biodiversity and reduce pollution. These objectives go beyond the EU's internal market because they also influence trade relations with non-EU countries (European Commission, 2019).

As part of this shift, the EU is actively using trade policy to advance global environmental goals. Otto (2025) points out that the EU uses its market power and regulations to encourage trade partners to decarbonize production and adopt stricter climate standards. The idea is to create a level playing field that supports both competitiveness and climate ambition.

At the same time, Felbermayr et al. (2024) caution that these measures could disrupt global trade. Countries that lack the resources to meet EU environmental rules may see these policies as protectionist. For many non-EU exporters, the cost of accessing the EU market has increased, forcing them to change their practices or risk losing competitiveness.

A key instrument in the EU's climate strategy is the Emissions Trading System (ETS), which has been in place since 2005. It operates on a cap-and-trade model: companies must buy emission allowances that match their CO_2 output. By limiting the total number of allowances, the system puts a price on carbon and creates an incentive to reduce emissions efficiently. The ETS has become central to EU climate policy and covers sectors like energy, industry and aviation (European Commission, 2025b).

To build on this, the EC launched the "Fit for 55" package in July 2021. It introduced updates to existing laws and new measures to help achieve a 55% emissions reduction by 2030 compared to 1990 levels (Council of the European Union, 2025). As part of this package, the ETS was extended to cover new sectors, including maritime transport. This sector faces unique challenges due to its global nature and heavy reliance on fossil fuels (Kotzampasakis, 2025).

Alongside these changes, the CBAM was introduced. While the ETS regulates emissions within the EU, CBAM ensures that imported goods face a similar carbon cost. This helps avoid "carbon leakage," where production moves to countries with weaker climate rules and ensures that EU industries are not unfairly disadvantaged (Dechezleprêtre et al., 2025).

Figure 3 shows how CBAM works. Products imported into the EU are subject to CBAM certificates based on the carbon emissions linked to their production. This ensures that both domestic and imported goods face comparable carbon costs. Goods already covered by the ETS within the EU are not subject to CBAM. This structure helps align EU climate and trade policy while encouraging climate action beyond its borders (The Conference Board, 2022).

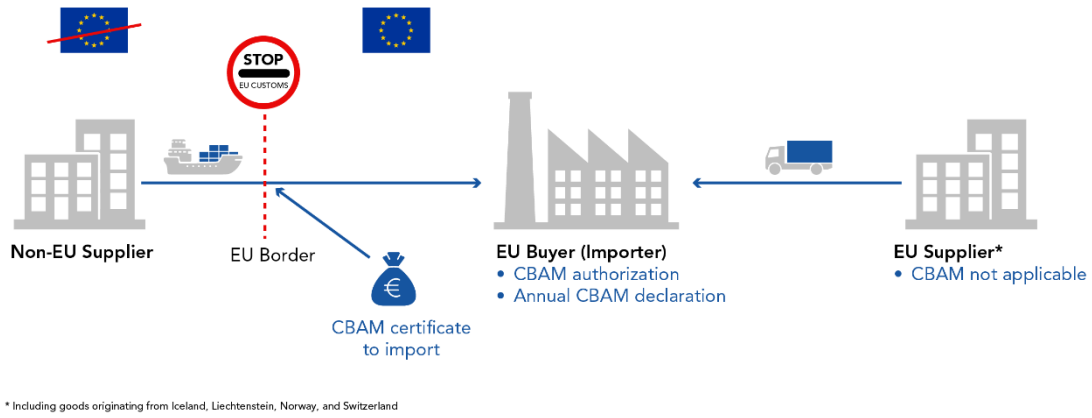


Figure 3: CBAM Illustration
Source: The Conference Board, 2022

Besides the CBAM, the EGD also introduces other trade-related measures. One of these is the EU regulation on deforestation. This law prevents the import of products such as palm oil, soy and coffee if their production contributes to deforestation. The purpose is to make sure that EU imports do not damage global forests and to support the EU's broader strategies on climate and biodiversity (European Commission, 2025a).

These new rules raise compliance costs for exporters, with developing countries often facing the greatest difficulties. They may also act as non-tariff trade barriers, making

it harder for certain producers to access the EU market (Besliu, 2023). However, some researchers believe that these policies could have positive effects globally. Delbeke and Vis (2020) suggest that the EU's strong environmental policies might encourage other countries to adopt stricter climate rules. The EU's influence as a large trading bloc could motivate partner countries to improve their standards to maintain access to the European market.

Still, this approach is not without challenges. There is a risk of straining relations with countries that follow less ambitious environmental paths. Feist et al. (2024) note that applying environmental rules globally is difficult when economic and logistical constraints are involved. A key concern is whether the EU can promote higher global standards without creating unfair trade conditions.

Engström (2022) raises the question of whether EU regulations alone are enough to drive international climate action. While CBAM might help the EU reduce its own emissions, its global effect could be limited if other countries see it mainly as a protectionist tool.

Despite these concerns, some trends are already emerging. Many companies are starting to anticipate EU regulations and are adjusting their production methods accordingly. According to the World Economic Forum (2020a), several multinational firms are investing in cleaner technologies not just to follow EU rules but also to protect their brand reputation and stay competitive in key markets.

Some scholars, such as Böhringer et al. (2012), argue that regulatory pressure like this can push industries to innovate. It may lead to new, more efficient technologies and lower the cost of reducing emissions in the long term.

The impact of CBAM and similar policies is not equal across all industries. Sectors like steel and cement, which emit high levels of carbon, are particularly affected. Branger et al. (2016) explain that these industries face higher costs due to carbon pricing. As a result, they are under pressure to invest in cleaner production processes. If they do not, they risk losing market share to companies in countries with looser

climate policies. However, without coordination at the international level, there is a danger that companies will move production to countries with fewer regulations. This shift would reduce EU emissions but not necessarily global emissions.

The shipping industry is also now covered under the EU Emissions Trading System (ETS). This sector faces unique difficulties because it is international and depends on high-emission fuels. Christodoulou and Cullinane (2022) argue that while the ETS increases costs for shipping companies, it also creates an incentive to improve fuel efficiency and explore new technologies like hydrogen and electrification.

Yang et al. (2025) have studied how carbon pricing and border measures influence innovation. They found that when companies face the financial cost of carbon emissions, they are more likely to invest in research and development for cleaner technologies. Dechezleprêtre et al. (2025) also confirm that CBAM and similar tools can promote innovation, as long as they are applied flexibly and combined with international cooperation.

The private sector is taking on a more active role in adapting to these changes. According to the World Economic Forum (2020b), many firms are taking early action and shifting to more sustainable practices. This momentum could help define new global standards and accelerate the transition to greener trade systems.

In conclusion, the EGD aims to connect environmental goals with trade policy. Measures like CBAM and the deforestation regulation are central in reshaping global supply chains. However, the EU must carefully balance environmental ambition with fair trade practices. Ensuring cooperation with trade partners will be essential to avoid unintended negative effects and to achieve broader climate impact worldwide.

1.1.5 WTO Compatibility and Trade Frictions

The EGD is not only about environmental goals but also sets a new direction for international trade. Because these measures directly affect imports and exports, it is important to see how they fit with existing World Trade Organization (WTO) rules. This chapter looks at the legal and political challenges that appear when sustainability

and trade policy overlap. These measures raise key questions about their compatibility with trade law and the possible tensions between environmental goals and free trade.

A key concern is whether these EU measures follow WTO principles. Hoekman and Mavroidis (2015) argue that some policies give EU producers an unfair advantage or create barriers for others. This relates to WTO rules that require equal treatment of all trading partners and no favoritism for local products. Environmental goals are allowed under Article XX of the GATT, but only if they are fair, transparent, and not more restrictive than necessary (WTO, 2025).

CBAM is a source of tension in current trade debates. Otto (2025) argues that although the EU presents it as a climate tool, it could be used to protect its own market. If foreign producers see CBAM as unfair, this may harm trade relations. The Office of the United States Trade Representative (2024) also warns that steps like CBAM can create trade barriers if they are not introduced transparently. Both sources stress the need for cooperation and dialogue. Climate policy should not come at the cost of fair trade.

How Article XX is applied is still up for debate in the diplomatic and legal communities. How open and fair these measures are and how other WTO members react will determine their acceptance. As trade disputes rise, the WTO Dispute Settlement Body is closely monitoring the situation (WTO, 2025).

Political issues arise alongside legal ones. The Green Deal received WTO criticism from various countries over its trade implications. As Bacchus (2024) points out, there is a clear conflict between saving the environment and keeping trade open. This could have bigger geopolitical effects.

What the EU does to turn its environmental goals into laws affects a lot of different sectors. These rules increase expenses, changing competitiveness and market access. Companies that want to adapt and compete must understand these laws.

In the chemical industry, rising energy costs and strict emission rules are changing production processes. Dow Inc., an American company, is investing in recycling and circular production models to meet EU standards while staying strong in the global

market (Dow Inc., 2024). The automotive sector is also in transition. Emission rules are speeding up the move to electric and hydrogen-powered vehicles. Car brand Ford is reworking their supply chains. Tesla is investing in more European production and looking for greener battery materials (McKinsey & Company, 2024; Han Kulak, 2024). Textile companies face pressure too. Sustainability and traceability rules mean higher costs and demand for better materials. An American brand, Patagonia, is doing well here by using eco-friendly fabrics and being transparent about its supply chain (Shourkaei et al., 2024). In agriculture, the Farm to Fork strategy introduces tighter controls on pesticides and fertilizers. For farmers outside the EU, this can raise costs and reduce market access. Still, some large companies, like Cargill, are adapting by shifting to more sustainable farming to keep their place in the European market (Cargill, 2024).

In the meanwhile, political lobbying shapes the outcome of many decisions. Industrial sectors call for more flexibility, while environmental groups push for stronger rules. This tension influences not only EU policy but also international trade talks (Hanegraaff & Poletti, 2021; Hanegraaff et al., 2024).

All of this is leading to major changes in global supply chains. Companies are investing in cleaner technologies and better certifications. This often leads to additional costs and uncertainty. But those who move early and embrace sustainability can gain a strong position and reach new markets (Nege & Abegaz, 2024; Zhang & Song, 2020).

1.2 Environmental and Economic Context of EU-U.S. Trade

This section looks at how sustainability became part of international trade. It begins with a short overview of the idea of sustainable trade and how its meaning has evolved. Then, it outlines key environmental and economic trends in both the EU and the U.S. since 1990. A comparison follows, showing how both regions approach trade and climate policy differently. The final part explains how social and governance factors now also influence access to the European market.

1.2.1 Sustainability in International Trade

Sustainability in international trade is not new, but its definition and implementation have evolved. Economic growth and market expansion dominated global trade during the Industrial Revolution. It was common to ignore or think of environmental and social effects as outside problems (Smith, 1773). People thought economic growth would improve life without considering the impact to nature or society.

People began to notice environmental and social impacts of trade in the second half of the 20th century. The report Limits to Growth by Meadows et al. (1972) told people that there aren't enough natural resources and that the economy can't keep growing forever. At the same time, sustainable development gained popularity. Providing for current needs while safeguarding future generations' capacity to do the same is how sustainability was described by Burton (1987). This was a big change because sustainability now embraced economic, social, and environmental factors.

In international trade, this means that economic gains must go hand in hand with protecting the environment and ensuring social fairness. Today's trade agreements and practices are expected to follow rules that respect ecological limits, reduce inequality and improve working conditions (Dauvergne, 2018).

Trade plays a double role nowadays. On one hand, it can promote economic growth and innovation, helping to find greener solutions. On the other hand, it can cause a 'race to the bottom,' where countries lower their environmental standards to stay competitive. This hurts the planet and vulnerable people (Gao et al., 2021). Balancing growth and protection is one of the biggest challenges for sustainable trade. Also social inclusion and fairness have become more important. Trade should not only be 'green' but also 'fair.' That means policies must consider workers' rights, fair wages and the impact on local communities (Mol & Oosterveer, 2015). Without this approach, sustainability may remain a distant ideal instead of something truly implemented.

1.2.2 Environmental and Economic Trends (1990-2025)

Sustainability plays a bigger role in trade today than ever before. To understand how this affects global trade, it's useful to look at how key players like the EU and the U.S. have developed their climate and economic policies over time. Since both are major trade partners, their paths give important context for the analysis in this thesis.

1.2.2.1 European Union

The development of the EGD reflects over three decades of changing environmental policies and trade strategies. This section explores how the EU moved from early environmental concerns to a global leadership role in climate policy. Understanding this evolution is essential for analyzing how the EGD influences today's trade relations.

People talked about protecting the environment a lot in the 1980s, but it wasn't yet part of EU policy. The major goal was still economic expansion, and sustainability was mostly ignored. In the 1990s, it started to change. People became more concerned of the environment, and the EU began to include environmental aims in its decision-making. What began off as a small issue grew into a major part of the EU's larger plan to find a balance between economic growth and environmental responsibility.

The Maastricht Treaty of 1992 was a turning point since it gave legal support to include environmental protection in all EU programs (Delbeke & Vis, 2020). At this time, laws were more focused on controlling pollution, managing waste and using resources. These early measures mostly addressed local concerns but paved the way for more ambitious goals. Harrison and Paulini (2024) describe this period as the start of a shift toward embedding sustainability within economic and trade frameworks. This trend strengthened over time.

International climate agreements played a crucial role in this transformation. The Kyoto Protocol of 1997 marked the first global effort to reduce greenhouse gas emissions. The EU aligned quickly with its objectives. According to Felbermayr et al. (2024), this step improved EU climate action and influenced trade through clean

technologies and carbon reduction. Kyoto's influence was negatively impacted by big countries' absence. This is a missed global collaboration opportunity, says Maamoun (2019). Delbeke and Vis (2020) claim this made the EU more independent in climate policy, often acting alone.

With the 2015 Paris Agreement, the EU's independence became clearer. The Paris Agreement is more flexible and inclusive than Kyoto. It helped the EU rethink environmental policy. It was a growth opportunity rather than an obstacle (Schunz, 2022). The EGD represents this change. It strives to divorce economic growth from damage to the environment and achieve net-zero greenhouse gas emissions by 2050. Çelik (2022) views the EGD as the EU's tool for global climate action and establishing new trade regulations with partners.

Responsibility comes with leadership. The EU wants its trading partners to follow its rules on the environment, which brings up some questions. In 2021, Oberthür and Dupont describe how the EU uses the Paris Agreement to make sure that its policies on the inside and the outside of the EU are similar. Van Schaik and Schunz (2012) warn that this technique may cause tensions in countries with limited resources or other policy priorities. The authors Perdana and Vielle (2022) expand on this by saying that developing nations might have trouble catching up to the EU’s climate goals any time soon. It's hard to find the right mix between promoting high standards and avoiding unfair trade barriers.

Even with these problems, the EU's climate policy has led to more people working together. Bodansky et al. (2017) and Falkner (2016) both talk about how the EU plays a big part in getting countries to work together through the Paris Agreement. A big part of this study is how the EU combines climate goals with trade and geopolitics.

These goals have been around since before the EGD. The EU made the Eco-Label Regulation in 1992 to encourage people to buy items that are good for the environment. Even though it was optional and didn't have much of an effect at first (Marquis et al., 2016), it was the first time that environmental goals were linked to trade goals. This bond has grown stronger over time. Many EU trade agreements now include

sustainability chapters, requiring partner countries to adhere to green standards (Borowicz & Daugėlienė, 2023). Çelik (2022) refers to this as green trade diplomacy, where the EU leverages its economic power to promote environmental goals. However, critics argue that these demands may be unfair to some countries. Blot and Kettunen (2021) note that developing countries often don't have the means to adapt, which could make global inequality worse. Sutton and Saha (2025) point out that these problems are concerning.

This issue is relevant when examining stronger EU tools like the CBAM. Zhao (2024) warns that such measures may act as trade barriers for energy-intensive industries in developing countries. Lin and Zhao argue that CBAM could disproportionately affect exporters from the Global South. Lim et al. (2021) caution that it might escalate diplomatic tensions if perceived as green protectionism. Scholars such as Brandi (2021) and Zucman (2023) advocates for fairer approaches, including financial aid and transition periods to mitigate inequality. Mehling et al. (2019) emphasize that EU climate leadership must balance ambition with fairness.

What people think about CBAM is based on what they learned from the EU Emissions Trading System (ETS), which began in 2005. The ETS is an important market-based climate tool because it sets a price on carbon, which pushes businesses to come up with new ideas and cut down on pollution. According to Dechezleprêtre et al. (2023), the ETS cut emissions by 10% from 2005 to 2012 without hurting competition. Bown and Clausing (2023) claim it limited market access for non-EU enterprises, especially those from countries without similar systems. Borowiecki et al. (2023) state that the ETS has an effect on industries that have a lot of emissions and trade. Companies shift to escape regulation, but Verde (2018) finds little carbon leakage. As restrictions tighten, dangers may increase. CBAM adds a new layer to this discussion. Marcu et al. (2020) stress that border measures must respect with WTO rules and diplomacy. WTO Director-General Ngozi Okonjo-Iweala supports global carbon pricing to prevent trade conflicts.

External events have also influenced EU climate policy. The 2022 war in Ukraine prompted a shift in energy strategy. The REPowerEU plan seeks to reduce dependence on Russian fossil fuels and accelerate the green transition. Olivares (2023) and Siddi (2023) link this plan closely to energy security and climate goals. De Jong (2024) notes that results depend on gas prices and geopolitical risks, but the crisis has strengthened the Green Deal.

Pressure from the public is still important. Climate change stays on the political table thanks to groups of young people like Fridays for Future. Growing public concern has led to stronger political commitment, according to Siddi (2023). Although progress is slow and campaigners get frustrated sometimes, the role of civil society helps explain why the EU is so committed to a green agenda.

In the end, the EGD brings together historical, political, social, and economic elements. Felbermayr et al. (2024) warn that the EU needs to carefully balance its green goals with free trade and working with other countries. Understanding these foundations helps this thesis understand the EGD's challenges and opportunities for transatlantic and global trade.

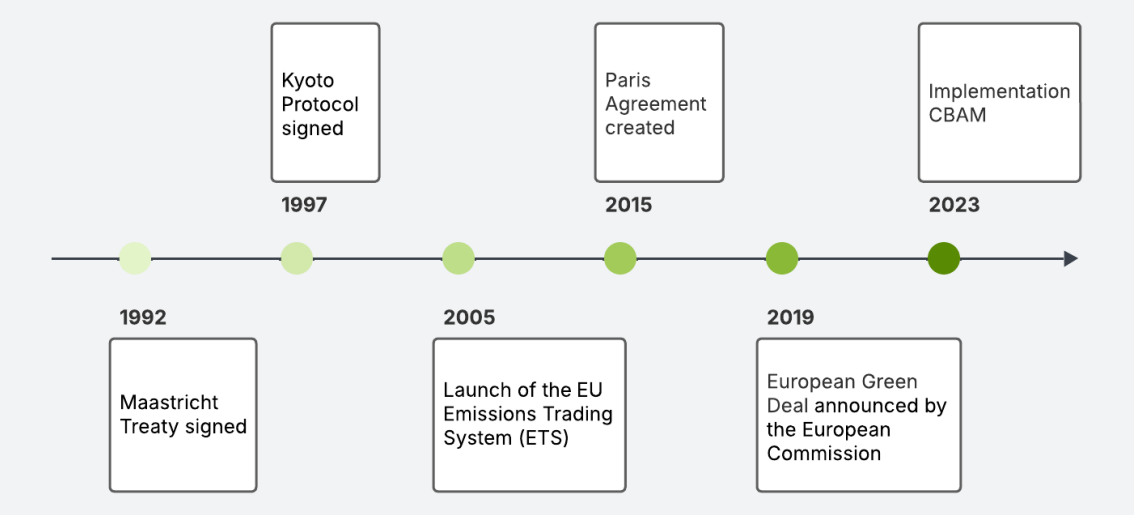


Figure 4: Timeline of Key Environmental and Economic Developments in the European Union (1990–2025)

1.2.2.2 United States

Political transitions, international agreements and environmental awareness shaped U.S. climate and trade policies between 1990 and 2025. Economic growth and environmental protection have often clashed due to political ideologies and competing interests.

In the 1990s, the U.S. played a key role in global trade with the introduction of the North American Free Trade Agreement (NAFTA) in 1994. NAFTA eliminated many trade barriers between the U.S., Canada and Mexico, fostering cross-border commerce and industrial expansion. However, its environmental provisions faced criticism. Charnovitz (1994) notes that agreements like the North American Agreement on Environmental Cooperation (NAAEC) did not succeed in reducing pollution, particularly in places where industrial activity had expanded rapidly. Economically, NAFTA boosted Gross Domestic Product (GDP) and created jobs in some sectors, but it also contributed to offshoring and weakened environmental oversight in certain areas. This illustrated how trade liberalization often advanced more quickly than environmental safeguards.

In 2020, NAFTA was replaced by the United States-Mexico-Canada Agreement (USMCA). This revised agreement incorporated enhanced environmental commitments concerning air quality and the illegal wildlife trade. Bacchus (2022) interprets this as a sign that the U.S. is prioritizing sustainability in its trade policy. However, critics argue that the USMCA still favor fossil fuel industries in the U.S. and Canada, which could pose risks to long-term climate goals (Stevens & Ramírez, 2022). While the USMCA preserved market access for U.S. firms, it did little to discourage carbon-intensive practices, maintaining the tension between economic competitiveness and environmental responsibility.

Under the Bush administration (2001 to 2009), climate policy shifted significantly. The U.S. left the Kyoto Protocol over concerns that binding emission targets would hurt the economy. Concerns about energy-intensive industries including oil, coal, and manufacturing drove this choice (Cohen & Egelston, 2003). The focus changed to

energy independence and economic growth, and there was more support for making fossil fuels in the U.S.. This method promoted short-term job creation and stable energy costs, but also delayed a clear climate plan and brought international criticism for U.S. inaction.

The Obama administration (2009 to 2017) adopted more climate-conscious policies. The Clean Power Plan and U.S. commitment to the 2015 Paris Agreement signaled sustainable growth. Obama promoted sustainable energy as a climate solution and economic boost. Investment in renewable energy technologies and green jobs became a focus. Nevertheless, Workman et al. (2020) observe that legal challenges and political opposition, especially in governments reliant on fossil fuels, restricted the success of these policies.

Many of these changes were undone by the Trump administration (2017–2021). The U.S. pulled out of the Paris Agreement and undid important environmental rules, such as rules for power plants and cars' emissions. The government put a lot of focus on traditional energy sources, saying that they would protect jobs and give the country more energy independence (Wentz & Gerrard, 2019). In the short run, these policies helped the fossil fuel industry, but they made the U.S. less strong in global climate diplomacy. Hunter et al. (2019) say that this change in policy hurt the country's reputation. Bomberg (2021) warns of rising long-term economic costs, such as missed chances to spend and higher costs for recovering from disasters.

President Biden rejoined the Paris Agreement and released a climate plan in 2021 to regain trust. Large-scale investments in sustainable energy, infrastructure and workforce development were his economic strategy for climate change. Lashof and Neuberger (2023) highlight transportation, construction and energy emission reduction targets. At COP26, the U.S. positioned itself as a global leader in climate negotiations (The White House, 2021). Nevertheless, political resistance from fossil fuel sectors and Congress made it difficult to pass major climate legislation (Bang, 2021).

A significant factor in U.S. climate policy is regional diversity. Climate commitments, energy resources, and political orientation differ per state. California leads in renewable energy and emissions reductions, while Texas and Wyoming use fossil fuels and reject federal mandates (Bergquist & Warshaw, 2023). This fragmentation hinders national policymaking and causes uneven climate progress.

In the meantime, the private sector is now very important to U.S. climate measures. Companies have started to include environmental goals in their business plans because investors and customers want them to. Next to that those companies don't want to risk their reputations. A lot of money is being put into sustainability and carbon neutrality in fields like banking, technology, and manufacturing (PwC, 2021). Even though these steps align environmental and economic goals, people are still free to choose to take them. Also the steps they take vary by industry.

In 2025, Donald Trump returned to the presidency and initiated a second withdrawal from the Paris Agreement (The White House, 2025). The administration prioritized deregulation and support for oil and gas, viewing climate measures as burdensome for business. Swain et al. (2025) predict this will lower costs for carbon-intensive industries in the short term but raise trade risks. The EU is expected to respond by enforcing mechanisms such as the CBAM, which would impose tariffs on U.S. exports with high emissions (Keskin, 2025). This could hurt U.S. competitiveness abroad and generate new trade tensions. Swain et al. (2025) argues that the U.S. is less of a climate partner when it changes its policies so often. Gibson (2025) warns that if the U.S. leaves the Paris Agreement again, it could hurt investment in clean technologies and make the country less important in global efforts to protect the environment.

From 1990 to 2025, the U.S. has struggled to balance environmental priorities with economic goals. Trade agreements have occasionally included environmental clauses, but enforcement has been limited. Shifts between administrations created uncertainty in long- term climate policy. Regional variation and market-based actions added further complexity. These patterns affect the U.S. economy and its role in international climate policy, with direct consequences for EU–U.S. trade relations.

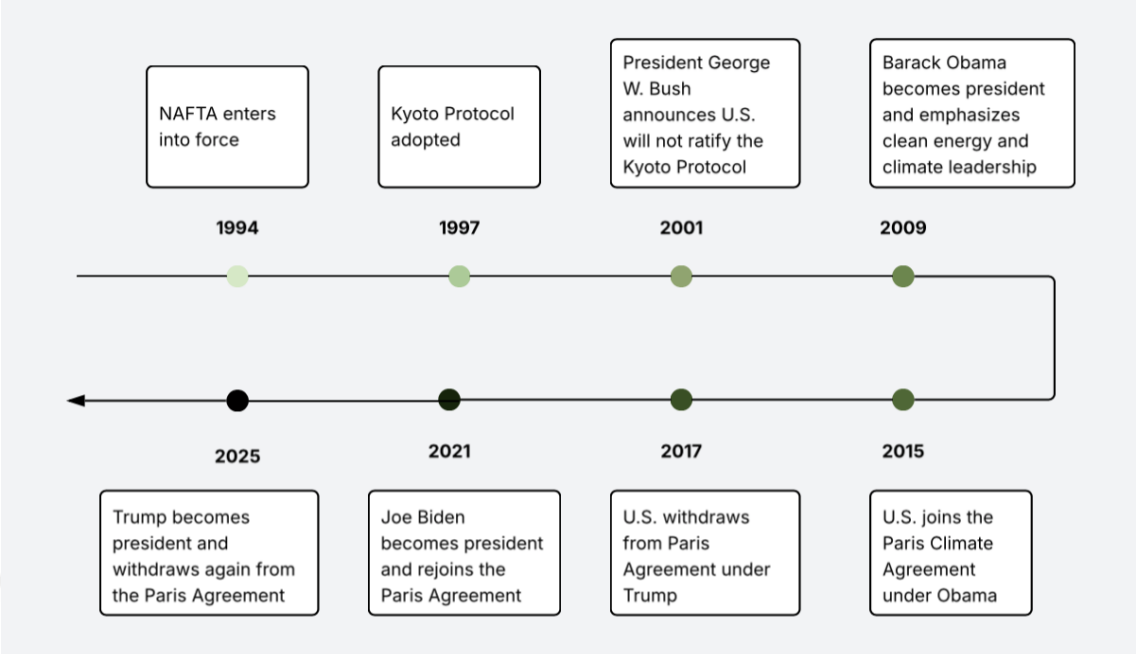


Figure 5: Timeline of Key Environmental and Economic Developments in the United States (1990–2025)

1.2.2.3 Comparative Analysis EU-U.S.

The trade relationship between the EU and the U.S. has long been a central pillar of the global economy. Since the 1990s, international concern over climate change has pushed environmental priorities into the core of trade negotiations. Both regions have addressed these issues differently, resulting in tension and cooperation.

The EU has consistently integrated environmental standards into its trade agreements. The EGD has been crucial in the progressive strengthening of these norms, as pointed out by Ville (2025). The EGD's goal of having net-zero pollution by 2050 is in line with the EU's plan to make trade and environmental goals more aligned. Louisa-Maria (2024) notices that the EU utilizes trade policy to promote global sustainability, even if it causes friction with partners.

In contrast, the U.S. has been more hesitant to tie trade agreements to environmental performance. During the Trump presidency, deregulation was prioritized to support economic growth. Galbraith (2017) reports that many in the U.S. business community viewed environmental rules in trade deals as constraints. This difference became clear during negotiations on the Transatlantic Trade and Investment Partnership (TTIP),

which failed partly due to disagreements over food safety and environmental standards (Peterson, 2016).

The EU's ban on hormone-treated beef was a clear example of these divisions. The U.S. saw this as a trade barrier, while the EU supported it as a health and sustainability measure (Beckman et al., 2021). Different views on the environment can make it hard for countries across the Atlantic to work together.

The U.S. signed the United States-Mexico-Canada Agreement (USMCA) in 2020, which came after TTIP. According to Lucatello (2022), USMCA has weaker environmental protections, which shows that the US wants trade policies that are not as strict. At the same time, the EU keeps pushing for stricter rules on the environment, as shown by the planned CBAM. This strategy aims to put taxes on imports that leave big carbon footprints (Leturcq, 2022).

CBAM may intensify trade tensions. U.S. exporters in sectors like steel and cement fear competitive disadvantages when accessing the European market. CBAM is seen as a protectionist instrument by some U.S. authorities, according to Stephansson (2023). On the other hand, the EU says the move is needed to stop carbon leakage and meet its climate goals (Dobranschi et al., 2024). Sun et al. (2024) state that CBAM could lead to global rules for pricing carbon, but they also warn that it could make trade conflicts worse.

Domestic political conditions in the U.S. complicate alignment with the EU. Although the Biden administration aimed for closer cooperation with European climate policy, resistance from fossil fuel interests and partisan politics limits the extent of policy change (Basseches et al., 2022). This internal division makes sustained collaboration more difficult.

Comparing strategies, EU–U.S. trade ties show that the two countries have different goals. The EU focuses on environmental integration through projects, but the U.S. policy is still not clear. These differences cause problems, but they also open the door to conversation. Knowing how this changing dynamic affects global trade and

international economic cooperation is important for figuring out how environmental policies affect these areas.

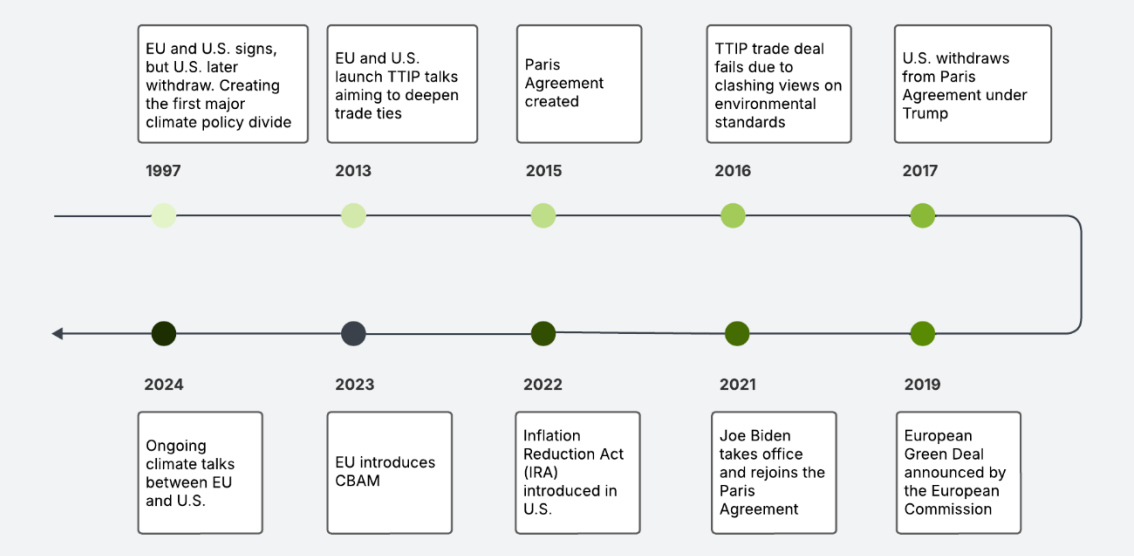


Figure 6: Timeline of Key Turning Points in EU–U.S. Sustainable Trade Policy (1990–2025)

1.2.3 Social and Governance Aspects

The EGD is frequently viewed as concentrating mainly on environmental objectives. However, social and governance concerns are becoming significant. Exporting U.S. enterprises to the EU must investigate environmental, human rights, labor, corporate ethics, and transparency laws. These things are important to get excess into the European market.

The Corporate Sustainability Reporting Directive is a clear example. This EU rule says that big businesses must be open about how they deal with social issues like working conditions, human rights, and equality. Companies in the U.S. aren't directly affected by this, but they do have to deal with its effects when they do business with companies in Europe. European purchasers want this information from their suppliers who are not based in Europe. This is why U.S. exporters need to build up equivalent reporting systems (European Commission, 2021e).

Governance also plays a key role. European rules like the EU Taxonomy and the Sustainable Finance Disclosure Regulation help define which companies count as sustainable. These rules are for investment and financing from Europe. For U.S.

companies that supply European customers, this brings new pressure. People might not want to buy from them if they can't show that they meet these standards for sustainability. This is the case in sectors such as the energy industry, the chemical industry, the textile industry and the technology sector. In these sectors is a high demand for sustainability and reputational damage can directly affect trade relations (Christensen et al., 2021).

What strengthens this is the “Brussels effect”. Companies around the world often follow European rules to stay competitive, so they have an effect on places outside of the EU as well. These ESG (Environmental, Social, and Governance) standards are often adopted freely by U.S. companies that want to stay ahead in the EU market. If they don't, they could lose customers, have trouble getting money or hurt their reputation with European stakeholders (Bradford, 2020). In short, the EGD affects U.S. exporters in more ways than only environmental restrictions. It also affects them through social and governance rules.

1.3 Regional Impact Assessment of the European Green Deal

This section examines how the EGD is implemented across different regions. It starts with an overview of key patterns within the EU, organized by geographic regions. After that, it looks at how non-European countries respond to the EGD. The analysis highlights differences in regulation, readiness and trade impact. This clarifies how the EGD affects U.S. exporters in the EU and beyond.

1.3.1 European Union

The EU does not implement the Green Deal uniformly across all member states. Different countries have different rules because they have different climate goals, governing structures and types of industries. This part focuses on a few EU member states where there is enough data and where the policy has an effect. Some European countries are left out because their laws are different or there isn't enough information about them. This section is organized by geographic areas that follow the cardinal directions so that the main ideas are clear and well-organized. This method helps to show how policies are implemented differently in different parts of Europe.

1.3.1.1 Western Europe

Netherlands

The Netherlands is seen as a leader in Europe when it comes to climate policy, according to Wang et al. (2023). In this country, the EGD is seen as both a legal requirement and a chance to promote long-term economic growth and creativity. Large investments in renewable energy and the circular economy aim to strengthen its export position. I This change has a significant effect on land usage, which impacts both domestic output and international trade flows, as Ivanov et al. (2025) highlight.

Belgium

Castanheira et al. (2024) show that Belgium is dedicated to sustainable governance but struggles to implement the Green Deal. The country tries to integrate sustainability across different sectors through regulation and policy. However, the degree of success varies by region and industry. According to Dootalieva (2022), environmental and trade policies in Belgium are now closely connected. This means that companies must adapt to stricter environmental rules to remain competitive in the European market. The adjustment requires U.S. exporters to meet stricter environmental regulations.

Germany

Germany is an important part of the EGD since it has a strong industrial base and a lot of economic power. Wang et al. (2023) point out that Germany implements aggressive climate policies designed to decrease CO_2 emissions, but comes across difficulties in sustaining its worldwide competitiveness. Turchet (2023) highlights the challenges on energy supply and environment that demand a balance between sustainability and energy security. Steininger et al. (2022) stress the need for a fair distribution of climate efforts within the EU. Given its size and emissions, Germany carries a large share of the responsibility.

France

France combines technological innovation with social engagement to meet the goals of the EGD (Wang et al., 2023). This includes investments in renewable energy and cleaner supply chains. Sandmann et al. (2024) note that France's multilevel governance system links local, national, and EU institutions. This system plays a key role in making climate transitions possible. Achieving progress in aligning economic action with climate goals depends on these levels working together well.

The Netherlands, Belgium, Germany and France are among the countries that have shown a notable commitment to the EGD. Climate neutrality, policies driven by innovation and strict environmental requirements are common between them. But they are different in how they are put into action in different regions, how their policies are set up and what sectors they focus on. This area has a steady but difficult regulatory environment for U.S. exporters. Adaptation is important since there are strict sustainability standards for both the product and the way it is made. What this means for international businesses seeking entry to the Western European market is that the region takes the lead and sets the standards inside the EU.

1.3.1.2 Northern Europe

Denmark

Denmark is often praised as a leader within the EGD. It aims to cut greenhouse gas emissions by 70% by 2030 from 1990 levels. Menu (2021) notes Denmark's organized policy-making and offshore wind energy and district heating investments for a climate-neutral Europe. Tilsted and Bjørn (2023) argue that Denmark may not meet its "fair share" based on historical emissions and economic potential. Denmark also has problems within its own country. Local farmers may face competitive disadvantages from measures such as CO_2 taxes (Sørensen et al., 2025). This poses a number of challenges for American exporters, including a market that places a value on economic equality and a clearly established sustainability policy.

Sweden

Sweden is recognized for its strong climate strategy under the EGD, targeting net-zero emissions by 2045. Pareliussen and Purwin (2023) talk about how Sweden is open and organized, with laws regarding climate change that require yearly reports and four-year action plans. They warn that recent easing in biofuel regulations and reductions in fossil fuel taxes could slow down progress. Swedish involvement in the EU presidency in 2023 shows its dedication to a strong EGD application (Lindberg & Wettestad, 2024) . Swedish openness to practical adaptations offers American companies high standards but also opportunity for innovation and cooperation.

Finland

In applying the EGD, Finland creates a balance between ambition and realism. Climate neutrality by 2035 and growth driven by the green economy are two of the objectives highlighted by Jokela (2023). Yet, Flam et al. (2023) show that national interests sometimes clash with EU goals, for example in the electricity sector, where subsidies may disrupt the market. Sandmann et al. (2024) stress the challenges of a just transition, with regional differences leading to varied policy responses. This means U.S. exporters must be aware of a fragmented market and possibly differing rules within the same region.

Northern Europe is a leader in EU EGD implementation. Denmark, Sweden, and Finland lead climate goals. This is because of strong policies, public support and ongoing investments in innovation and sustainability. U.S. exporters and other trade partners can take advantage of these markets' maturity and transparency. Northern Europe care about the environment and are open to new technologies. This makes it easier to work together on green mobility, hydrogen technology, energy storage, and smart infrastructure. To succeed, firms must meet strict environmental and ESG standards. The market is tough but promising for American exporters, as quality, certification, and image are very important.

1.3.1.3 Southern Europe

Italy

Italy shows a mixed picture in implementing the EGD. Turchet (2023) points to the National Integrated Energy and Climate Plan as the framework for climate targets, but highlights that execution varies greatly between regions. In southern areas such as Apulia and Sicily, local governments use initiatives like the Covenant of Mayors to develop strategies for emission reduction and renewable energy. However there are problems with tracking and implementation, according to Congedo et al. (2025). In agriculture there are efforts to lower the carbon footprint, like in Sicily's potato cultivation (Scuderi et al., 2021). In politics, there has been resistance against the EGD banning on fossil fuel engines starting in 2035. Prime Minister Meloni views this as a danger to the Italian car industry and employment opportunities (Kazmin et al., 2024). These conflicts show how fragile the balance is between national economic and European climate goals.

Spain

Spain is also an active participant in the EGD but faces structural differences. Peña-Ramos et al. (2021) describe how ambitious energy plans coexist with a paradoxical increase in fossil fuel consumption. Antón (2022) addresses the possible benefits of green tax policies, but they will only work if they have political support and are implemented effectively. Another study by Lariau and Shi (2023) shows that higher CO_2 prices and investments that are good for the environment can have a positive effect on the job market, but only if enough money is spent on education and active labor policies. Spain shows that policy goals and economic realities don't always match up, but they can also create opportunities for social and economic change.

Portugal

Portugal supports the green transition with policy tools like the Just Transition Fund (JTF), but its effectiveness relies on how resources are utilized (Silva, 2021). New environmental rules raise agricultural production costs, especially for small producers

(Cabeço, 2022). In the contrary, the construction sector actively promotes the circular economy, with Pedroso and Tavares (2023) noting both policy progress and existing obstacles. Portugal stands at a tipping point between opportunity and vulnerability in EGD implementation.

Southern Europe is determined to reach the EGD goals, yet each country is making progress at a different rate. In terms of green energy and the circular economy, Spain and Portugal have come a long way. Slow implementation and structural problems have made Italy fall behind. For U.S. exporters, the rules and standards for sustainability are mostly the same across Southern Europe. However, each country has its own way of putting these rules into action and at its own time. Companies that want to sell their goods in this area need to know how things work in each country. There are big chances in areas like circular products, sustainable energy, and eco-friendly tools where the change is further along. Accessing a market successfully means following local rules and showing a clear picture of sustainability.

1.3.1.4 Central and Eastern Europe

Poland

Implementing the EGD in Poland is a difficult challenge. Pawłowski and Sołtysiak (2024) note that reducing the use of pesticides and fertilizers significantly affects the agricultural sector. They also note that precision farming can help reduce this impact. Dulak and Kułakowska (2024) point out that the Polish government often presents climate measures as threats to national sovereignty and energy security. This shows political caution. Szczubełek (2022) adds that Poland's heavy reliance on coal is a barrier to a fast energy transition. These studies show that Poland accepts the EU's climate goals but struggles with economic interests and existing structures that slow the change.

Czech Republic

The Czech Republic is at a similar turning point. Rečka et al. (2023) expect it to meet the EU goal of a 55% emission cut by 2030, helped by large declines in the 1990s. However, coal dependency is still high and limited use of renewables slows progress. IMF reports (2023, 2024a) call for major investments in green energy and efficiency. Kotlán et al. (2021) note that institutional issues, such as corruption, weaken climate policies. Politically, there is resistance because of the impact on the automotive industry, which makes up about 9% of GDP (Reuters, 2024). This creates a difficult market where economic and environmental goals often conflict.

Slovakia

Slovakia's situation is different. Ciot (2022) points out that while Slovakia formally complies with EU rules, institutional and structural obstacles hinder implementation. Melichová et al. (2021) focus on the wood processing industry, where innovation and funding lag behind, limiting sustainable growth. Lazorcakova (2024) stresses that member states' willingness to enforce EU rules is crucial and Slovakia shows mixed compliance. Exporters should therefore expect slow and uneven application of the EGD in Slovakia.

Hungary

Hungary faces big challenges because of its energy-intensive industries and heavy use of fossil fuels. The IMF (2024b) reports that about 70% of its energy comes from non-renewable sources. This makes the transition costly and complex. Hungary aims for climate neutrality by 2050, but its carbon intensity is 63% above the EU average. The IMF advises ending fossil fuel subsidies to improve energy efficiency and support low-emission technologies. For exporters, this offers opportunities in energy-saving tech, but the market will change slowly.

Romania

Romania shows a more positive development. Simionescu et al. (2020) report significant greenhouse gas reductions since 1990, supporting EU targets. However, fossil fuel dependency remains a hurdle. Panton (2023) notes that sectors like transport and agriculture need extra focus to speed up emission cuts. The IMF highlights the need for greater energy efficiency and higher renewable energy use. This makes Romania relatively attractive for exporters with sustainable solutions, as long as they address sector-specific differences.

Bulgaria

Bulgaria faces major obstacles, mainly due to coal dependence and outdated infrastructure. Sabev (2024) argues for a polycentric approach involving multiple governance levels to enable a just transition. Petrov and Tsonkov (2022) highlight the importance of regional strategies and cross-border cooperation to strengthen the green economy. Paliova (2024) points to fiscal challenges despite EU funding, indicating the need for coordinated policies. These findings suggest that while Bulgaria faces significant problems, there is room for progress with the right approach.

The analysis of Central and Eastern European countries shows that the EGD's rules are the same across the EU. However, implementation, policy support and economic strength differ from country to country. This affects how ready these markets are for foreign trade partners such as the U.S.. The Czech Republic and Romania have solid policy frameworks. They have also taken steps to cut emissions and use more renewable energy. This makes them attractive for green products and sustainable exports. Bulgaria and Slovakia face structural problems and weaker institutions. They also depend more on fossil fuels, which slows the transition. The same EGD standards apply to U.S. companies across the EU. Yet the openness of each market to sustainable trade depends on how each country applies the rules. To succeed in this region, a tailored approach for each country is needed.

1.3.1.5 Northwestern Europe

Ireland

Gray and McArdle (2025) explain that local communities in Ireland play a central role in decision-making around sustainable energy projects within the EGD. This involvement strengthens the legitimacy of environmental policies and influences how sustainability criteria are applied. For American exporters, this means that products and processes must meet strict environmental standards while also addressing social acceptance in local markets.

Luxembourg

Ottomano Palmisano et al. (2025) show that Luxembourg performs well in sustainability but faces legal and financial challenges in implementing the EGD (Sikora, 2021). Fleming and Mauger (2021) emphasize that Luxembourg seeks a pragmatic balance between ambitious green goals and just transitions. For American exporters, this means acting in accordance not only with environmental standards but also navigating complex regulations and potential financial barriers that may affect exports.

Northwestern European countries are characterized by a strong focus on participatory decision-making and the pursuit of a just yet ambitious green transition. Ireland stands out due to the active involvement of local communities in the energy transition, adding a layer of social legitimacy to sustainability requirements. Luxembourg combines high sustainability performance with complicated legal and financial conditions that affect EGD compliance. For American exporters, this translates into a diverse set of demands, ranging from social acceptance and local engagement to legal complexity and strict environmental norms. Successful market entry requires careful alignment with these regional features, addressing not only technical adjustments but also social and institutional contexts.

1.3.1.6 Balkan Countries and Southeastern Europe

Slovenia, Greece and Croatia

Slovenia, Greece and Croatia differ in their readiness to implement the EGD. Slovenia is a leader among newer EU members. Ottomano Palmisano et al. (2025) note its strong results in environmental indicators such as forest coverage and land protection. This positions it well for the EU's sustainability transition. In Greece, enforcing environmental laws has long been difficult. Pouikli et al. (2024) cite weak coordination between institutions and limited judicial involvement as key problems. These reduce Greece's ability to meet the EGD's goals. Croatia sees mixed economic effects from the green transition. Denona Bogovic and Grdic (2020) report that renewable energy and tourism benefit, while carbon-heavy industries face high costs. They stress the need for targeted policies to support vulnerable sectors and ensure an inclusive transition.

These countries show the different speeds of EGD implementation in the Balkan and Southeast European region. Institutional, economic, and ecological factors shape this progress. For American exporters, it means checking each market's rules and opportunities. Some markets already demand sustainable products and technologies. Others are still building the laws and support systems they need.

1.3.1.7 Overview of EGD Maturity in Europe

The map in Figure 7 shows the progress of European countries in implementing the EGD. The EGD sets the rules that all EU countries are expected to follow. However, each country follows its own path when putting these goals into practice. The colors provide an indication of their "EGD maturity":

- Green: countries that are already advanced in implementation, characterized by robust climate policies, high investments in sustainability and clear regulations.
- Orange: countries that are making progress, but where implementation is still uneven or where policy structures are less stable.
- Red: countries where the transition is slow, often due to institutional or economic constraints.

The map shows the regional differences discussed earlier. Western and Northern Europe are mostly green, showing their leading role in adapting to the Green Deal. These regions have strict environmental standards, stable policies, and strong public support for sustainability. Southern Europe shows a mixed picture, mostly in shades of orange. while countries like Spain and Portugal are making clear progress, structural and administrative challenges in other parts of the region slow down full implementation. In Central and Eastern Europe, more countries are marked in red. This shows that the transition is slower, with more institutional problems and a stronger reliance on traditional energy sources. These regional differences show that American companies are not dealing with one single European market. Instead, they face a mix of different local situations, each requiring a tailored approach.

The EGD may look the same on paper for American exporters, but its true effects are different in each country. Some follow stricter standards for sustainability more quickly and regularly than others. Companies should change their export approach based on how mature the EGD is in each country. Countries that are further ahead with the EGD have tougher requirements and expect strong ESG efforts. Countries that are still developing their policies give exporters more flexibility and focus more on

economic development. It helps to show that even though all EU countries follow the same climate rules on paper, the way these rules play out in practice varies a lot between them.

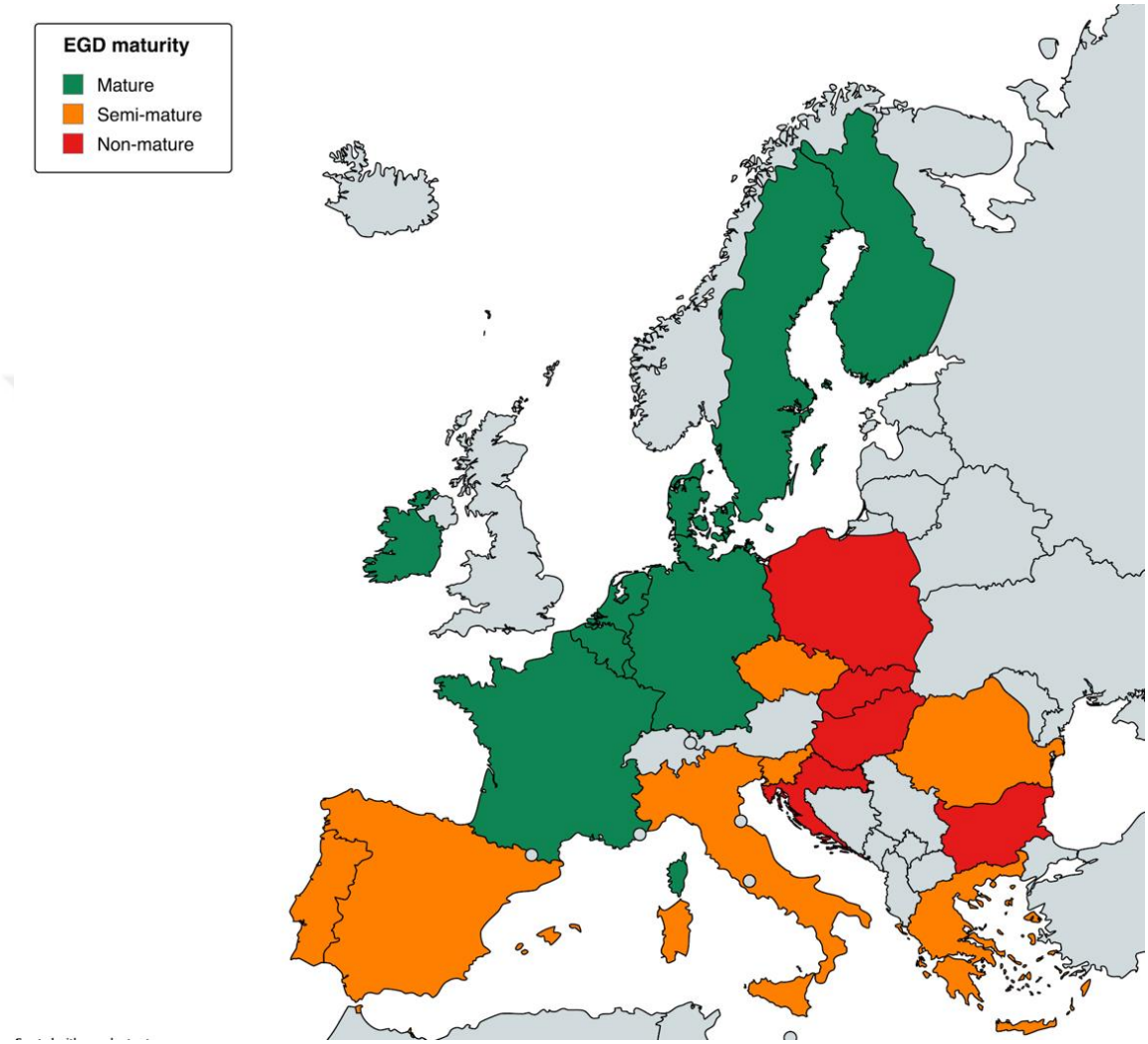


Figure 7: EGD Maturity Map – Regional Differences in Implementation Across Europe

1.3.2 Non-European Regions

Focusing only on the U.S. would offer an incomplete picture, so this thesis also considers how non-European countries are responding to the EGD. This perspective helps to better understand the United States' position within the global context. This section looks at how countries in Asia, Africa, South America, North America and Oceania respond to the EGD. Their reactions help reveal important differences. These include variations in competitive pressure, how countries adjust their strategies and the specific regulatory challenges they face. These insights are essential for assessing how U.S. exporters are positioned in a changing international trade environment.

1.3.2.1 Asia

Asia is an economically and industrially diverse continent, resulting in varying impacts of the EGD and the CBAM across different countries. According to Chang (2025), China, as the region's largest industrial producer and exporter, represents one of the most significant challenges. China's steel, cement and chemical sectors are heavily affected by the CBAM. The study highlights that these industries are likely to face significant cost increases and reduced access to the European market. Wenmei and Wang (2023) support this view. They predict that this pressure will push China to restructure its production processes and invest in cleaner technologies.

Kashyap and Purkayastha (2024) indicate that India is also a major exporter of carbon-intensive goods. However, the country mainly struggles with financing constraints and limited technological modernization. These limitations make it harder for India to adapt to CBAM rules. In contrast, Lee and Woo (2020) say that South Korea is better prepared for the EU's stricter environmental standards. This is because of its focus on sustainable innovation and advanced technology. These differences show that adaptation to the EGD in Asia depends not only on economic size. Institutional strength and technology are just as important.

In Southeast Asia, industrial exports have grown significantly in recent years. According to Huq and Ichihashi (2025), countries like Vietnam, Bangladesh and Cambodia have seen strong export activity in sectors such as textiles, electronics and

basic materials. At this stage, these sectors are not strongly affected by CBAM. Tabachová et al. (2025) point out that this may change in the future. As the system expands and emission rules become stricter, the financial impact could grow.

In emerging economies like Bangladesh and the Philippines, the direct impact of CBAM is still limited. According to Razzaque and Zobair (2021) and Martinus and Laopirun (2023), the reason is because their exports, which is mainly textiles and agricultural goods, have relatively low carbon intensity. However, these countries do feel indirect effects. Rising costs for imported raw materials and growing pressure to meet international sustainability standards are making it harder for them to stay competitive in the European market.

Russia, Pakistan and the Gulf States each respond differently to the CBAM. Russia faces strong economic pressure because of its high-carbon exports in steel and aluminum. However, it still lacks effective policies to support decarbonisation (Sudakov, 2023). There is less research on Pakistan and the Gulf States, but their reliance on fossil fuels and limited policy reforms suggest they are less prepared to adapt (Rochette and von Kumberg, 2022).

These insights from Asia are relevant for U.S. exporters to the EU. As noted by Wenmei and Wang (2023) and Lee and Woo (2020), Asian companies that respond more rapidly and effectively to the EGD and CBAM are expected to strengthen their competitive positions. This implies that American companies must not only take European regulations into account but also anticipate changes in competitive dynamics, partly shaped by the strategic responses of Asian players. The different experiences across Asia offer useful insights into how economic structure, technology and environmental policy interact. These insights can help U.S. exporters adapt their strategies more effectively.

1.3.2.2 Africa

Africa illustrates how EU climate policy shapes global trade in practice. The EGD and CBAM create new costs and compliance demands for African exporters. These changes are often introduced without consultation or support. As a result, African responses offer a clear view of the risks, inequalities and strategic choices that other non-EU countries must also consider.

Academicians describe this pressure as a form of green colonialism. Claar (2022) argues that the EGD forces non-EU countries to follow European standards without having a say in shaping them. Maimele (2023) points to South Africa as a clear example. Companies there must comply with EU rules but receive little support or guidance. The situation raises concerns about fairness and sovereignty. A similar dynamic is emerging for U.S. companies. They are expected to meet CBAM requirements that were introduced without consultation or bilateral agreement.

At the same time, some African countries are taking a strategic approach. Morocco and Ethiopia have made early investments in green industries, positioning themselves more favorably in the EU market (Van der Ven & Sasmal, 2024). North African states are also developing partnerships with Europe in renewable energy and hydrogen (Van der Zwaan et al., 2021). These efforts show that proactive adaptation can create economic opportunities. The same applies to U.S. exporters that invest in low-carbon production and transparent emissions data.

The risks remain high. Karkare and Medinilla (2023) and Perdana and Vielle (2022) warn that CBAM could become a trade barrier for countries without access to clean technology or financing. In South Africa, the steel and cement sectors are vulnerable. Many companies lack the data or capacity to meet EU requirements (Monaisa & Maimele, 2023). Rumble and Gilder (2024) note that CBAM may also weaken regional trade efforts under the African Continental Free Trade Area (AfCFTA). The U.S. has more resources, but smaller American firms may still struggle with carbon reporting and face disadvantages compared to EU producers or exporters from exempt countries.

Legal concerns are also increasing. Mwangi (2024) notes that some African countries may challenge CBAM at the World Trade Organization. They argue it is not a neutral climate policy but a tool that excludes countries from major markets. This criticism could also apply to the U.S. if the EU continues without clear coordination with its trade partners.

Africa's experience highlights that the EGD is not only an environmental initiative. It is also an economic policy tool with global consequences. For U.S. businesses and policymakers, this means preparing for a new reality in which climate regulation shapes trade conditions. Without adjustment, firms may face higher costs, complex reporting demands and reduced market access. With the right strategy, however, sustainability can also become a competitive advantage.

1.3.2.3 South-America

South America, with its wealth of natural resources and strong focus on agri-food and raw material exports, faces a difficult position when it comes to the EGD. The Green Deal raises pressure on regional exporters to produce more sustainably, but many countries are not yet fully equipped in terms of institutions and technology.

According to Nolte (2023), the EGD presents an opportunity to revitalize the strategic partnership between the EU and Latin America. Still, Feffer (2022) points out that there is deep-rooted distrust. Many Latin American countries see the European climate agenda not just as environmental policy, but as a way to protect European markets under the label of sustainability. This perception complicates policy alignment and strengthens fears that Latin American countries are left to bear the costs of climate actions decided by others.

In this context, Brazil shows how difficult it can be to balance economic interests with environmental goals. Sandrin (2024) points out that Brazil presents itself as a global supporter of green energy, yet still depends largely on carbon-intensive exports like soy and meat. This dual approach increases the risk of trade barriers toward Europe, particularly as CBAM is likely to expand to new sectors in the future.

Zoghbi (2022) points out that a more inclusive Green Deal is possible in Latin America. But progress remains slow because many governments lack political commitment, strong institutions and effective regional collaboration. This structural unpreparedness increases the vulnerability of export-oriented sectors.

This vulnerability is evident in the agri-food sector, as analyzed by Faichuk et al. (2022). Countries such as Argentina, Paraguay and Uruguay face risks related to stricter certification requirements, CO_2-related market conditions and potential reputational damage. The current reliance on volume-based production and the absence of transparent supply chains present serious adaptation challenges.

At the same time, Leonard et al. (2021) emphasize the geopolitical nature of the EGD. Europe actively uses environmental policy as leverage to shape international standards and expand its influence across global value chains. The EGD is not just an environmental plan, but also changes how global influence is shaped. For U.S. companies competing with South American exporters, this means they must not only follow European regulations but also keep an eye on how other regions adapt to the green transition.

The varied responses within South America offer valuable lessons. While sustainability offers chances for growth, many countries are struggling to apply it in a consistent way. For U.S. exporters, this creates two key challenges. First, they must monitor how South American competitors are gaining or losing ground. Second, they should consider investing in cleaner supply chains that both meet European standards and support long-term stability.

1.3.2.4 North-America

Within North America, Mexico and Canada each occupy a distinct position in relation to the EGD. While Canada is relatively well positioned to meet European climate requirements, Mexico faces a significantly more difficult situation.

Lucatello (2022) explains that Mexico faces a difficult position. The country depends economically on the U.S. through the USMCA agreement. At the same time, it wants to build stronger economic ties with the EU. Mexico faces pressure from both sides, as the U.S. and the EU follow different climate policies. This makes it difficult for the country to meet both sets of expectations at the same time. Mexican companies are pushed to follow European environmental standards, but national policy still supports fossil fuels like oil and gas. This makes it harder to attract investment in sustainable alternatives. This situation makes it difficult for Mexico to follow a clear policy path and increases the chance of facing trade restrictions from the EU.

In this context, the renewed EU-Mexico Global Agreement also plays a significant role. As Ilcus (2024) explains, the agreement modernizes the existing trade relationship and includes explicit provisions on sustainability and environmental protection. In theory, it provides a framework for Mexico to prepare for European climate measures such as CBAM. In reality, meeting these requirements remains a challenge. This is especially true for sectors like steel, cement and fertilizers, which are highly exposed to carbon-related costs. According to Peña-Ramos et al. (2021), many in Mexico view the push to follow European climate rules as unequal. They see it as a situation where local development needs are pushed aside to meet European expectations.

In contrast, Canada demonstrates greater policy alignment with the European climate agenda. According to Elkerbout et al. (2021), the Canadian Green Recovery strategy aligns closely with the objectives of the EGD. The country has already implemented a national carbon pricing mechanism and actively invests in renewable energy and circular innovation. Still, there are internal disagreements. Ringel et al. (2021) point out that regions like Alberta worry that stricter climate rules could harm industries that rely heavily on CO_2. Despite this, the Canadian private sector appears better equipped to adapt to CBAM regulations compared to Mexico.

For U.S.-based exporters to the EU, these contrasts offer relevant insights. Canada shows that a forward-looking climate policy can help maintain access to the European

market. In contrast, Mexico's experience shows how internal challenges and geopolitical ties can slow down progress toward sustainability. These developments show that it is important not only to follow European rules, but also to keep an eye on how climate policy is changing trade and competition within North America.

1.3.2.5 Oceania

Oceania exports large amounts of agri-food, dairy and meat products to Europe. These sectors are directly affected by the environmental and climate rules introduced under the EGD. Tompkins et al. (2021) point out that agricultural producers in New Zealand are undergoing pressure to cut emissions and make their production more sustainable if they want to keep access to the European market. This aligns closely with the central research question of this thesis, namely how the EGD creates new trade barriers.

Androniceanu and Sabie (2022) show that the push for green energy and sustainable innovation in Oceania is no longer just about the environment, but also an economic necessity as European import rules become stricter. Smol (2023) places this development in a global context. According to Smol (2023), the EGD is encouraging international exporters to shift toward more circular and climate-friendly business models. This effect is especially visible in regions like Oceania, where primary industries play a central role in the economy.

Additionally, Bieroza et al. (2021) show that European environmental regulations, such as those concerning water quality and soil use, are also applied to imported goods. This leads to what is known as a “regulatory effect”, meaning that even companies outside the EU must adjust to its internal standards in order to keep access to the European market. The EGD’s impact beyond EU borders forces exporters in Oceania to review and improve the sustainability of their entire production chains to stay competitive.

Dupont et al. (2024) frame this dynamic within the broader historical trajectory of EU climate policy. The current Green Deal represents three decades of environmental regulation, during which the EU has come to treat external trade partners as indirect participants in its climate ambitions. This shows that companies in Oceania are forced

to align with the EU's sustainability shift, even when their own governments apply less strict rules. Muteswa (2021) confirms that more and more companies in Oceania are making sustainability a core part of their business strategy, driven by the pressure from European climate policies.

In summary, the case of Oceania shows that the EGD is more than just an internal climate policy. It also acts as a geopolitical tool that shapes the behaviour of international companies trading with the EU. This highlights how the EGD functions as a global trade instrument, pushing companies outside Europe to rethink their strategies and adjust to new standards.

1.3.2.6 Non-European Insights for U.S. Exporters

The analysis of non-European regions shows that the impact of the EGD differs greatly. This is due to variations in technological capacity, institutional support, and economic structure. South Korea and Canada are generally well placed to adapt to the stricter European climate rules. In contrast, India, Mexico, and many African nations find it harder to meet the new requirements. As a result, global trade flows are affected unevenly. Some exporters improve their competitive position, while others face the risk of new trade barriers and a loss of market share.

The EGD's impact on U.S. exporters to the EU depends first on their ability to meet the new rules and second on how competitors in other regions adapt. Understanding this interaction is crucial, as it creates a complex situation for U.S. companies. On one hand, they face new costs and trade barriers. On the other hand, they must adapt to maintain their position in a shifting global competitive landscape.

This context underscores the importance of the central research of this thesis. The impact of the EGD on U.S. exporters cannot be viewed in isolation from global adaptation processes and regional differences in response to the EGD. To remain successful, U.S. companies will need to align their strategies with both European environmental demands and the global competitive pressures shaped by these divergent international experiences.

1.4 Research Gap

The primary research gaps in the present studies on the EGD and trade are explained in the following part. It highlights the lack of studies on the impact on exports from the U.S.. The summary shows the benefit this thesis brings by combining existing literature with quantitative data.

Research Area/Topic	**Existing Literature Insights**	**Identified Research Gaps**	**Research Focus for this thesis**	**Sources**
Policy and theory on the EGD	Mostly theoretical and policy-oriented	Lacks concrete data on trade impacts	Adds a practical view with trade data, focused on the U.S.	Lucatello (2022); European Commission (2019); Amendola (2025)
Regional focus: non-EU countries	Focus on countries from other continents as Asia, Africa, Latin America, …	U.S. impact often overlooked	Focuses on U.S. exports and how they are affected	Wenmei en Wang (2023); Claar (2022); Zoghbi (2022); Peña-Ramos et al. (2021); Karkare & Medinilla (2023)
Impact on U.S. companies	Emphasis on politics and policy alignment	Few insights on affected sectors or adaptation	Combines literature and data to assess sector preparedness	Stephansson (2023); Lashof & Neuberger (2023)
Quantitative impact assessment	Risks mentioned but little numerical trade data	Lack of measurable, sector-specific export insights	Uses 2017–2024 data to analyze trends and potential impact	Bergquist & Warshaw (2023); Stephansson (2023)

Figure 8: Identification of literature gap regarding the European Green Deal in relation to U.S. exports

The EGD is one of the most impactful policy shifts in recent EU history. Researchers and policymakers have shown increasing interest in this issue. However, much of the literature stays focused on broad goals and theoretical frameworks. While important, these studies often miss the real, data-based effects on global trade.

Non-EU nations including China, India, Brazil, and Morocco are the focus of the majority of studies. These studies look at how local sectors adapt and if the EU's new policies are fair to developing economies. On the other hand, the U.S. receives not so much attention. It makes it surprising, given that the U.S. is one of the EU's biggest and strongest trade partners.

Politics or diplomacy are typically the main topics of conversation when the U.S. is discussed. The practical effects on American companies are not well examined. There are still remaining problems including increased export costs, dealing with carbon regulations and which sectors are most affected. At the same time, research on the evolution of trade flows under the EGD is lacking.

This lack of data leaves a clear gap. It is difficult for American companies and policymakers to respond correctly in the absence of strong data. They need numbers and facts, not just theory.

This thesis helps to fill that gap. It analyzes U.S. exports to the EU and combines existing literature. Trade data from 2017 to 2024 is included in the study, along with early 2025 data when available. The focus is on three elements. Namely changes in export volumes, the vulnerability of specific sectors and how EGD-readiness varies across EU countries.

By connecting real data with policy analysis, this study shows how the EGD is changing the way the U.S. trades with Europe. It offers a clearer view of which sectors are most affected and where the biggest risks or opportunities lie. The findings are meant to support better decisions for businesses and policymakers facing the realities of a greener European market.

2 METHODOLOGY

This part of the research explains the details of the empirical analysis. It first starts with the research design, then the data sources and the analytical methods. The use of trade data from 2017 to 2025 to identify changes and differences across sectors and countries within the EU is discussed in this section.

2.1 Research Design

This study uses a quantitative research design to determine whether the EGD has already affected U.S. companies' exports to the EU. The data used covers the period from 2017 to 2025, covering both the pre- and post-implementation phases of the EGD. Total export numbers, industries which are vulnerable to EGD norms and variations among European countries depending on Green Deal implementation are the main focuses of the empirical study. A clear and neutral analysis of potential changes in trade flows is made achievable by this approach.

2.2 Data Sources

The quantitative data used in this study come from official and reliable sources. On the one hand, data from Eurostat is used to map European trade figures, focusing on imports. On the other hand, figures from the United States International Trade Commission (USITC) are used to obtain U.S. export figures. By combining these two sources, trade flows between the two regions can be analyzed. Furthermore, the USITC allowed for the classification of products according to the Harmonized Tariff Schedule (HTS), an internationally recognized system. HTS allowed for sectoral classifications for the generated graphs.

2.3 Analytical Methods

The empirical analysis to examine imports to the EU is approached from multiple perspectives. By using line graphs with the key EGD data highlighted, it is possible to observe fluctuations. These line graphs are constructed using Eurostat data between 2017 and 2025. USITC is used to create pie charts, bar charts and stacked charts of U.S. exports between 2017 and 2025. These graphs show the distribution of U.S.

exports and the development by sector group. Sectoral export data is further broken down by group of EU countries, categorized based on their level of EGD implementation. This method provides a clear picture of total trade flows as well as a more in-depth look at the Green Deal's effects on certain sectors and regions. The use of various graph types allows for clearer presentation of complex trade data and supports the interpretation of the results. Lastly this study focuses on the EU27, which means the 27 member states of the EU after the United Kingdom left in 2020. Inclusion of the UK would provide a misrepresentation of the results as it no longer belongs to the EU and not follows EU policies like the EGD.

3 EMPIRICAL ANALYSIS

This chapter explores how U.S. exports to the EU have developed from 2017 to 2025. The analysis focuses on overall trade patterns, sector-oriented developments and country differences within the EU based on the Green Deal's level of implementation. Spotting new trends and figuring out how Europe's changing climate policies impact exports from the U.S. are the goals.

3.1 Exports to the EU

This chapter researches whether the EGD has already had an impact on U.S. companies' exports to the EU. Based on quantitative data between 2017 and 2025, different angles are analyzed. These angles are overall export volumes, sectors that are sensitive to EGD measures and differences between European countries based on their level of maturity in the EGD. The aim is to determine whether there are any notable trends or shifts in U.S. exports to the EU since the announcement of the EGD.

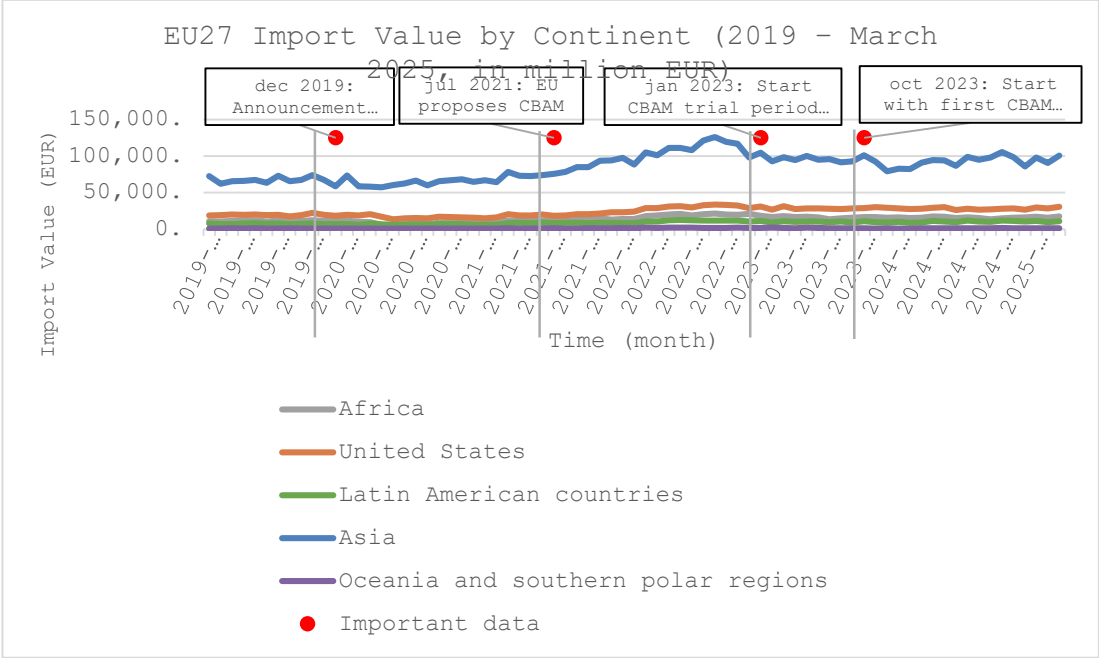


Figure 9: EU27 Import Value by Continent
Source: European Commission, 2025c

Figure 9 examines the import value of the EU27 by continent, to gain insight into which continents export the most to the EU. The first graph shows the monthly import value (in million euros) from five world regions: Asia, Africa, South America, Oceania and the U.S. separately. The x-axis shows time per month and the y-axis shows the import value expressed in millions of euros. The data comes from Eurostat and covers the period from January 2019 to March 2025. The figures are not limited to specific sectors that are sensitive to the EGD. Only the total value of all imported goods is considered, in order to provide a complete and robust picture of trade flows.

Next, the continent of North America is not mentioned in Figure 9 to avoid confusion. By linking the U.S. to a general category, it is prevented that trends from other countries influence the interpretation of the data. In addition, Eurostat did not clearly indicate which countries exactly belong under the terms ‘America’ and ‘North America’. Moreover, the main subject of this thesis is the U.S. and it makes sense to compare the U.S. with other continents in order to be able to analyze more specifically.

Asia's export data shows a clear trend of increasing value from 2021 to early 2023, then fluctuating. Other regions do not experience this growth. Throughout the timeframe, U.S. export values remain mainly steady. Later there is a little increase in late 2022. Between early 2022 and early 2023, EU import values generally increased throughout the majority of regions. Since the start of the CBAM trial period in January 2023, China's export values have significantly decreased, while the U.S. has seen a slight dip. The export lines for Africa, South America and Oceania remain largely unaffected. China's export line has been declining since the CBAM levy began in October 2023, but U.S. export values have remained stable. No significant changes are observed in the other regions during this time.

This broad comparison at the continent level forms the basis for a more in-depth analysis at the country level. Although this study focus on the impact of the EGD on U.S. firms exporting to the EU, it is essential to include Asia in the analysis. In the end Asia is the largest exporter to Europe. By comparing the export developments of Asian countries with those of the U.S., it is possible to gain a better understanding of how

different regions respond to the early stages of the EGD. This allows to investigate whether the effects and adjustments in trade strategies of U.S. firms differ or are similar to those of Asian exporters. This comparison contributes to a more complete and nuanced look of the impact of European climate measures on global trade relations within the research.

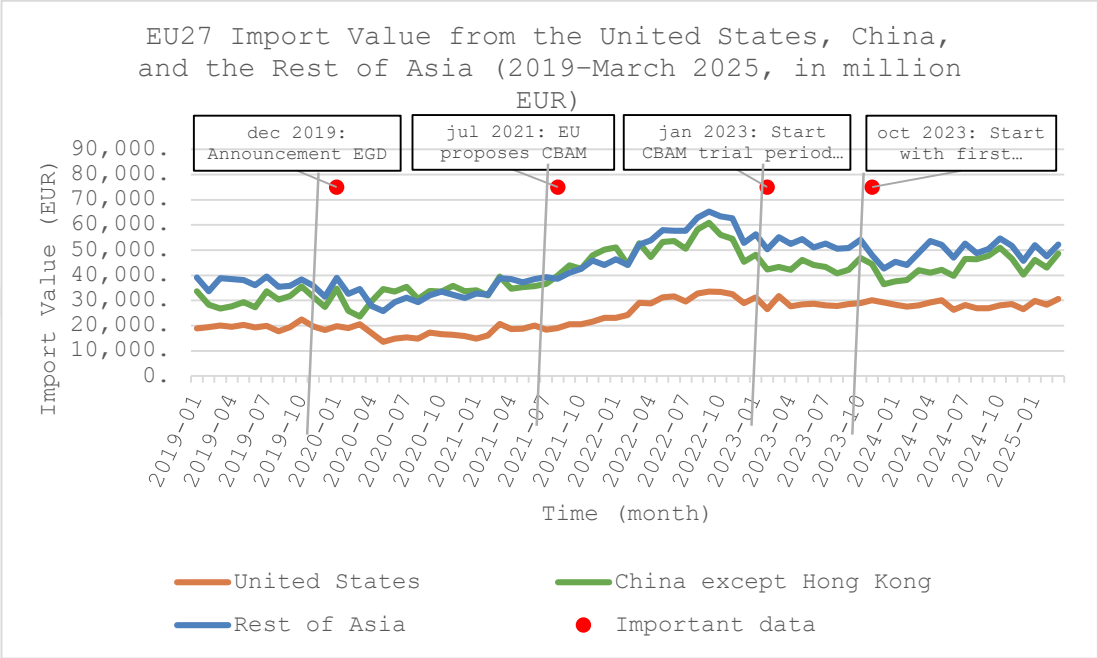


Figure 10: EU27 Import Value from the U.S., China and the Rest of Asia
Source: European Commission, 2025c

x-axis shows the time per month and the y-axis shows the import value in millions of euros. These figures are studied because China, as the largest economy in Asia, plays a dominant role in trade with the EU. The rest of Asia consists of smaller countries with a variety of economic structures and industrial developments. Because the figures of smaller countries are lower than those of China, this group is grouped under the term ‘Rest of Asia’. In this way, the graph lines are not influenced by low figures. Also like the previous graph, the graph in Figure 10 contains important milestones of the EGD.

A first important interpretation is that the EU imports more from China than the U.S. The import value from China remains above the U.S. over the entire period, but also experiences many fluctuations. The Rest of Asia also shows the same pattern of China.

Until mid-2021, the figures remain relatively stable for both China and the Rest of Asia. Afterwards a clear increase can be noticed. This increase is same with Figure 9 9. There was also an increase between July 2021 and January 2023. A second interpretation is that there is a decline after the first CBAM levy from October 2023. The import value of China and the rest of Asia drops drastically. This downward trend is hardly noticeable in the U.S.. A third interpretation is that the U.S. does not react as extremely as China and the rest of Asia.

The insights from this analysis of broad regions within Asia are crucial to further understanding how smaller, individual countries within the rest of Asia are responding. The third chart therefore zooms in on four smaller Asian countries, to investigate whether they too are experiencing a similar impact.

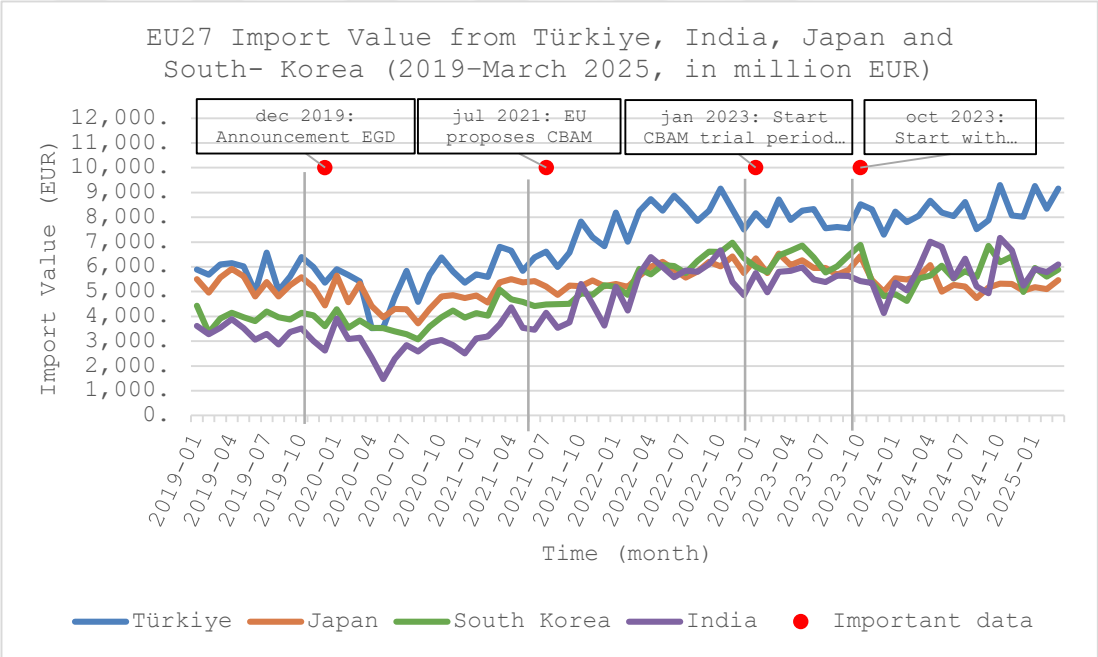


Figure 11: EU27 Import Value from Türkiye, India, Japan and South-Korea
Source: European Commission, 2025c

Following the broad analysis of total import flows in Figure 9 and the comparison between major economic players China and the U.S. in Figure 10, Figure 11 focuses on four medium-sized Asian economies. These countries are Türkiye, Japan, South Korea and India. They were chosen because of their active trade relations with the EU and their different industrial and emission profiles as seen in 1.3.2.1. The line graph

shows the monthly import value of goods from these countries to the EU-27, for the period from January 2019 to March 2025. The x-axis shows the time per month and the y-axis shows the import value in millions of euros. Again, the main milestones of the EGD are listed here. Finally does not put the focus on big economies as China or the U.S.. In this way, the behavior of countries with lower import values is better reflected, without their lines being lost under the weight of much higher import values from major trading partners

What is immediately noticeable is that the general development of the import value from these countries is similar to that of China in Figure 10. Trade flows increase from mid-2021, with a clear peak in 2022, just before the start of the CBAM pilot period. Afterwards, a decrease occurs from October 2023, when the first CBAM levy effectively comes into force. These countries have been less affected than China. The peaks and troughs are smaller, which can be explained by the scale of their exports.

These observations lead to the analysis of the U.S.. As a major EU trading partner and technological power, the question is whether the U.S. response to EU climate policy matches that of other countries. The relative stability in export figures (Figure 10) already points to a different dynamic.

3.2 Key U.S. Export Partners

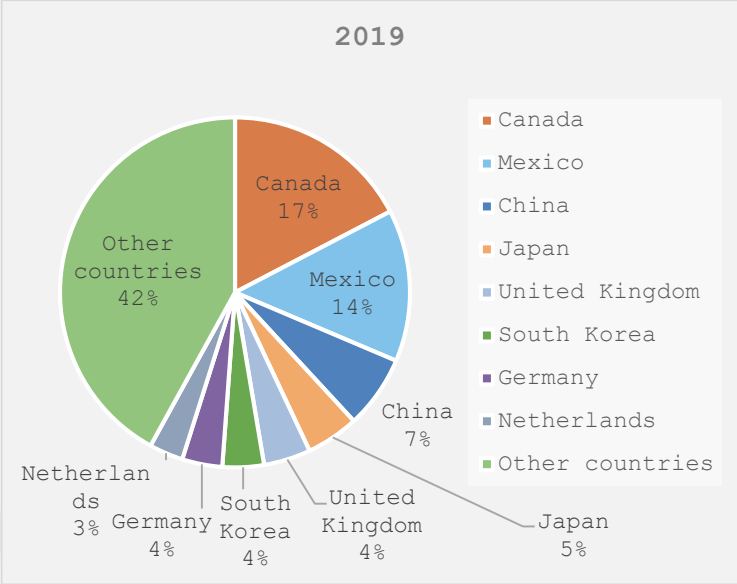


Figure 12: Distribution of U.S. exports in 2019
Source: USITC, 2025

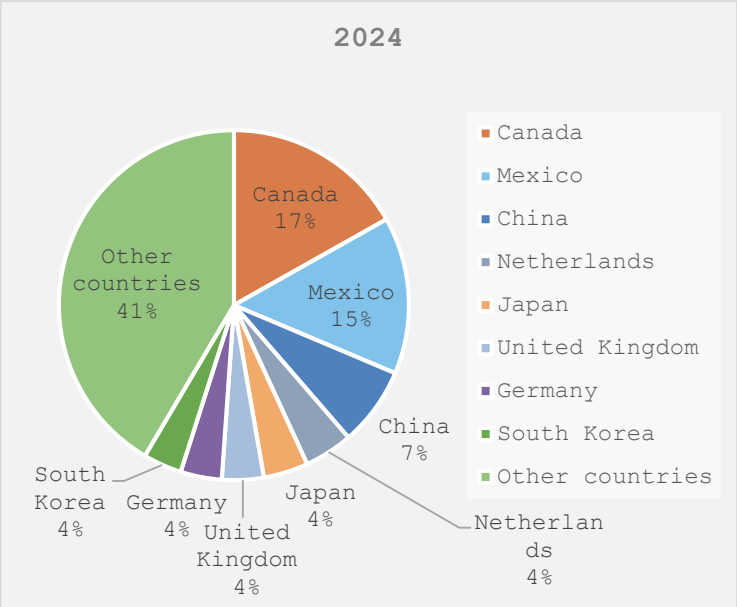


Figure 13: Distribution of U.S. exports in 2024
Source: USITC, 2025

Figure 12 and Figure 13 consists of two pie charts showing the top eight export destinations of the U.S. in 2019 and 2024 respectively. The remaining destinations were grouped under the category "Rest of the world". This graph provides insight into the export destinations of the U.S.. The aim is to map the position of the European countries within this context.

According to the data, the United States' top three export partners have remained stable over this period. Canada is the leading export destination, which represents a share of 17% in both 2019 and 2024. Mexico's share rises a little from 14% to 15%, while China's remains at 7%. This top three stability highlights the United States' strong geographical and economic ties with countries near it and China.

Regarding the presence of European countries in the U.S. export structure, it is striking that the EU does not occupy a dominant position. Only the Netherlands and Germany appear in the top eight in both years. Germany retains a share of 4%, while the Netherlands increases from 3% in 2019 to 4% in 2024. The Netherlands thus climbs in the ranking from eighth to fourth place. Although this increase remains limited in absolute terms, it indicates a strengthening of the trade relationship with the Netherlands, which in many cases functions as a logistical gateway to the European market.

Still, Europe's overall export share from the U.S. is still quite small when compared to other regions. While Canada and Mexico together account for 32% of total exports, the Netherlands and Germany together represent only 8%.

3.3 Export Trends by Sector

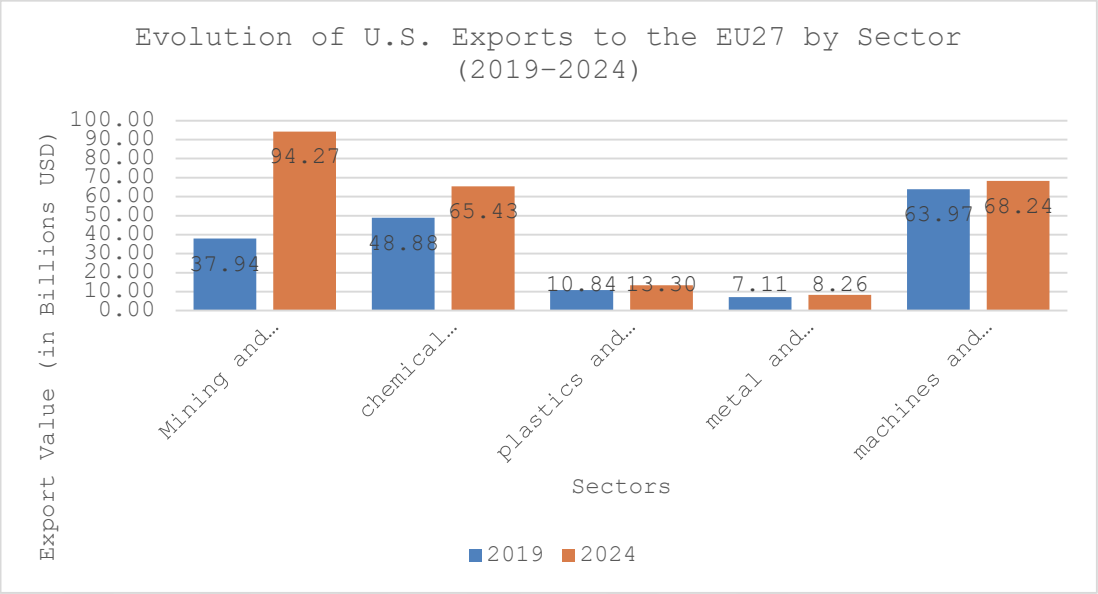


Figure 14: Evolution of U.S. Exports to the EU27 by Sector
Source: USITC, 2025

Figure 14 shows a bar chart of U.S. exports to the EU27 in five specific sectors from 2019 to 2024. The sectors analyzed include mining and minerals, chemical products, plastics and rubber, metal and metal products, and machinery and vehicles. These sectors were selected because they are considered carbon intensive. For this reason, they are directly under the attention of European climate policy. More specifically, in the upcoming implementation of the CBAM. The x-axis shows the five sectors and the y-axis shows the export value in billions of United States dollar (USD).

First of all, none of the sectors shows a decline in export value. On the contrary, all five show an upward trend. The mining and minerals sector experiences the strongest growth, with export values nearly doubling from 37.94 billion USD in 2019 to 94.27 billion USD in 2024. Chemical products also see a significant rise, increasing from 48.88 billion USD to 65.43 billion USD during the same period. The plastics and rubber sector shows a more modest growth, from 10.84 billion USD to 13.30 billion USD, while metal and metal products have a smaller increase from 7.11 billion USD to 8.26 billion USD. The machines and vehicles sector also demonstrates a clear upward trend, rising from 63.97 billion USD to 68.24 billion USD.

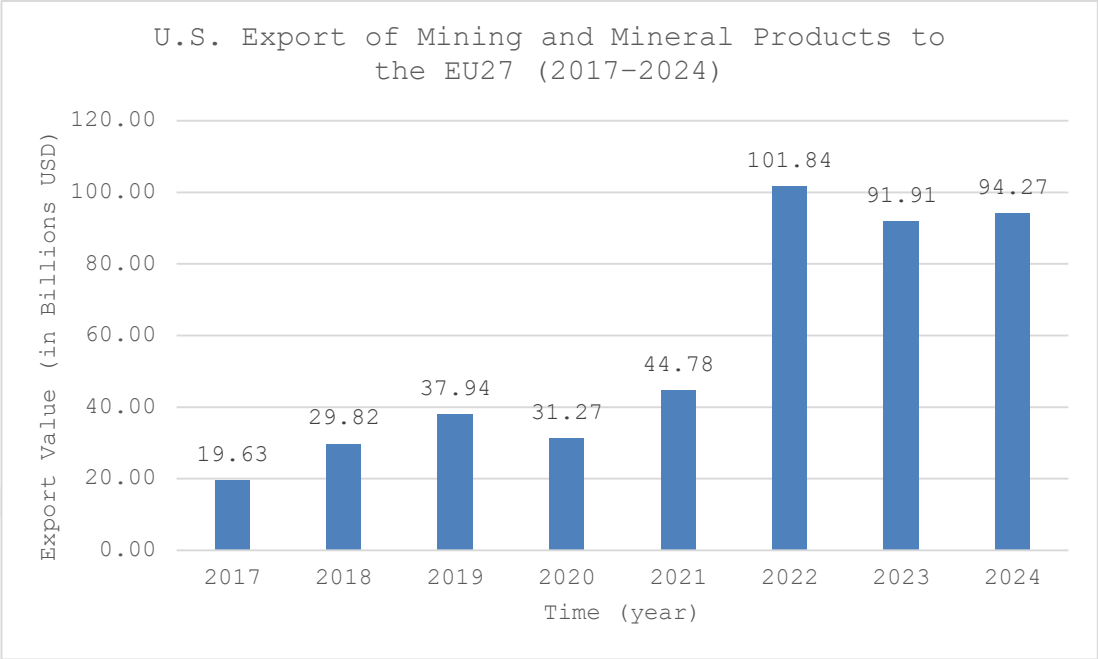


Figure 15: U.S. Export of Mining and Mineral Products to the EU27
Source: USITC, 2025

The following bar chart in Figure 15 shows the evolution of U.S. exports of products in the mining and minerals sector to the EU27. The time period covers from 2017 to 2024. The x-axis represents the time in years, while the y-axis represents the export value in billions of dollars.

In 2017, the export value was 19.63 billion USD. It increased steadily to 29.82 billion USD in 2018 and then to 37.94 billion USD in 2019. After a small decrease to 31.27 billion USD in 2020, there is a recovery and a rise to 44.78 billion USD in 2021. The biggest increase takes place in 2022, when export values reach a peak of 101.84 billion USD. After a little decrease in 2023 to 91.91 billion USD, the value goes up to 94.27 billion USD in 2024. With 2022 marking the greatest export value, the graph generally shows a strong rise in mining and mineral product exports over the span of time.

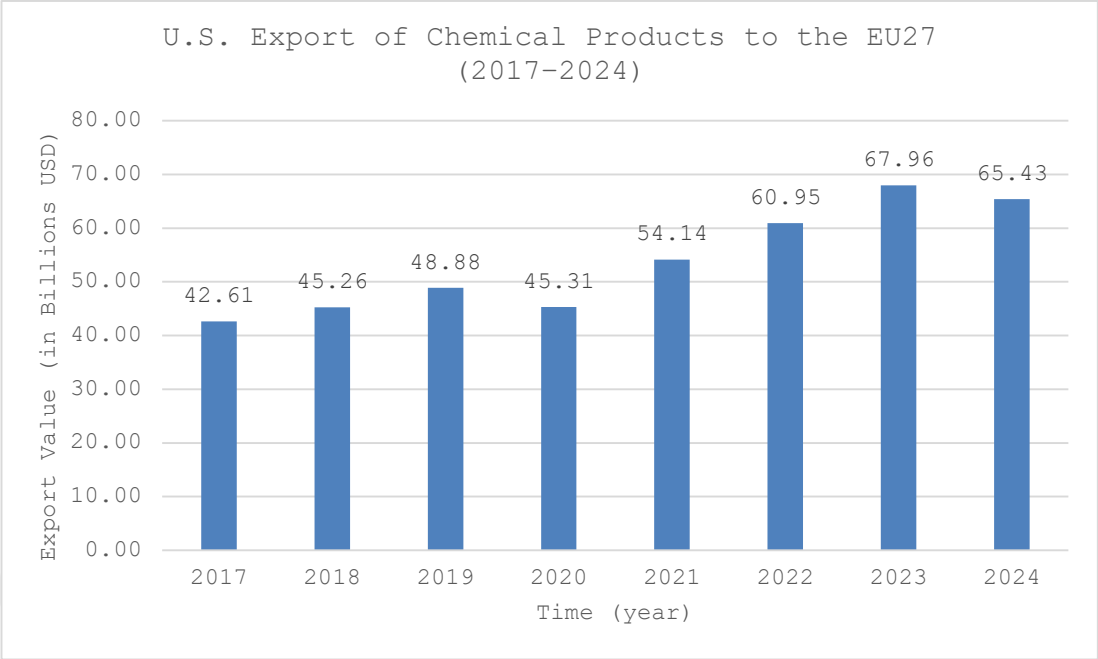


Figure 16: U.S. Export of Chemical Products to the EU27
Source: USITC, 2025

The next bar chart in Figure 16 shows the evolution of U.S. exports of products in the chemical sector to the EU27. The time period spans from 2017 to 2024. The x-axis shows the time in years and the y-axis shows the export value in billions of dollars.

The export value of chemical products to the EU27 in 2017 starting at 42.61 billion USD keeps rising until 2019. In 2019 it reached 48.88 billion USD. There is a temporary decline in 2020 of 3 billion USD less than 2019. After 2020, the export value recovers and continues to grow until 2023. In 2023 it reached its highest point in the used timeframe, which is 67.96 billion USD. In 2024, the figure remains high but with a slight decrease. The graph shows an increase of more than 50% over the entire period from 2017 to 2024.

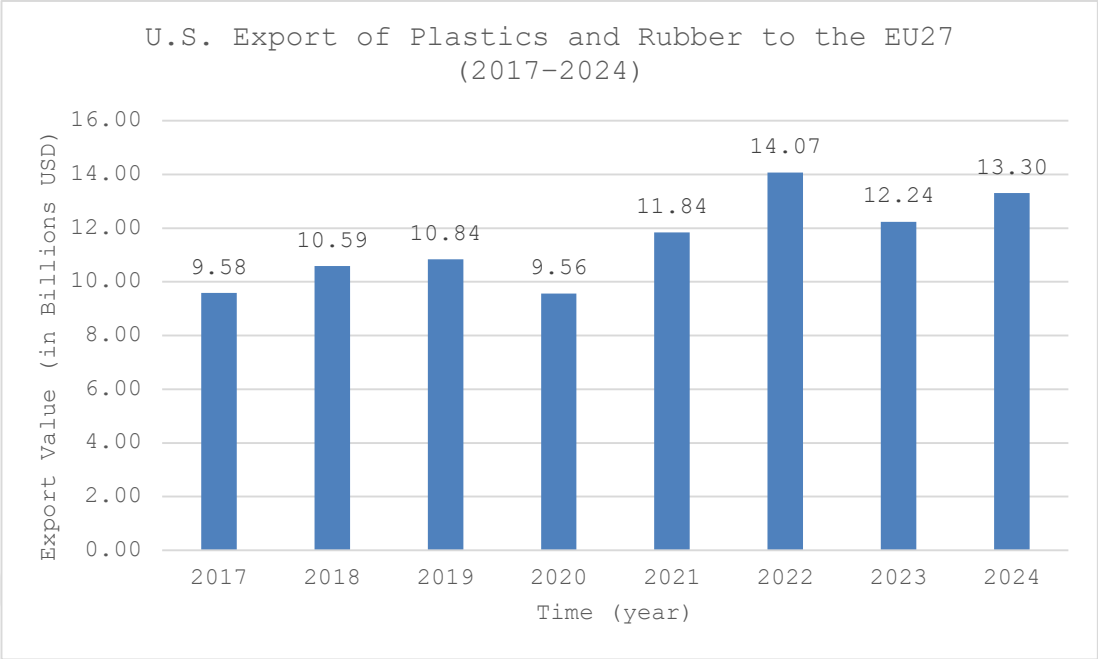


Figure 17: U.S. Export of Plastics and Rubber to the EU27
Source: USITC, 2025

The bar chart from Figure 17 shows the evolution of U.S. exports of plastics and rubber to the EU27. The time period spans from 2017 to 2024. The time in years is shown on the x-axis, while the export value in billions of dollars is represented on the y-axis.

The export value increased slightly between 2017 and 2019, from 9.58 billion USD in 2017 to 10.84 billion USD in 2019. But in 2020, there is a clear fall to $9.56 billion USD. The export value starts to rise in 2021 and reaches 11.84 billion USD. Later it hits its peak at 14.07 billion USD in 2022. 2023 sees a small decline to $12.24 billion USD, although exports are still higher than before. In 2024, the figure rises to 13.30 billion USD, demonstrating that exports are stabilizing at a greater level than in earlier years. In general, the graph shows a modest growth in this sector, especially following the 2020 decline.

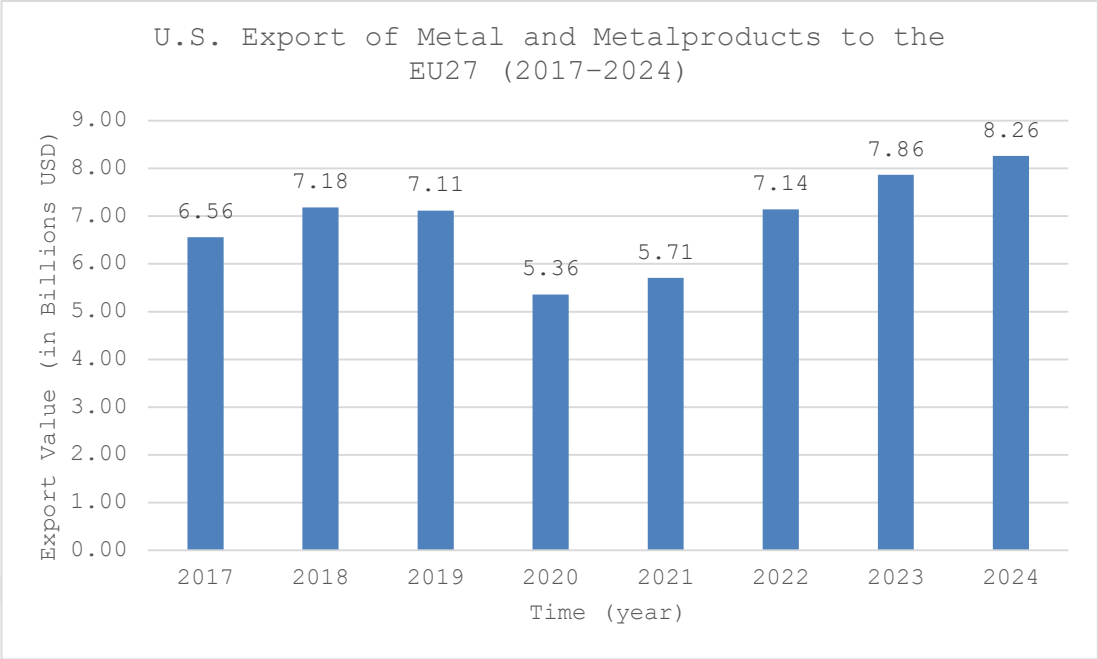


Figure 18: U.S. Export of Metal and Metalproducts to the EU27
Source: USITC, 2025

The evolution of U.S. exports of products in the metal sector to the EU27 is shown in the bar chart from Figure 18. The time period goes from 2017 until 2024. The time in years is presented on the x-axis, while the export value in billions of dollars is indicated on the y-axis.

Export values are relatively steady from 2017 to 2019, with little difference between 6.56 billion USD in 2017, 7.18 billion USD in 2018, and 7.11 billion USD in 2019. The biggest decline takes place in 2020, when the export value falls to $5.36 billion USD. The sector shows an upward trend starting in 2021. In 2021, exports reach $5.71 billion, in 2022, they reach $7.14 billion, and in 2023, they reach $7.86 billion. The export value reaches 8.26 billion USD in 2024, which is the biggest value throughout the researched period. In general, the data shows a stable beginning, a decline in 2020 and continued growth in the years that followed.

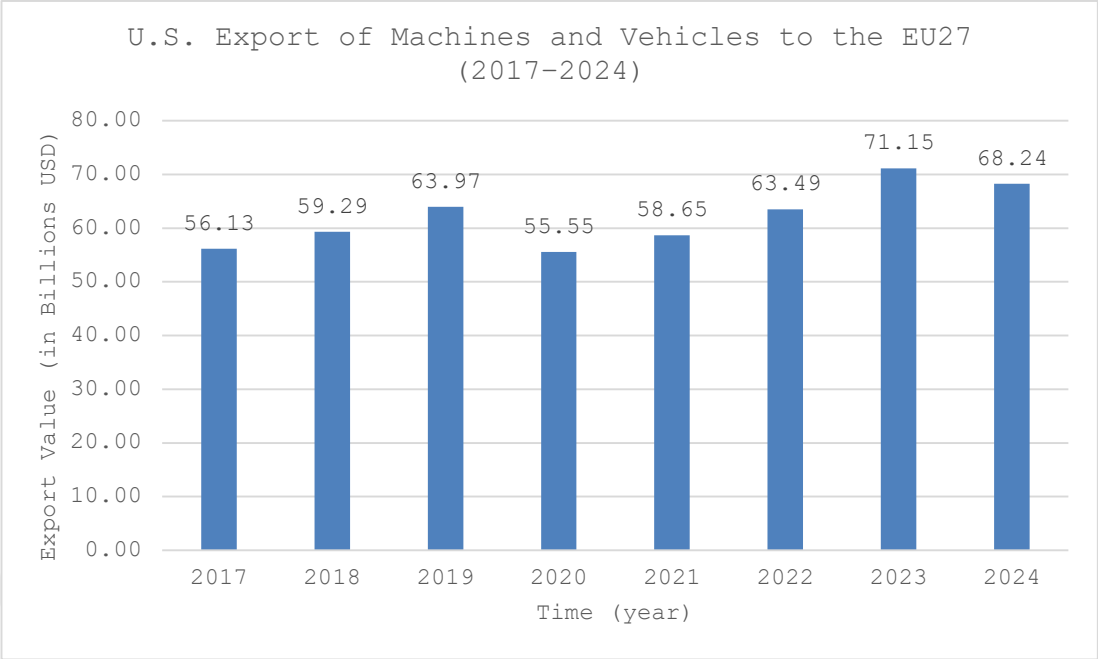


Figure 19: U.S. Export of Machines and Vehicles to the EU27
Source: USITC, 2025

The bar chart from Figure 19 shows the evolution of U.S. exports of machines and vehicles to the EU27. The time period spans from 2017 to 2024. The x-axis shows the time in years and the y-axis shows the export value in billions of dollars.

The value of exports increased between 2017 and 2019, rising from 56.13 billion USD in 2017 to 63.97 billion USD in 2019. A decrease takes place in 2020, when the value drops to 55.55 billion USD. Exports start to rise once again after this decline, reaching 58.65 billion USD in 2021 and 63.49 billion USD in 2022. In 2023, the export value reaches its peak at 71.15 billion USD. During the observed period, this is the highest. In 2024, it declined a little to 68.24 billion USD. With small fluctuations, the general pattern shows this sector's exports have been steadily rising for the last few years.

3.4 Exports to EU Countries by EGD Maturity Level

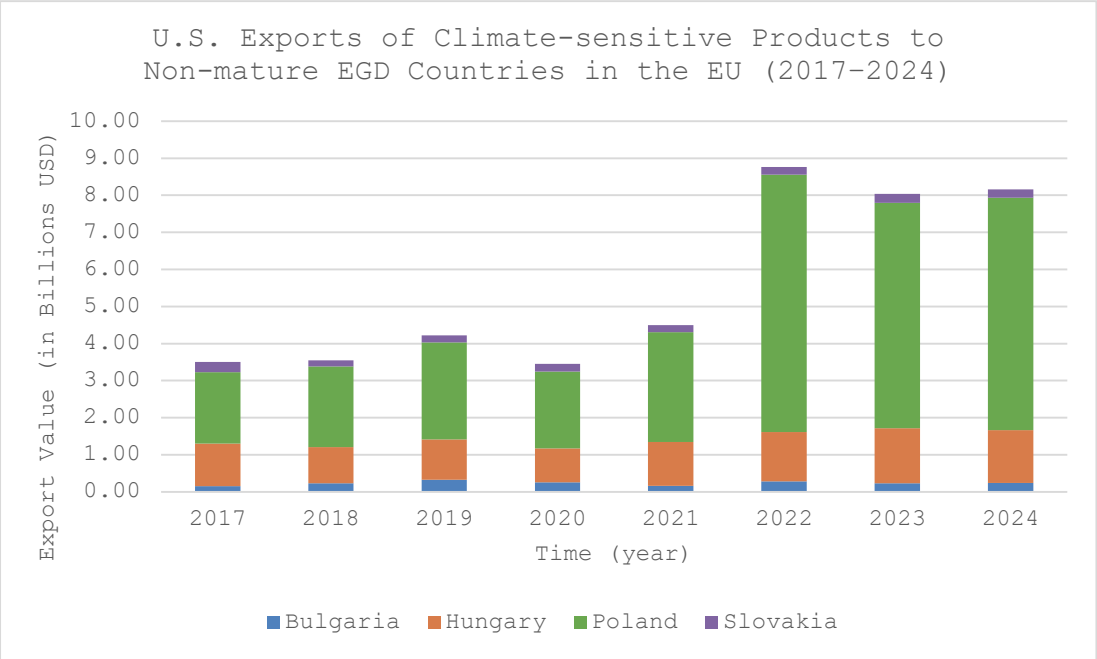


Figure 20: U.S. Exports of Climate-sensitive Products to Non-mature EGD Countries in the EU
Source: USITC, 2025

The stacked graph in Figure 20 shows U.S. exports of climate-sensitive products to EU countries with low EGD maturity. The graph covers a period between 2017 and 2024. The x-axis represents time in years and the y-axis shows export value in billions of dollars.

Exports remain relatively stable between 2017 and 2021. There is an increase in exports from 2022 onwards, primarily due to exports to Poland, which accounts for the majority of exports during this period. A total of just under 9 billion dollars is exported to these countries in 2022, the year of the highest peak. After 2022, the total export value remains relatively steady, holding steady around 8 billion dollars. Hungary follows at a considerable distance, while Bulgaria and Slovakia maintain similar, lower levels. This confirms that Poland is mostly responsible for the overall growth seen after 2022.

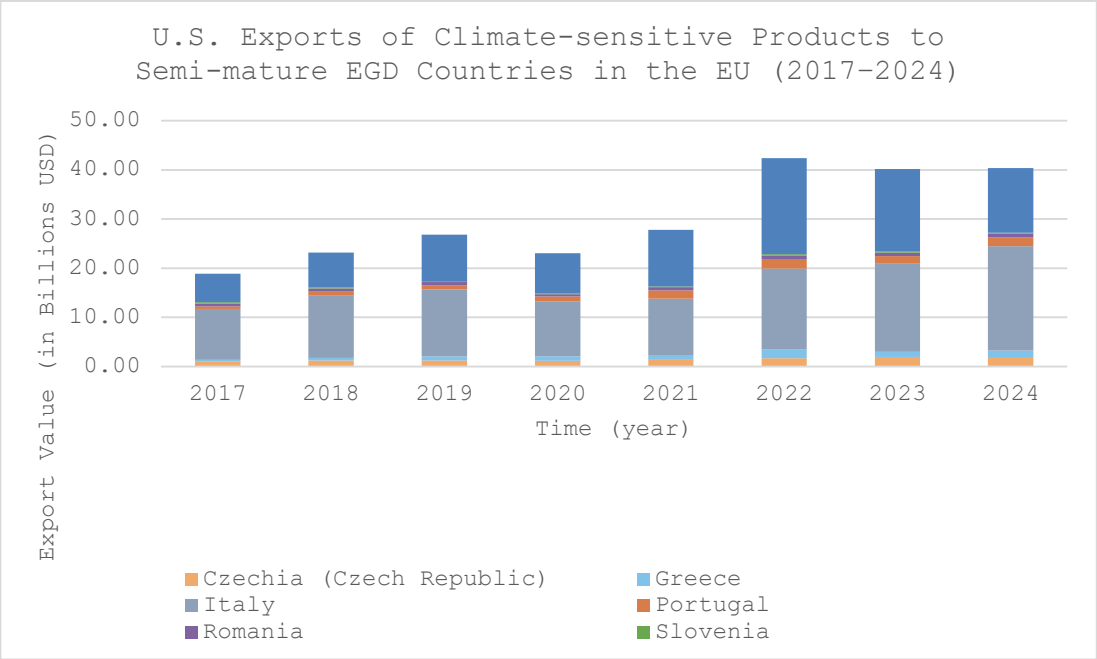


Figure 21: U.S. Exports of Climate-sensitive Products to Semi-mature EGD Countries in the EU
Source: USITC, 2025

The stacked graph in Figure 21 shows the exports of climate-sensitive products from the U.S. to EU nations with a medium level of EGD maturity. The graph covers a period between 2017 and 2024. The x-axis shows time in years and the y-axis shows export value in billions of dollars.

U.S. exports to EU nations with an average level of EGD maturity have increased since 2022. Initially, Italy was the largest export destination, but from 2021 onwards, a shift occurred with Spain taking the lead, which is particularly evident in 2022. After that, Spain and Italy remained roughly equal for some time, before Italy regained its position as the top destination again in 2024. Following these two countries, Portugal ranks next, while the Czech Republic and Greece show similar export volumes, as do Romania and Slovenia. With exports surpassing 40 billion dollars, 2022 saw the biggest peak in the total value of exports to these nations. The lowest value during this period was in 2019, just under 20 billion dollars. These figures illustrate a strong growth in U.S. exports to these regions over recent years.

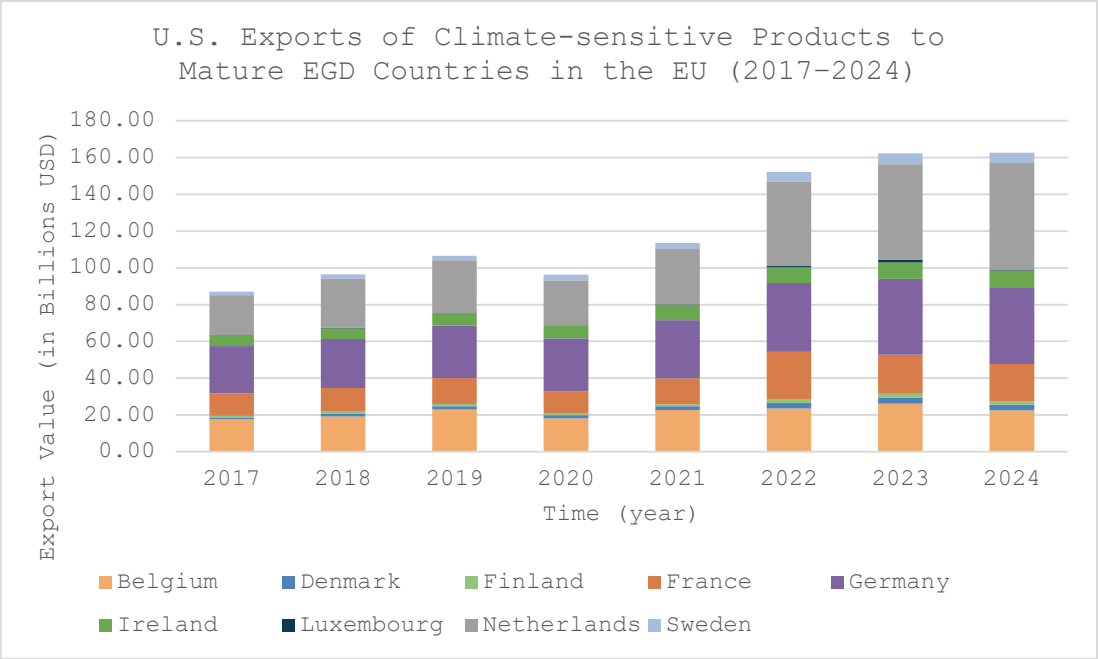


Figure 22: U.S. Exports of Climate-sensitive Products to Mature EGD Countries in the EU
Source: USITC, 2025

U.S. exports of climate-sensitive goods to EU nations with high EGD maturity are presented in the stacked graph in Figure 22. The graph covers a period between 2017 and 2024. The x-axis shows time in years and the y-axis shows export value in billions of dollars.

the Netherlands accounts for the largest share of U.S. exports, followed by Germany, Belgium, France, Ireland, Sweden, Denmark, with Finland and Luxembourg at similar lower levels. In the early years, exports to the Netherlands and Germany were roughly equal. But from 2022 onwards, the Netherlands began to surpass Germany. The leading position of the Netherlands and Germany aligns with earlier findings shown in the pie charts of Figure 12 and Figure 13 Both countries ranked among the top eight U.S. export destinations. The highest peak in total export value to these countries was reached in 2023 and 2024, a little above 160 billion dollars. A small dip is also noticeable in 2020.

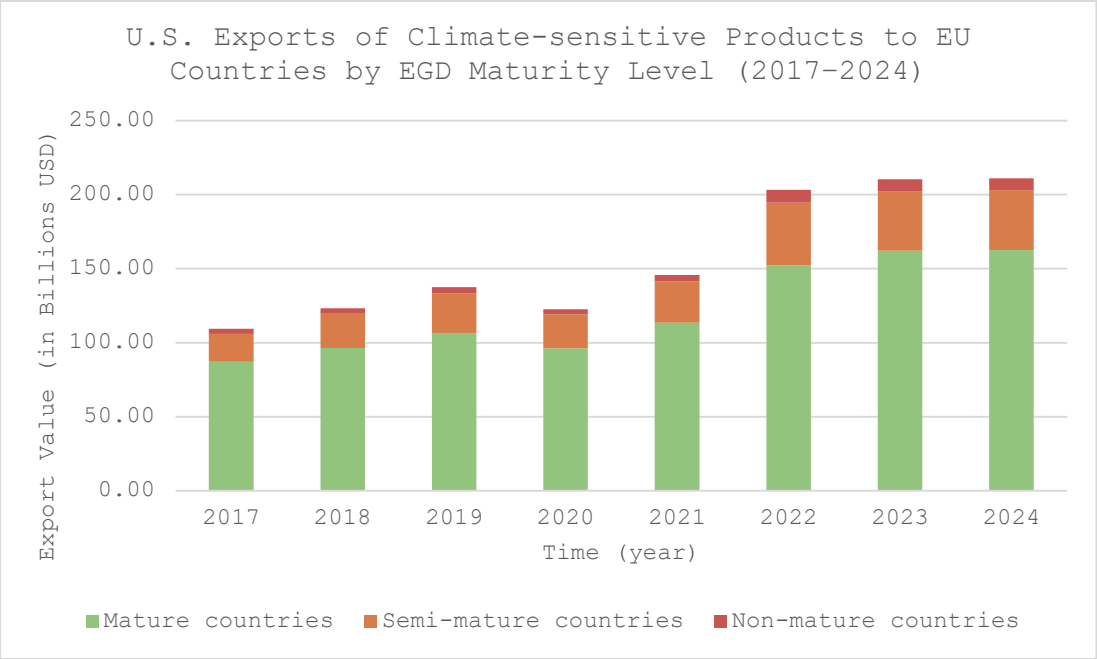


Figure 23: U.S. Exports of Climate-sensitive Products to EU Countries by EGD Maturity Level
Source: USITC, 2025

The stacked graph from U.S. exports of climate-sensitive products to EU countries based on EGD maturity is shown in Figure 23. The colors in the stacked graph represent the EGD maturity levels of the countries: green for mature countries, orange for semi-mature countries and red for non-mature countries. The graph covers a period between 2017 and 2024. The x-axis shows time in years and the y-axis shows export value in billions of dollars.

The peak export value is reached in 2023 and 2024, exceeding 200 billion dollars. Throughout the period, exports to all three groups increase, with mature countries consistently accounting for the largest share. Between 2017 and 2024, exports to mature countries grew from just under 100 billion dollars to over 150 billion dollars. Semi-mature countries follow in export value and non-mature countries have the lowest export values among the three groups.

4 DISCUSSION

This part of the research looks at what the data means in practice. It discusses how U.S. exports to the EU have changed since the start of the EGD and compares these trends with what the literature suggests. The goal is to see whether climate policy is already affecting trade and how companies may be responding.

4.1 Key Findings from Data

This section presents the main findings from the trade data analysis between the U.S. and the EU from 2017 to 2025. The analysis is based on official numbers from Eurostat and the USITC. It looks at both overall trade flows and specific sectors that may be influenced by the EGD.

The data shows that Asia remains the largest export region to the EU for climate-sensitive goods. The U.S. follows, along with other regions. Asian export flows seem to react more directly to major policy moments under the Green Deal. For example, after announcements like the introduction of the CBAM, several Asian countries showed a short-term drop in export volumes. In contrast, this pattern was not seen in other regions. U.S. exports stayed stable during those times and in some cases even increased. This demonstrates that American exporters may currently be less sensitive to EU climate rules than some Asian exporters.

Looking at the U.S.'s top export destinations, Canada, Mexico and China lead the list. Still, two European countries, the Netherlands and Germany, also rank among the top eight. Between 2019 and 2024, the Netherlands rose from eighth to fourth place, while Germany stayed at seventh. Despite the fact that these two countries are actively implementing EU climate policy, strong U.S. trade with them reveals that notable bottlenecks have not yet been created by present climate policies.

U.S. exports to the EU have grown between 2021 and 2024 in industries such as chemicals, metals, plastics, machinery, vehicles and mineral products. It's unclear whether this growth is the result of EGD compliance or a reflection of strong economic ties. It's also possible that other global factors are involved. The COVID-19 recovery,

the conflict in Ukraine, inflation, growing energy prices, and changes in supply chains are a few examples. These changes could have affected where and how nations export.

At the same time, most climate-related trade rules in the EU are still being developed. Measures like the CBAM are in a transitional phase and not yet fully applied. For now, companies only need to report emissions. Financial penalties are expected to start from 2026. Because of this timeline, it is still too early to measure the full trade impact. It remains uncertain whether the rise in U.S. exports is linked to climate action or simply reflects wider economic shifts.

The analysis also looks at how advanced different EU countries are in implementing the Green Deal. Countries were grouped into three categories: non-mature, semi-mature and mature. In all groups, U.S. exports have grown since 2022. Growth was more modest in non-mature countries like Poland and Bulgaria. Semi-mature countries like Italy and Spain saw a stronger upward trend. The mature group including Germany, France and the Netherlands experienced the highest growth. This observation underlines the notion that even in countries with stricter climate rules, U.S. exports continue to perform well.

In summary, there is no clear evidence that the EGD has reduced U.S. exports to the EU so far. Export volumes are growing across sectors and countries. Since the EGD is still being phased in, its long-term effects are not yet visible. The main concern is whether this will shift once policies such as CBAM are fully implemented. At this moment, American businesses seem to be able to maintain access to the EU market with minimal impact.

4.2 Link between Literature and Data

The EGD brings about notable shifts in international trade policy, as Felbermayr et al. (2024) highlight. It is anticipated that industries with high carbon intensity, such chemicals, steel, and cement, will see an increase in compliance costs. These restrictions could serve as trade obstacles for exporters from nations with looser environmental laws, Zhao (2024) warns.

However, the trade data in this study show no clear negative trend. Between 2019 and 2024, U.S. exports to the EU have grown. This trend is seen even in areas that are thought to be vulnerable to Green Deal requirements, such as metals, machinery, and chemicals. These findings align with those of the World Economic Forum (2020b), which noted that multinational companies are already adapting their production processes to EU climate laws. Although they are not necessarily required at this point, these changes often indicate thoughtful preparation to maintain access to the European market.

The current EGD transition phase can also be linked to the lack of notable trade obstacles. The first levy was introduced in October 2023, while the Carbon Border Adjustment Mechanism (CBAM) only went into trial phase in January 2023, according to the European Commission (2021d). In 2026, full implementation is planned. As noted by Chateau (2023), many parts of the Fit for 55 package are still in development or not yet fully operational. This explains why the effects on trade flows are still limited in the available numerical data.

Literature also stresses the uneven pace of implementation across EU member states. Figure 7 shows that Western and Northern Europe have taken the lead, while Southern and Eastern regions face more obstacles. This regional variation is reflected in the data. U.S. exports increased not only to highly regulated countries but also to those with less advanced implementation. This challenges earlier assumptions by Claar (2022), who argued that stricter regulation would inevitably reduce trade flows.

International comparison provides more background. After the CBAM levy began in October 2023, Chinese exports to the EU declined. U.S. export levels remained relatively stable. According to this contrast, American exporters tend to be adapting more successfully. Delbeke and Vis (2020) state that the EU uses its market power to shape global standards for the environment.

Political uncertainty in the U.S. remains an important factor. Bacchus (2022) and Lashof and Neuberger (2023) describe how federal climate policy in the U.S. often shifts with changes in political leadership. This inconsistency makes long-term

compliance planning more difficult. Despite that, the data suggest that many U.S. companies are already taking steps to align with European sustainability goals. Yang et al. (2025) found that carbon pricing and border measures can stimulate innovation. Early adaptation, as seen in the trade figures, may reflect this dynamic.

Although many EGD-related measures are not yet fully enforced, companies appear to be anticipating future regulatory demands. Dechezleprêtre et al. (2025) and the World Economic Forum (2020b) both point out that businesses frequently make adaptations beforehand in order to protect their brand and market access. The recent increase in exports should be seen as a forward-thinking reaction rather than as a lack of impact. The tactical importance of early implementation in ensuring competitiveness is highlighted by Doyle (2007). Legal concerns are still important. Hoekman and Mavroidis (2015) warn that trade conflicts at the WTO level may arise if EU climate regulations are viewed as discriminating. But the ongoing rise in U.S. exports indicates that many businesses are already adjusting to the shifting European trading landscape.

5 CONCLUSION

The key findings from the study are collected in this concluding chapter, which also looks at their broader meaning. It covers the main conclusions, talks about how they affect practice and policy, and makes suggestions for future trade and climate policies. The chapter also discusses the study's shortcomings and suggests potential topics for further research. The combination of these components provides an overview of how the EGD is reshaping the trade between the U.S. and the EU.

5.1 Summary of Findings

This thesis focused on the effects of the EGD on U.S. businesses who export to the EU. The goal of the study was to determine how environmental regulation is changing access to the European market by integrating secondary resources with trade data from 2017 to early 2025. The results reveal that the EGD creates a new trade barriers. These are not all tariffs. But also environmental norms including carbon accounting, product design guidelines, and sustainability labels. Industries with heavy emissions are under pressure to keep up with these regulations.

Although the CBAM is the most visible instrument, it is part of a broader shift in EU trade strategy. The EGD represents a change from promoting green practices to implementing binding rules that protect them. This adds another level of complexity for exporters who are not from the EU. At the same time, the application of these rules differs across the Union. While many EU policies have been unified, individual countries' levels of readiness vary. Member states in the North and West usually have more advanced EGD implementations, providing stricter but predictable market environments. In contrast, Southern and Eastern countries face more administrative or political hurdles, which makes the regulatory landscape uneven.

Another key observation is the contrast between U.S. and EU climate governance. The EU has built up its environmental policy over decades, in a steady and growing way. In the U.S., climate regulations often shift with political cycles. Depending on the president, environmental priorities may change. This makes it harder for U.S. exporters to plan ahead and invest in long-term compliance strategies. Larger

companies seem to be adjusting, but small and medium-sized enterprises often lack the resources to follow.

Despite these difficulties, the transatlantic trade relationship has proven resilient. U.S. exports to the EU have remained stable and even increased in some key sectors. This indicates that some American firms are already anticipating the EGD's demands and aligning their business practices accordingly. It also reflects the fact that the EGD is still in its early stages. Many of its measures are not yet fully applied. Still, one trend is becoming clear. Environmental performance is turning into a basic condition for entering the European market. Companies that fail to adjust risk losing their competitive edge in the coming years.

5.2 Implications for Policy and Practice

The results of this study show that the EGD is not just a climate plan for Europe, but a framework that redefines how international trade operates. By linking environmental standards to market access, the EU is setting a new tone for global commerce. For the U.S., this creates both pressure and opportunity. The EU must manage the balance between ambitious climate goals and fair trade practices. At the same time, aligning with these standards has become essential for the U.S. to maintain access to the European market.

In the U.S., climate policy has often been unstable. Shifts in political leadership bring sharp changes in environmental priorities, which leads to uncertainty for exporters. The more steady and long-term policy development of the EU contrasts with this. As a result, American companies face difficulties in anticipating future requirements. This uncertainty affects their willingness to invest in sustainable technologies. This indicates that trade policy and climate change cannot be viewed as two separate issues by policymakers. A more stable and coordinated approach is needed to support U.S. businesses.

On the company level, the EGD already influences how American exporters operate. Environmental compliance is quickly becoming a basic requirement rather than a voluntary effort. Firms must provide transparent data, reduce carbon intensity and

adjust to new reporting standards. Larger companies find these tasks difficult, but achievable. Small firms may find it challenging to meet these demands. Many small businesses danger being thrown out of one of the biggest markets in the world if they don't receive the right kind of help. In order to support businesses in adapting, U.S. institutions and trade organizations must act quickly to provide advice and financial resources.

5.3 Recommendations for Trade Policy Reforms

Both the U.S. and the EU must modernize some areas of their trade rules in order to prevent unnecessary trade friction and to allow a fair shift. While maintaining global partnerships, the EU has to meet its environmental commitments. Clear instructions and enough time to align with the new regulations should be provided to exporters based outside of Europe. Providing technical assistance and reasonable deadlines will help to ensure that green trade policies are viewed as a global initiative rather than as protectionism.

The necessity for policy stability is the most critical issue on the American side. Long-term competitiveness requires a climate policy that remains stable beyond election cycles. American exports might be pulled closer to European standards with the support of a national carbon pricing system, such as a carbon tax or a system for trading emission rights. New trade agreements should also include environmental goals. This is not only important to meet international expectations, but also to make sure U.S. industry stays competitive in the future.

Close cooperation between the EU and the U.S. is key. If they work together on data systems, certification rules, and environmental reporting, they can avoid doing the same work twice and make processes more efficient. A joint transatlantic platform for green trade could help them share good practices, avoid conflicts, and align regulations. These steps would not only keep trade moving smoothly but also help create a more sustainable and stable global trading system.

5.4 Limitations of the Study

The results of this study should be interpreted with a number of limitations in mind. While early 2025 trade data was included, the entire year was not yet available when the research was conducted. Trade flows could still change in reaction to recent events or long-term impacts. Therefore, the conclusions about the current impact of the EGD are still preliminary and should be regarded cautiously.

Existing literature and secondary sources served as the basis for classifying EU member states according to their EGD maturity. This gives a general framework for comparison. However, it does not show all the differences between regions within a country. It also does not capture the full picture of how each country applies the EGD. This means it is not an exact measurement. It should be seen as a guiding tool instead.

In terms of data, the analysis relied on bilateral trade statistics from Eurostat and the USITC. These sources make it impossible to separate from outside influences like supply chain interruptions, inflation, and geopolitical instability. Consequently, it is not possible to attribute observed trade trends only to the EGD. Other influencing variables may have contributed to the patterns identified.

Furthermore, many of the EGD’s core instruments are still in transition. This limited the extent to which their effects on international exporters could be evaluated in detail. Future research will need more complete data over a longer period. This will be necessary to see the full impact. Still, this thesis is a starting point. It can help with future studies on the changing role of the EGD in international trade.

5.5 Future Research Directions

Future studies need to examine the EGD's long-term impacts on global trade in greater detail. Business practices and trade flows will likely change as the policy develops and new regulations go into force. Research that tracks these changes over time will be necessary to observe indirect or delayed effects.

More research at the company level would give valuable insights. It could show how firms, especially in carbon-heavy sectors, adapt to new environmental rules. Case studies, interviews or targeted surveys could help. They could reveal which strategies companies use and what challenges they face. They could also show how these differ by company size or sector.

It would also help to study how other major trading partners react to the EGD. This includes countries like China, Canada, and emerging economies. Comparative studies can show best practices for adjustment. They can also reveal where countries agree or disagree. They may also show where trade tensions could develop. These insights can help policymakers create more balanced and coordinated trade policies.

Finally, the link between environmental standards and other trade rules needs more study. This includes labour rights, supply chain checks, and human rights. As the EU grows its green trade agenda, exporters will face stricter and more technical rules. Research from different fields will be needed to see how this affects business strategy, global value chains, and competitiveness in the long run. A better understanding of these changes will be key for countries and companies that want to stay relevant in a changing global trade market.

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