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# Performativity of Economics: Economics as Politics?

## A Case Study on the EU ETS

By Wouter Pen (s1024499)  
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Program: Economics  
Specialisation: International Business  
Supervisor: Dr. I. Boldyrev

Radboud Universiteit



## Abstract

How does economics, often seen as a theoretical discipline, shape real-world policies? This study examines the European Union Emissions Trading System (EU ETS), to analyse the performative dynamics of economics. The EU ETS serves as a historical case study to research how economic theory is translated into policy aimed at addressing the collective issue of global warming. Two hypotheses guide the analysis, while allowing for exploration beyond testing existing theory. The findings reveal the complex interaction between economic theory and political interests. Initial aversion to market-based policies has diminished at the end of last century and the EU ETS has been embraced as a means of cost-effectively pricing emissions to reduce pollution. After implementation, political interventions were found to be crucial in addressing the market mechanism's effectiveness. However, it also caused some disruption of the internal working of the market. The study uncovers a trend towards depoliticization, with decision-making becoming more reliant on economic theory, technical expertise, and independent regulatory bodies. However, it does emphasize that the EU ETS stays a politically charged arena where stakeholders try to influence policymaking. The insights highlight the ongoing need for political involvement to balance economic theory with real-world complexities.

**Keywords:** Performativity; European Union Emissions Trading System (EU ETS); Market making; Carbon pricing mechanism; Depoliticisation; Market interventions

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## 1. Introduction

Considering the complexities of societal challenges, economics plays an increasingly important role in shaping potential solutions (Blok, 2011). Traditional economics often assumes that agents operate in a vacuum, making rational decisions based solely on economic principles without significant regard to social influences. This traditional view, however, is being challenged by social scientists who argue that economics is embedded in society and is deeply intertwined with social relations, practices, and societal structures. This perspective shifts our understanding of economics from a purely theoretical framework to a practical force that actively constructs and performs the phenomena it describes, highlighting its performative power in the real world (Callon, 1998; Silvast, 2017). This paper elaborates on the concept of performativity, which examines how economic theory influences society through the formation and functioning of policy instruments (Silvast, 2017). As economics becomes more influential in the political debate, this claim is gaining relevance (Carrier & Miller, 2020).

Economics sets the parameters for debate, such as by defining concepts like efficiency, competition, and utility maximization as benchmarks for evaluating policies. This framing not only shapes market agents, but also society as a whole by creating a culture that prioritizes efficiency over other criteria (Breslau, 2013). While economics becomes increasingly influential in policy debates, performativity analysts have underemphasized the political dimension of this performativity debate (Blok, 2011). This paper aims to address this gap by examining a case study on the European Emissions Trading System, hereafter called EU ETS, which showcases an example where economics is used to solve an issue of collective concern: global warming (European Commission, n.d.).

The European Union (EU) has set emission reduction goals by aiming to be carbon neutral by 2050 and have a 55% net reduction in greenhouse gas emissions in 2030 compared to 1990 levels (Fetting, 2020). Countries face a common choice in what policy instruments to use in order to reach these goals. Policymakers and economists find common ground in tackling those issues through carbon pricing (Klenert, et al., 2018). However, the role of economics in crafting and implementing these policy instruments justifies close examination. This paper explores the dynamics through which economics brings into being 'the economy' it claims to describe (Giraudeau & Gond, 2008). It then applies this concept to elaborate on the following research question: *'To what extent does the theory of performativity explain the design and implementation of the EU Emissions Trading System (ETS) within the political dynamics of market making?'*

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The ongoing debate on the performativity of economics does not concern the question whether economics is performative. Most researchers are unanimous about that, but mostly question how it does so and if this is desirable (Butler, 2015; Callon, 2006; MacKenzie, 2006). This discourse increased further since it is argued that economics has become more performative over time (Colander, 2005). An important concern is that the performativity thesis might depoliticise economic discourse and grant economists a monopoly on defining what is good economic management by politicians (Butler, 2015).

Exploring the design and implementation of the EU ETS provides opportunities to elaborate on the performativity issue in general, in which it holds both practical and academical contribution. From a practical perspective, this research provides policymakers with a better understanding of how economic practices influence the political domain. By examining the implementation of the trading system, this paper shows empirical evidence of interactive dynamics between economic theory and politics in policymaking. These insights can provide policymakers with a better understanding of the factors influencing their decision-making processes, thereby promoting transparency in policy formulation to better achieve their political objectives.

From an academic perspective, the study provides empirical evidence on *how* the performativity of economics plays a role in policymaking, especially in policies which try to solve collective concerns. It elaborates upon the complexity through which economic principles are translated into real-world policies, both in a direct and indirect way. This paves the floor to an open discussion on whether or not the extent to which this performative working is desirable since it could lead to depoliticisation of the decision-making process of policies (Hitzig, 2020).

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## 2. Theoretical Framework

### 2.1 Performativity Theory

Performativity refers to how statements do not only describe reality, but also actively shape it. Callon (1998) introduced the performativity issue of economics by arguing that economics does not describe an external ‘economy’, but it brings that economy into being (MacKenzie & Millo, 2003). This view critiques the intended scientific objectivity of economic theory (Brisset, 2016). Understanding the economic performativity theory is crucial to lay hold of the mechanisms, implications and limitations of its influence on society. For example, to understand the market making in the case of the EU ETS, which heavily relies on economic principles and concepts. Showcasing the influence of economics in actively shaping a policy through its interaction with policymakers, rather than only describing it (Cochoy, Giraudeau & McFall, 2015). In doing so, the performativity of economics consists of several components, which help clarifying its dynamics: 1) Self-Fulfilling Prophecies, 2) Prescription, 3) Expression, and 4) Performance (Callon, 2006).

The component of self-fulfilling prophecies describes the phenomenon where economic expectations or beliefs lead to actions which cause that expectation or belief to become true. Suppose, economists advocating the relatively high effectiveness of carbon taxation compared to an emissions trading system (ETS). This could influence policymakers in shifting the focus of their carbon pricing policies towards taxation instead of an ETS, leading to a reduced adoption of the ETS relative to taxation. The reduced adoption reduces the effectiveness of new or existing ETS frameworks leading to a relatively higher effectiveness of carbon taxation. It creates a self-reinforcing cycle in which the economic beliefs lead to actions which cause them to become true.

The prescription component describes the mechanisms through which economic theory is translated into real-world practices. Therefore it may directly shape policies. For example, economic theory advocating for internalizing the external costs of carbon emissions in the price of goods by introducing carbon taxes may prescribe guidelines for policymakers on how to best implement this. In doing so, economics is no longer descriptive, but prescribes economic theory to shape real-world practices. This prescriptive use of economics is not widely supported, since it is argued that economics “is not an empirical science but rather a study of an artificial idealized construction with little connection to real-world economies” (Focardi, 2015). How credible economic theory is in practice remains an open debate (Loannidis & Doucouliagos,

2013). However, the fact that economic theory is in reality used in a prescriptive way, it widely agreed upon (Beder, 2011; Callon, 2006; Callon & Latour, 1981; Christophers, 2014).

Understanding the notion of expression on the mechanism of performativity by emphasizing that models in economics do not create reality from scratch. These models shape and define reality within its existing context, which shows the importance of understanding existing socio-technical arrangements. Besides, the notion of expression shows the dynamic characteristic of performativity. For example, policymakers might base the design of an ETS on economic theory. However, it cannot only implement a theoretical design, but also needs to look at the different market participants and their behaviour, regulatory frameworks, cultural aspects, and other external forces. When there are weak institutions which the theoretical design would not account for, this might undermine the system itself and will therefore not be able to reach its intended goals.

Lastly, the notion of performance within the performativity of economics describes the dynamic co-evolutionary process between the contextual environment and its models and statements. While expression focuses on how economic models and theory define and shape reality within its existing context, performance centres the dynamic process in which socio-technical arrangements, such as the ETS, are enacted and influence economic outcome. It exemplifies how resistance may occur when implementing economic theory in different settings. This ongoing process of performance involves the creation of socio-technical arrangements which creates settings where economic theory spreads and influences outcomes. Performance embraces the notions of self-fulfilling prophecies, prescription, and expression as part of this dynamic process in which economic statements influence outcomes (Callon, 2006).

Together, these four components help us to better understand the performativity of Economics by breaking it down into tangible pieces. The understandings not only show that economics can actively shape the economy it describes, but especially how it can do so. It highlights how economic theory shapes our understanding of the world and influences social struggles and collective practices (Boldyrev & Svetlova, 2016).

## 2.2 Economics as a Science: From Theory to Practice

Despite economics being seen as the most politically influential science, economists themselves see this influence as rather limited. This discrepancy between external perceptions and internal perspectives may be one of the reasons that the performativity of economics is generally more researched by other social scientists than by economists (Fourcade, 2009). The disconnection between the views highlights the importance of interdisciplinary dialogue. By examining how economic theory translates into policy instruments that address collective concerns and market failures, like negative externalities, a deeper understanding of the performativity of economics can be gained (Swedberg, 1990; Reverdy, et al., 2021). The sociology of interventions provides a valuable framework to unpack these influences. It focuses on the production, contestation, and dissemination of economic ideas within society through politics. In doing so, allowing for research on how economic ideas are performed in policy contexts, how these economic ideas are questioned, and how they shape social and economic realities (Eyal & Buchholz, 2010; McCloskey, 1994). By considering social dynamics, the emergence of alternative approaches, and the need for interdisciplinary perspectives, the sociology of interventions enables identifying the dynamics that mediate the ability of economics to influence policy in a variety of settings, which improves the external validity of this paper (Hirschman & Berman, 2014).

Policymakers often use market making as a way to solve the world's biggest problems. These markets can only be produced by policymakers, but are highly based upon economic theory. Literature on performativity examines economics in terms of practices for defining agents, rules, and entities exchanged in markets. These correspondences between economic reality and theory are not discovered, but built. But economists can only influence these policymakers in the construction of policies as long as they have a certain level of professional authority (Davies, 2011; Lederer, 2012).

Economists can accomplish this by acquiring certain institutional positions, such as formal organizational roles or influential locations within social networks. Additionally, economists can reshape the cognitive infrastructure of policymaking by spreading an economic style of reasoning or by providing sociotechnical tools to assist policymakers in decision making (Fourcade, 2009). Effects of this economic style of reasoning are more influential in early stages of the policy process, such as in the production stage of the specific policy. The authority of economists can be increased in situations understood as technical, and in ill-defined situations where uncertainty forces policymakers to look for new solutions (Hirschman & Berman, 2014). Policies aiming to reduce greenhouse gasses are examples of such situations. When the

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authority is sufficiently established, the competitive nature of economic theory influences market design in two primary ways: 1) in a competition among different frameworks of economic theories for policy tools, and 2) by shaping the ongoing political struggles over the specific rules that govern these tools (Boltanski & Thévenot, 2006). The framing by economics replaces other criteria such as fairness by evaluations based on market efficiency. Once this market frame is included in the market rules, it shapes the ongoing questioning over those rules, which will be elaborated upon in the following paragraph. This framing not only forms market agents, but also the politics of markets by creating a political culture that prioritizes efficiency over other criteria (Breslau, 2013).

The politics of markets may also influence the contesting of the frameworks themselves. The questioning of policies also occurs in market making, and can range from controversies over the goods exchanged, to the capacity of markets to realize the policy objectives (Doganova & Laurent, 2019). Economics sets the parameters for the debate, for example by setting concepts like efficiency, competition, and utility maximization as benchmarks for evaluating market policies. It has been more closely connected with a process that is distinct from market formation, namely the formulation and justification of interventions within the economy (Breslau, 2013).

In the context of producing and questioning the economic frameworks applied by politics, it is crucial to recognize the dissemination of economics. Economics can directly influence policymaking by consulting policy advisors. In doing so, economists may strategically position themselves within the institutional framework and social network to influence policy outcomes. More importantly, economics shapes the way policymakers think by promoting an economic style of reasoning. This economic thinking in policymaking is not only driven by the number of economists among bureaucrats, but mainly by the spread of economics into disciplines as law and public policy (Hirschman & Berman, 2014). The dissemination of economic thinking promotes a culture that prioritizes efficiency, influencing the way policies are formulated and debated. This broad acceptance of economic principles shapes the socioeconomic reality (Mirowski & Plehwe, 2015; Reverdy, 2023). Therefore, economists play a significant role in formulating and justifying government interventions in the economy (Breslau, 2013).

## 2.3 The Principles of a Carbon Pricing Mechanism

The case study will focus on the performativity of economics in the implementation of the EU ETS. To elaborate upon the performativity debate, it is important to understand the mechanisms behind this carbon pricing policy. The instruments for environmental policies are mostly focused on making the alternatives either more or less attractive. Within the possible instruments, a distinction can be made between prohibitions, such as permit-granting systems, and instruments aimed at guiding the policy object in a desirable direction through free choice, such as taxes or tradable carbon permits (Bressers & Klok, 1988; Stavins, 2000a). These ‘free choice’ instruments are dominant in policymaking in order to solve collective issues such as an overload of emissions and are predominantly based on price- or quantity setting mechanisms (Gerres, et al., 2021). Mintz-Woo (2022) summarizes the mechanisms in a nutshell: *“Price instruments are like saying: “for each five candies, you have to do a chore” (or “for each five candies, you have to give me one”). Quantity instruments are like saying “you and your sister can only eat a total of 20 candies, but it's up to you to trade or decide amongst yourselves how the candy gets divided.”*

Although the applications of taxation have changed through over time, the basic economic principles have remained the same for hundreds of years (Samson, 2002). In contrast, market making as a tool to account for collective concerns, such as global warming, is relatively new and has developed mainly over the past 40 years (Frankel, et al., 2019). Such market making to price negative externalities in the form of a cap-and-trade system builds in principle on the Coase theorem (Coase, 1960). It suggests that bilateral negotiation between the recipient and generator of an externality, assuming the absence of transaction costs, income effects and other externalities, will lead to the same efficient outcome as would be achieved through direct regulation or a perfect tax. This should hold regardless of the initial assignment of property rights. This argumentation is also shown in the equilibrium theory of Arrow & Debreu (1954) who show mathematically that an equilibrium remains efficient after lump-sum transfers among agents. Both theories lay the foundation for the cap-and-trade system which should demonstrate that even after the initial allocation of allowances, the market mechanism allows for efficient reallocation of permits in which it internalizes externalities by pricing them.

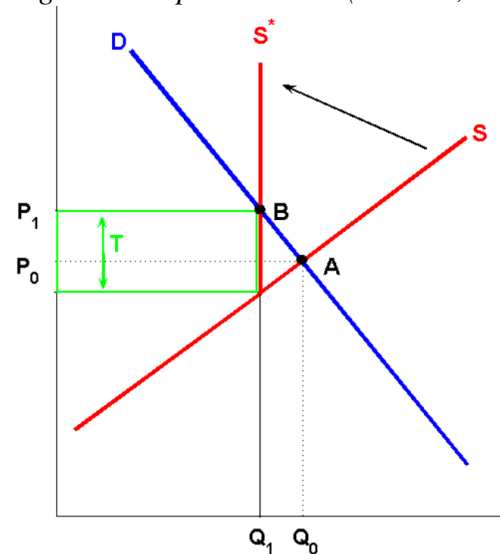
Following this argumentation, it becomes possible to solve the problem of negative externalities by clarifying poorly defined property rights. If resources like clean air were considered a form of property, and the corresponding rights could be exchanged on the market, private actors could reallocate the use of this property in a cost-effective and efficient way

(Hahn & Stavins, 2011). A system of transferable discharge permits that could provide such a market solution is the cap-and-trade system. When used for carbon pricing, a regulator sets a cap, which is the total quantity of allowed emissions, and distributes the allowed emissions. When individual polluters are allowed to trade these permits, a cost-effective allocation can be reached regardless of the initial allocation. By setting an equilibrium quantity, the policymaker indirectly affects the price through the law of supply and demand. Because the policy influences the new market equilibrium through the allowed quantity, the cap-and-trade system is seen as a quantity-setting mechanism (Barnes, 2021; Crocker, 1968; Tietenberg, 2010).

The EU ETS represents such cap-and-trade system which sets a European Union-wide cap and therefore mandates companies to possess allowances for their emissions thereby putting a price on carbon emissions (European Commission, 2023). This is illustrated in the graphical example of Figure 1 (Gordon, 2012). In this example, policymakers limit emissions to  $Q_1$  by setting a cap on total allowable emissions. Permits are then issued to companies, each of which allow a specific amount of carbon pollution. If the cap is set below current emissions levels, illustrated in the example by a lower  $Q_1$  than the original equilibrium quantity of  $Q_0$ , permits become scarce commodities that firms need to have in order to comply with the regulation. At the quantity produced at the emissions cap, the willingness to pay of consumers is higher than the price a producer is willing to produce. Firms will then buy permits to pollute until the price of the permits, in combination with the original costs for which a firm was willing to produce, exceeds the willingness to pay of the consumer. Therefore, the price of the permits, denoted as  $T$ , will increase until they represent the difference between the market price of  $P_1$  and the price for which a firm is willing to produce at  $P_0$  (Calel, 2018; Gordon, 2012).

The pricing of the permits is where negative externalities and economic incentives come into play. The difference between the new price that consumers are willing to pay for the product, denoted as  $P_1$ , and the price for which firms are willing to produce at the reduced emission level  $Q_1$ , denoted as  $P_0$ , represents rent of polluting. This rent arises because firms can sell their surplus permits if they emit less than their allocated quantity, or can purchase additional permits if they pollute more. Therefore, firms have incentive to innovate in order to

Figure 1: Cap-and-Trade (Gordon, 2012)



reduce emissions, even if they have a surplus of allocated permits (Calel, 2018; Coughlin & Ott, 2009). Because the percentage of permits that is auctioned instead of freely distributed is increasing and the amount of permits is reduced, this incentive increases further over time (Stavins, 2008).

## 2.4 Isolating ‘the Market’?

A fundamental concept within economic theory is the concept of ‘the market’. Although this is a crucial aspect in the debate on performativity, the definition of ‘the market’ is often taken for granted without further elaboration. However, to research the performativity of economics, it is important to understand one of its most influential concepts. Traditionally, ‘the market’ has been defined as “A place where individual buyers and sellers meet to trade”, emphasizing the physical aspect of a market place as a trading venue (White, 1981). However, this definition no longer fully covers connotation of contemporary markets as policy instruments.

Recent academic literature sees markets as institutions that favour the creation value by organizing competition between independent and autonomous agents. This already shows that in modern times, markets are not only seen as a place where supply and demand meet, but as a separate institution which functions on its own (MacKenzie, 2009). Therefore, this paper uses the definition of Çalışkan & Callon (2010) who define markets as sociotechnical arrangements or assemblages which have three characteristics: 1) They organize the conception, production and circulation of goods, along with the voluntary transfer of property rights through monetary compensation; 2) they consist of heterogeneous constituents including rules, technical devices, metrological systems, logistical infrastructure, narratives, knowledge, and embodied competencies; and 3) they create a space for confrontation and power struggles, where conflicting definitions and valuations are resolved through pricing mechanisms.

Unlike traditional definitions, such as the definition of White (1981) which highlight the physical infrastructure of the market, the definition of Çalışkan & Callon (2010) emphasizes two important aspects which transcend the physical dimension of the market. The first one is that it underscores the concrete, technical components that enable market operations as mentioned in the second characteristic of the definition. Furthermore, by acknowledging the importance of social relations within the market, it shifts from a purely theoretical model to a practical model which draws attention to a field of research which is less touched upon: how human elements interact with the material and technical aspects of the market (Çalışkan & Callon, 2010).

When a market is established, it often operates under self-regulating laws, somewhat separated from societal influences. This can lead to disentanglement of political debate. For example, in the Dutch housing market, high prices are often accepted as an outcome of supply and demand which cause an inevitable economic outcome (DNB, 2021). Policymakers set the technical parameters on which the policy is evaluated, but these parameters are rarely questioned afterwards. Instead, the focus is on reducing market distortion, such as regulation which focuses on landlords (Plott, 1981; BZK, 2023). When a market entity is established, it is often governed under self-regulating laws, separate from societal influences, which may foster political abdication.

In this way, economics is used to justify the creation of markets for public goods and manage the political conflicts surrounding them. However, different perspectives exist on the relationship between economics, markets, and politics. Some argue that economics contributes to depoliticisation by presenting markets as technical and apolitical, excluding social and political considerations (Aksakal, 2024). Other research shows that introducing markets does not remove politics from the public debate, but economics shapes the debate itself (Boltanski & Thévenot, 2006). It transforms the political debate by replacing discussions of fairness with ideas of market efficiency. Political actors are still involved in the market through interventions, but it uses economics to justify their interests. Which shows that political conflicts continue, but in a different form. Economics shapes the debate, but it does not remove the political dimension (Breslau, 2013). Related literature argues that markets could be skewed by policymakers toward favoured outcomes (Mirowski & Nik-Khah, 2019).

## 2.5 The Political Dimension of the Market

Recognizing the interaction between politics and the market is crucial to understand the broader applications of economic theory, but this interplay has different perspectives. There are four different understandings from which one can look at the relationship between politics and the market: 1) Markets as Politics, 2) Politics in Markets, 3) Markets against Politics, and 4) Politics by Markets (Doganova & Laurent, 2019).

The depoliticisation argument is mostly connected to the view of *markets against politics*. In this perspective, markets are often used to depoliticise the debate by turning them into economic issue. When looking at the EU ETS from this perspective, the political issue of industrial pollution is shifted to the economic domain of the allocation of emission allowances. The shift to the economic domain is often criticized for being a distraction, moving attention away from the need for change in behaviour, institutions, and infrastructures (Spash, 2010).

*Politics in markets* adds to this discussion that these, in theory neutral, markets themselves are also shaped by politics. Market rules can be negotiated to achieve specific goals while considering the interests of different actors involved. For example, the EU ETS has the goal to reduce carbon emissions, but takes into account that member states want to stay competitive in different industries. Therefore, the design of such a market reflects the political dimension within the market.

The political dimension of carbon markets involves power dynamics and conflicts of interest, which causes struggles for influence that shape policies and the nature of markets itself (Fligstein & Mara-Drita, 1996). Within this debate, it is important to emphasize that the politics of markets is not a synonym for the policy of markets. In system dynamics, such as market systems, policies are the influence points of management on a system with the aim to improve real-world systems by converting information into action (Forrester, 1992; Giesler & Fischer, 2017). In the practice of market policies, they can be seen as the concrete rules and regulation within the market. These policies have to be formulated and applied, this process is seen as politics. It highlights that individuals, organizations, states, etc. have self-interests in the modelling the policies, which must be consolidated in negotiation processes. Therefore, policymakers have to regard these self-interests and cannot simply ignore them as irrational if one wants to implement policy recommendations. The consolidation within the process of politics is exposed to the power dynamics and conflicts of interest influencing these policies, revealing that markets are political by nature (Fligstein & Mara-Drita, 1996; Größler, 2010; Spash, 2010).

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*Markets as politics* extends this notion by arguing that markets are places where power dynamics and conflicts of interests are settled. For example, the allocation of emission allowances within the EU ETS is influenced by political negotiations to balance environmental goals with economic competitiveness. Member states and industries lobby for their interests within the market. Unlike the 'politics in markets', which focus on how external political negotiations shape market policies, 'market as politics' emphasizes that the market itself is a place of ongoing political activity. The 'market as politics' suggests that market outcomes are a direct result of the internal political interactions, making them political constructs rather than objective applications of economic theory (Doganova & Laurent, 2019). Power dynamics in the market can lead to compromises that may decrease the effectiveness of the environmental policy (Mirowski & Nik-Khah, 2019).

The last of the aforementioned four understandings of the politics of markets focuses on the *politics produced by markets*. According to Callon (2007), markets are not only shaped by politics, but also generate their own controversies. When using the case of the EU ETS, the design choices of the market, i.e. how emissions are priced, can create debate itself. Highly polluting industries might for example challenge the fairness of the market while environmental groups might challenge its effectiveness. Therefore the market itself causes debate and may encourage new political interventions within the market (Doganova & Laurent, 2019).

By elaborating upon the relationship between markets and politics, Doganova & Laurent (2019) show that in all understandings there is a domain defined as 'the market' which operates separately from policymaking. Recognizing the social relations within it (Çalışkan & Callon, 2010). However, the question remains whether this domain can and should be isolated from the policy domain. The relationship between markets and politics is not as distanced as the different understandings might pretend. It is not to say that one of the understandings is the right interplay between markets and politics. Where the understandings might be conceptually different, they constantly influence and interact with each other. What the understandings do show is that economics is performative, but the way in which it shapes and is shaped by politics differs. Therefore, the debate changes from whether economics is performative to how economics is performed.

## 2.6 Economisation and Marketisation: Shaping Policy with Economic Logic

The notion of economisation refers to discursive and institutional processes which design areas of life and activity. These areas, which were previously defined as non-economic, are now approached according to a decidedly economic logic. In societies where economisation occurs, policy is significantly shaped by the market and other economic theories, thereby altering the foundational structures of knowledge and the institutional frameworks that govern these areas. When this happens epistemic imperialism may occur, a situation in which the economic perspective dominates other knowledge forms, for example coming from political science. In doing so, the market often becomes the dominant framework which marginalizes alternative understandings (Steffestun & Ötsch, 2023).

The fact that marketisation is often a consequence of economisation ensures that the terms are used interchangeably. Although the two concepts may be related to each other, they are not the same. Economisation includes the notion of marketisation, but is a broader concept. Marketisation is a specific form of economisation that involves the inclusion of non-economic life or activity into the market (Beckert, 2009). This form of economisation is highly related to the EU ETS and will be of main concern. However, it is important to acknowledge that there are more forms of economisation outside of marketisation, such as economic rationale on how to avoid free-riding behaviour in the collective provision and universal access of public goods and services. Besides, markets themselves are not all identical, they can rather be seen as a 'family resemblance' because of the coherence in the overall process of marketisation (Çalışkan & Callon, 2010).

Policymakers often create such a domain for the market in solving issues for collective concerns. The politics of markets lies within the maintenance of boundaries that define these markets as separate entities. Policymakers constantly work on maintaining the boundaries between policy and markets, which can be of material, geographical and regulatory nature. The EU ETS is an example of such a market which works as a separate entity (Doganova & Laurent, 2019). Such a market is implemented as a mean to solve the collective concern of global warming. Markets for collective concerns are markets that have been constructed by policymakers as policy instruments, because it should offer the best possible solution to a particular collective problem (Frankel, et al., 2019).

In liberal countries, such as most countries within the EU, the government's objective is to address societal challenges by utilizing economic incentives through policy devices based on economic theory. This is achieved by reshaping and reformatting the institutional

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environment through an interface in which actors can understand and respond to these incentives. This economisation serves as a drive towards depoliticisation of the social and political realm, where the introduction of the EU ETS serves no exception (Foucault, et al., 2008; Remling, 2018). In which ‘depoliticisation’<sup>1</sup> is seen as the replacement of democratic choices with a rule-based form of governance, expert power, and the creation of independent regulatory agencies (Felli, 2015). Therefore, depoliticisation through economisation of the social can be read as a complex and adaptable political agenda within the mainstream of the economics discipline (Madra & Adama, 2018). But restraint is in order, as liberalism is a rather broad paradigm without clear boundaries.

Liberalism and other political movements function as ideologies, are difficult to grasp. Furthermore, liberalism includes several currents which all differ in their political ideology, for example neoliberalism and social liberalism (Prince, 2012). Mellink (2021) grasps it briefly by stating that “ideologies are like black holes: hard to define, but visible through their influence”. Although liberalism as an ideology is widely researched, its definition remains unclear (Cahill, et al., 2018; Gaus, et al., 1996). However, few will disagree that a key feature of liberalism, compared to other ideologies, is the prioritization of market-based solutions for collective concerns, advocating for privatization and a reduced role for public institutions (Cahill, et al., 2018; Ossandón & Ureta, 2019; Dobbin, et al., 2008).

Within this liberal framework, the effectiveness of the market as a policy instrument is constantly questioned, but it always remains under the umbrella of neoliberal market thinking. This makes big reforms in the economic sector highly unlikely, which Mirowski (2014) shows by researching the aftermath of the Great Recession. He argues that the biggest crisis was not the recession between 2007 and 2009 itself, but the fact that the market as policy instrument persisted and this ideology even strengthened. Although the market-centric approach failed during the crisis, policy interventions are still blamed and policymakers remain steadfast in their beliefs that the market as policy instrument is the best way to solve collective problems. This reflects the dominance of economic thinking within policymaking where market solutions are perceived as the only viable option, disregarding alternatives. To summarize his findings: “The preordained answer to any problem, economic or otherwise, is more markets” (Mirowski, 2014, p. 332).

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<sup>1</sup> There exists a differentiation between the process of ‘depoliticisation’, where an object that was previously politicised is no longer political, and the process of ‘non-politicization’ where an object has never been politicized. Since the focus is on the dynamic process of the market making, the difference is of insignificant importance and will not be distinguished between the terms (Felli, 2015).

## 2.7 Limits of Economic Rationale in Policymaking

While economics undeniably plays an important role in the formation of policies, it is essential to acknowledge its limitations. Policymakers must frequently intervene in markets to account for intrinsic limitations of economic rationale (Crouch, 2017; Olson, 1971). Often, economics is criticized because it oversimplifies the real world (Hassler, 1959). One example is the often used assumption of *ceteris paribus*, which assumes that ‘all other things are being equal’. It is most often appealed to as an aspect of idealization in the formulation of theory and models. Economists have debated the need for realism of theoretical assumptions for the applicability of the model for policy aims (Friedman, 1953, Mäki, 2009). When Alfred Marshall (1890) ‘invented’ the assumption of *ceteris paribus*, he argued that the issues could be handled ‘more exactly’. While acknowledging the disadvantage that the more the issue was narrowed, ‘the less closely does it correspond to real life’ (Marshall, 1964: 304). More often than not, a large amount of oversimplification is inevitable in the making of economic theory (Hassler, 1959).

The application of *ceteris paribus* to real-world interventions poses the difficulty of taking into account other variables which may change as a result of the intervention. It is challenging, if not impossible, to ensure that real-world circumstances align perfectly with the conditions specified by *ceteris paribus* (Boumans & Morgan, 2001). When an optimal economic condition cannot be met, often due to the interconnectedness of policies, the second best alternative involves a different set of tools to be implemented. These tools may involve changing other methods away from their optimal setting. This process of changing policy tools away from their optimal setting in order to reach the best outcome for society as a whole is the concept behind ‘the theory of second best’ (Lipsey & Lancaster, 1956). The EU ETS operates within a complex landscape with a variety of market imperfections, and may not achieve the most efficient outcome due to other existing distortions such as national subsidies or taxes of other member states. Therefore, policymakers must consider other environmental policies to combat global warming effectively such as implementing a carbon tax themselves, changing the EU ETS away from its optimal setting (Bennear & Stavins, 2007; Heindl, et al., 2015).

The interconnectedness may not only be underestimated within policies, but according to some authors, also often neglects the methodological problem, in not recognizing that diverse theoretical frameworks are needed to understand behaviour in different social and economic systems (Hodgson, 2001). This means interacting with other social sciences. However, economic theory often claims to be a general theory about human interaction for the purpose of material well-being over time, therefore applicable at all time (Fligstein, 2001, 7). Because of

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which, economists ignore how non-economists think about economic processes and claim modern markets as intellectual domain (Keen, 2001). This can lead to a displacement of goals where the means, such as economic efficiency, becomes the end. In doing so, sidelining the original objective, such as decreasing greenhouse gas emission (Merton, 1938). Prestige in the academy and the influence on social policymaking make it unnecessary to recognize outsiders, which is a sustaining process in itself (Fligstein, 2001, 8).

In general, economic science has traditionally relied on quantitative methods to examine economic phenomena, and relies more on data today than ever before (Einav & Levin, 2014). While quantitative data allow to develop theory with greater accuracy and transparency, relying too heavily on data can increase the risk of overlooking the complexity of social phenomena. When policymakers use parameters, simply because they have done so in the past, they face the risk of running into a preselection bias. This bias distorts the point of view, through direct or indirect channels, which can lead to a less comprehension of the circumstances and less effective decision-making (Schulte & Felgenhauer, 2017). The number of economists among policymakers can directly introduce the economic rationale in policy implementation. However, shaping the cognitive infrastructure increases the risk of preselection even further. The economic thinking may indirectly benefits the bias of preselection by setting the parameters. By focusing on specific parameters set by economic theory, such as efficiency or revenue, but can overlook aspects such as distributional effects and environmental sustainability (Gorz, 2011).

One final limitation is the disentanglement of policies from the theory on which they were originally based. As mentioned before, market rules are constantly questioned (Breslau, 2013). Because of this questioning, market rules are adapted. Often, various actors propose different ‘solutions’ on how best adapt the market rules, which can cause struggles. Callon (2007), calls these “performative struggles” highlighting the dynamic interaction and negotiation between different actors on which theory to use in order to control a specific system. In some cases, policies are adjusted in such a way, often after several adjustments, that they conform less or not at all with the original theory. This counter-performativity can occur due to the dynamic adaptation between theory and reality (D’adderio & Pollock, 2014). At a certain point, instruments may only be maintained because of institutional status and the relationship within the government, and not because they represent economic theory. Separating policy and economic theory is also known as ‘decoupling’, which can occur due to constant attachment of the instrument (Reverdy, 2023).

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Connecting these limitations to the performativity debate on economics emphasizes the dynamic relationship between economic theory and policy implementation. While economic rationale evidently plays an important role in policy formation and implementation, it is crucial to recognize its limitations and the consequences of its performative nature (Callon, 2007). Constant interventions are needed due to the limitations of economic rationale in capturing the complexities of the real-world (Crouch, 2017).

## 2.8 Hypotheses

Building on the theoretical framework, this section delves into three hypotheses concerning the influence of economic rationale on policymaking in which economic theory not only describes reality, but actively shapes it (Callon, 1998). These hypotheses will then be tested in the historical case study of the EU ETS. However, such qualitative deductive hypotheses are highly contested for its risk on a selection bias. As helpful as initial theory and concepts are, they may blind researchers to other phenomena or aspects that might be valuable for their understanding (Bitektine, 2008; DeRosia & Christensen, 2009; Gilgun, 2019). Therefore, some scholars argue that hypotheses testing is not possible in qualitative research, a viewpoint this study differs from (Chigbu, 2019). To include the dynamics and complexity of social interaction, a framework that incorporates flexibility is needed. Especially when comparing the case study of the EU ETS with theories that are themselves based on case studies (Casula, et al., 2020; Gilgun, 2009).

Such flexible framework enables for exploration, which has long been characterized as a brief, fleeting, and preliminary stage in the research process to real research. However, because the world is continuously changing, and the EU ETS being the first international ETS therefore barely having counterparts, exploratory research is needed (Colmer, et al., 2024; Convery, 2009; Skjærseth & Wettestad, 2016; Stebbins, 2001). Therefore, it is important to understand that theory should be treated as a tool for research, not as the truth (Dewey, 1938). This paper uses the concept of the 'working hypotheses', which allows for refinements of the initial hypotheses as the analysis progresses (Dewey, 1896; Mead, 1899). It allows for a focus on the bigger picture and by doing so, it ensures a more comprehensive and nuanced understanding of the influence of economic rationale on policymaking than traditional deductive research, where hypotheses are solely based on the theoretical framework (Oppenheim & Putnam, 1958). The hypotheses are adjusted to assure that they reflect the complexities and nuances of the case study, but they are not part of testing them. This approach enables the research to be guided by established theories within the theoretical framework,

while remaining open to new perspectives and insights that emerge during the analysis (Casula, et al., 2020).

The EU ETS stands as the world's largest cap-and-trade system, designed to decrease greenhouse gas emissions by market mechanism, embodies economic theory based on the Coase Theorem's reasoning of efficient allocation through market transactions (Coase, 1960; European Commission, 2003). In constructing these markets as policy instruments, policymakers try to create clear boundaries (Doganova & Laurent, 2019). Other market-based policies have persisted with minimal political interference, showcasing the authority Economics has within politics (Mirowski, 2014). However, the practical application of economic theory also faces critiques for, among others, oversimplification because of which economic theory does not align with real-world dynamics (Boumans & Morgan, 2001; Hassler, 1959). Furthermore, economic rationale tends to overlook the insights of other disciplines which are needed to address the complex societal issues the rationale is often applied for (Hodgson, 2001). While economic theory shapes policy tools, such as the EU ETS, they are likely to require constant political interventions because of economic limitations. This underscores the dynamic interplay between Economics and Politics, arguing for a nuanced understanding of their performative connection in producing sustainable policies (Reverdy, 2023). This builds towards the first hypothesis: *"Hypothesis 1: While economic theory establishes the EU ETS as a separate market, its limitations necessitate political intervention to ensure environmental goals are met."*

When applying these insights to the case of the EU ETS, the dynamic interplay between economic theory and political interests appears. Political power dynamics play an important role in these dynamics. Where member states want certain authority on a national level, the Commission sees this as a problem for a well-functioning internal market. This eventually led to a more centralised decision-making, which is in favour of the EU ETS shifting towards a separate market entity operating under self-regulating laws (Ellerman, et al., 2010, p.42-60; Skjærseth & Wettestad, 2008). The evolution of the market from its existence to its current form through different interventions, underscores the dynamic interaction between economic theory and politics (Dirix, et al., 2015). This development highlights the system's embeddedness to both economic theory and political reality, emphasizing the importance of ongoing political dialogue and interventions for a well-functioning market. To better align this information with the hypothesis, the original hypothesis is adjusted as such:

*“Working Hypothesis 1: The evolution of the EU ETS underscores the ongoing need for political intervention to balance economic theory and practical complexities, thereby navigating the performativity of economics.”*

Liberal countries are witnessing a phenomenon where economic logic is infiltrating into areas which were previously considered as non-economic (Steffestun & Ötsch, 2023). This economisation process reshapes how politics addresses societal challenges, often relying on economic incentives and emphasizing the role of the market. The EU ETS exemplifies such market implementation to solve the societal challenge of global warming (Beckert, 2009; Frankel, et al., 2019). This approach raises dispute on depoliticisation, where economic incentives, experts and institutions may overshadow political debate (Felli, 2015). This raises the second hypothesis: *“Hypothesis 2: The performativity of economics leads to the depoliticisation of the decision-making process in the EU ETS.”*

While the initial hypothesis focuses solely on economic theory to suggest depoliticisation, a closer look on the specific case study of the EU ETS reveals some more dynamics. The EU ETS design process highlights an interplay between political considerations and technical expertise (European Commission, 1997). The political debate introduced by the in the form of a Green Paper along with the reliance on external technical experts and independent regulatory bodies underscores the influence of both political and technical spheres (European Commission, 2000b; FIELD, 2000). However, as the cap-and-trade system is into place, the debate shifts towards the politics in markets, causing a more technical debate in Directive 2003/87/EC (European Commission, 2003). By introducing a market for emission permits, the Commission influences cognitive infrastructure, is framing policy debate, and guides the formulation of interventions (Boltanski & Thévenot, 2006; Fourcade, 2009; Hirschman & Berman, 2014). This information on the EU ETS provides for a more nuanced hypothesis:

*“Working Hypothesis 2: As the European Commission relies more on economic theory, technical expertise, and independent regulatory bodies, there is a decrease in the influence of political interest in the decision-making process of the EU ETS.”*

Both hypotheses elaborate on the research question by touching different aspects of how economic theory influences the market making of the EU ETS, shaping the reality it aims to describe. The first hypothesis argues there is a need for ongoing political intervention. While

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acknowledging the performative power of economics in the production of the EU ETS, it also recognizes the practical limitations of economic theory. The second hypothesis claims a depoliticised working of economic theory implementation, which potentially diminishes the role of political debate by replacing it with economic rationale. Together, the hypotheses analyse the interplay between economic theory and political dynamics of market making, and therefore elaborate on the research question: *'To what extent does the theory of performativity explain the design and implementation of the EU Emissions Trading System (ETS) within the political dynamics of market making?'*.

### 3. Methodology

This chapter tries to elaborate on the 'what', 'why', and 'how' of this paper (Zhang & Shaw, 2012). The Methodological Approach-section explains the 'what' and 'why' by setting a theoretical and conceptual framework for this research. The 'how' will be substantiated in the Research Method which involves the practical implementation of this theory in a historical case study.

#### 3.1 Research Method

The goal of this thesis is to elaborate to the debate on the performativity of economics by empirically researching the channels through which economics shapes policymaking and society in general, particularly through the design and implementation of the EU ETS. In order to do so, the following research question will have to be answered: *'To what extent does the theory of performativity explain the design and implementation of the EU Emissions Trading System (ETS) within the political dynamics of market making?'* which will be elaborated upon in the empirical analysis of the thesis.

The choice and application of policy instruments has always been fundamental to the practice of governance, and therefore be one of the most debated topics of social sciences (Hood, 2007). In itself, this choice and application of policy instruments is political debate and cannot be simply understood as a technical device to implement a given policy (Felli, 2015; Jordan, et al., 2013). To offer an analysis of carbon market politics which is not limited to policymaking processes or critiques on ethical governance, it is crucial to understand what allows the reconfiguration of policy tools such as the EU ETS (Stephan & Paterson, 2012).

In order to answer the research question, the study will employ a qualitative literature research. Qualitative research is a good fit in order to create understanding on the social contexts

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in which policies are implemented and the associated human behaviour (Fossey, et al., 2002). The research will be done in a setting of an historical case study on the implementation of the EU ETS. Case studies can serve as a principal form of quasi-experimental theory testing, providing a better understanding of the explanatory power of competing social theories. Economics, as a subset of social science, seeks to explain aspects of behaviour related to production, consumption, and distribution of goods and services within society (Becker, 2017; Bitektine, 2008).

The deductive reasoning in the empirical analysis involves testing different theories on economic performativity against specific observations on the EU ETS. Although much qualitative case studies are of inductive nature, deductive qualitative research does have its benefits. It has the potential to address shortcomings of inductive approaches, which is useful when comparing theory to practice within this case study. More specifically, a deductive pattern matching approach will be used as the main method to answer the research question. Using this approach, hypotheses based on current theory are tested against actual observations in the case study of the EU ETS to see if the observations support or contradict the theoretical propositions (Campbell, 1975; Pearse, 2019). The theories used in the theoretical framework are to a large extent build on case studies themselves. Testing them against the EU ETS can also influence the robustness of these theories by providing empirical evidence in favour or against them. This qualitative pattern matching enhances the internal validity of the theories in the context and complexity of human behaviour and could be used to refine existing theory (Pearse, 2019; Sinkovics, 2018).

### 3.2 Research Design

The research, i.e. the analysis, is divided into five sections, in which each section contributes to a comprehensive understanding of the role of economic performativity influences in the EU ETS. The sections are written in chronological order, with the last section on depoliticization looking back at the process as a whole. The storyline looks as follows: 1) 'The rise of EU Market Making', 2) 'The EU ETS in Response to the Kyoto Protocol', 3) 'Designing the EU ETS', 4) 'Interventions in the EU ETS' and 5) 'The Policy of Depoliticisation'.

Because the performative influence economics is not limited to the creation of a technical framework, the first section '*The rise of EU Market Making*' explores the initial motivations that influenced the adoption of market-based mechanisms in the European Union. It demonstrates the significant dissemination of economic ideas within politics. The first section

focuses on the external influences on the adoption of the EU ETS. *'The EU ETS in Response to the Kyoto Protocol'* delves into the European Commission's decision-making process which paves the way for the creation and implementation of the market comes to light.

The specific process of creating the market framework of the EU ETS, both the political and technical dimensions, are delved into in the third section of the Analysis: *'Designing the EU ETS'*. It demonstrates how economic theory is operationalized in crafting specific rules and structures of the system in which several stakeholders are involved. *'Interventions in the EU ETS'* elaborates on how these rules and structures are constantly questioned which can cause interventions. It allows for research on how economic theory shape social and economic realities, but also how these realities can contest and refine the original theory. Investigating the broader political implications of the performativity of economics on power dynamics and policy outcomes is revealed in the last section. In doing so, the section called *'The Policy of Depoliticisation'* researches the strategic framing of the EU ETS as a technical issue.

These sections allow for elaborating on the hypotheses based on the theoretical framework, in order to answer the research question. They will be separately analysed in the next chapter.

## 4. Analysis

To research the performativity of economics, a case study on the European Union Emissions Trading System (EU ETS) will be used. In 2005, it was the world's first international emissions trading system and is now in its fourth stage. Because it is already in place for some years it allows to not only study its market making, but also its interventions through the years. In doing so, the different dynamics between politics and the market can be researched in order to contribute to the ways economics acts performative.

### 4.1 The rise of EU Market Making

Introduced as the world's biggest cap-and-trade system, the market has seen some changes throughout the years (Dechezleprêtre, et al., 2023). The four phases it has undergone demarcate the biggest changes, in which the legislation changed as the system evolved (European Commission, 2003; 2009; 2018). The basic principles of the EU ETS are stated in Directive 2003/87/EC, which outlines the basic framework of the EU ETS. Each directive builds on the

previous directives, in order to include new lessons learned, and adapting to the macroeconomic environment (European Commission, n.d.a).

The use of market-based policy instruments, such as a cap-and-trade systems, represents a significant shift in policymaking since the mid-1980s with the aim to address collective issues more efficient than traditional command-and-control mechanisms (European Commission, 2003). Market mechanisms should be better able to do so because of their flexibility, relatively low compliance costs, and high incentive for innovation (Buch-Hansen & Wigger, 2010). Despite initial concerns of environmental interest groups which were actively against permits as a 'license to pollute', successes such as the U.S. Acid Rain Program, Montreal Protocol's Ozone-Depleting Substances (ODS) Phaseout, and the Regional Greenhouse Gas Initiative (RGGI) have shifted the public opinion in favour of market-making mechanisms (Stavins, 2003b). However, these market-based instruments do offer less certainty. The uncertainty arises because the outcomes depend on market forces rather direct regulation. In the EU ETS, the outcome comes in the form of permit prices. These permit prices are volatile, creating uncertainty about future compliance costs. (Anderson, et al., 2010; Stavins, 2008). Risk-averse policymakers historically favoured command-and-control mechanisms over market mechanisms, because of this uncertainty (Stavins, 2003a).

Simultaneously, other political tools to decrease carbon emissions has been unsuccessful. In 1992, the European Commission, hereafter called 'Commission', proposed an EU-wide carbon and energy tax (European Commission, 1992). However, member states highly valued their fiscal autonomy and feared that further EU-level taxation would follow from introducing this tax. This would decrease national control over their individual economies. In addition, there was fiercely lobbied by various industries against the introduction of the tax, with UNICE as a representative. UNICE was an influential advocacy group representing the interests of European businesses and industries, nowadays known as BusinessEurope (n.d.). As a result, the tax was never implemented and the proposal was formally withdrawn in 1997 (Convery, 2009). To this day, individual member states have autonomy over their taxation on emissions. As a result, the differences between the carbon tax rates are significant. Where Italy, for example, has no carbon tax, Sweden has one of the highest carbon tax rates in the world with 115 euros per metric tonne of CO<sup>2</sup> in 2023. Whereas both countries are also part of the EU ETS (The World Bank, 2023).

This uneven application of carbon taxes can undermine the efficiency of the EU ETS. Countries with an absent or low carbon tax can 'free ride' on the emission reduction of other countries. Because of reductions in countries with a high carbon tax, regardless of the presence

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of the EU ETS, the demand for permits will decrease and the supply will simultaneously. This results in a lower price for permits. Countries with a low carbon tax now face less pressure to decrease their emissions, profiting on the cuts due to carbon taxes in foreign countries. In theory, this results in the same pollution as in an stand-alone market, but it undermines the effectiveness of the trading system itself. While the pollution in the situation of both policies may be similar to a single cap-and-trade policy, the compliance costs are higher, therefore further decreasing efficiency of the policies (Heindl, Wootz & Jotzo, 2015).

Despite the success of market making in the United States and the disappointing European implementation of taxes, the Commission took the stand against introducing an emissions trading system during the Kyoto Protocol negotiations in 1997. The Commission was afraid that the system would not be effective and fair enough. According to the Commission, such a system would provide countries with the opportunity to buy themselves out of their obligations. There was a risk that countries would try to benefit from 'hot air' allowances. This means that the countries would receive a surplus of emission permits that is based on inflated baseline estimates often due to lower economic growth, without making substantial emissions reductions. The foundation for this fear was due to the collapse of the Soviet Union, leading to deindustrialization in these countries and thus a surplus of emissions on the market without any reduction in emissions (Brack, et al., 1999. p.213-217). The Commission faced resistance from the United States and UNICE, who saw emissions trading as a viable option to reduce emissions while remaining competitive. Also, the international pressure increased due to the fact that the alternative in the form of the taxation was not implemented successfully. So although success was not guaranteed, and other countries like Canada and Japan did not implement a trading scheme, the Commission agreed on making a European Union-wide emission trading system in order to reach the emission reduction set in the Kyoto Protocol (Brack, et al., 1999, p.94; Oberthür & Ott, 1999; Convery, 2009; Skjærseth & Wettestad, 2009).

A more general reason on the trading system was the EU's regulatory tradition of using command-and-control regulations which should have lower uncertainty than market based regulations. This preference changed after the Commission had to make plans for such a trading framework, which was mainly due to three key aspects: 1) a small, dedicated group championed emissions trading after a change within the climate change unit of the Commission. They propagated a form of leadership that involved organising and motivating other policymakers. 2) The Commission fostered support from stakeholders through consultations and 3) the Commission was motivated by the failure of the carbon tax and countries lacking the domestic policies to reduce enough emissions. Especially these three aspects led to the embracement and

rise of the EU ETS market making. They supported the desire to position the EU as the global leader on climate change (Christiansen & Wettestad, 2003; Lefevere, 2005; Skjærseth & Wettestad, 2010; Schmidt, 2018).

#### 4.2 The EU ETS as response to the Kyoto Protocol

To implement effective markets, the first step is to state clear goals to be achieved by the mechanism, and then finding the best way to achieve them (Guala, 2001). The EU ETS forms no exception. In 1997, the first legally binding emissions reduction targets were set in the Kyoto Protocol. It defines the basic structural elements which sets the scene for global efforts to tackle climate change in the twenty-first century (Brack, et al., 1999). The 15 member states who were at that time part of the European Union targeted an 8% reduction of emissions during the period 2008-2012 compared to 1990 emissions. The states set these rules as collective, in which the EU could distribute different targets per member state. There were also 11 states included in the protocol who are now part of the EU, but were not at that time (UN FCCC, 2008). It was upon the involved countries themselves how to reach the goals set in the Kyoto Protocol. To reach the 8% reduction, the Commission presented the first ideas on the design of an emissions trading system in the Green Paper on greenhouse gas emissions trading within the European Union (European Commission, 2000a; European Commission, n.d.a).

It is to say that the first short term goal of the EU ETS market making was to reduce greenhouse gas emissions with 8%, that required a 14% reduction to a 'business as usual' forecast. The reductions needed to be within the European Union as a whole to comply with the agreements made in the Kyoto Protocol. Long run goals were to reduce emissions in a cost-effective and increase investments in environmentally sound technologies. Also, the ETS should not distort competition within the internal market. One of the major challenges was to ensure that the trading of emissions complemented and was compatible with other policies and measures. This shows the interconnectedness of policies, connecting to the theory of second best (Heindl, et al., 2015). It highlights the necessity of considering alternatives and moving away from the idealized 'first best' solutions to effectively address the original objectives.

The Green Paper was the start of a consultation process that allowed all stakeholders to give their opinions about the right balance in the use of emissions trading, recognizing the markets as politics, as it shows the power dynamics, stakeholder interest, and policy goals in institution-building in which markets are the outcome of the power struggles among different groups. The Commission seems to acknowledge these power struggles and tries to account for

this, to a certain extent, in the design phase of the market (Convery, 2009). Simultaneously, the politics in markets show that politically neutral economic mechanisms, such as the cap-and-trade system, are used to achieve specific goals while considering the interests of different actors involved. It is designed with the goal to decrease carbon emissions while limiting the economic costs and ensuring the compatibility with other, mostly national, policies.

Interestingly, the Commission starts the debate on how to reduce greenhouse gas emissions by giving the opportunity to elaborate on the right balance in emissions trading, foregoing on alternatives for an emissions trading system such as carbon taxes and legislation. The design of the policy tool immediately started with focussing on the technical aspects based on economic theory. Technical debate tend to focus solely on distributive aspects. In doing so, it excludes non-technical debate in the form of a broader range of justice dimensions, and seeks to address the broader social, cultural and political aspects of environmental issues. By starting the design with a focus on the cap size and distribution, the political dimension diminishes and the political debate will always take place within the economic framework of the cap-and-trade system. This approach can lead to depoliticised solutions, that fail to address the underlying causes to the problems the market is trying to solve (Ellerman, et al., 2003; Fischer, 2000; Schlosberg, 2007). Depoliticising the debate on how to reach the preferred emissions reduction. “The key economic rationale behind emissions trading is to use market mechanisms to ensure that emissions reductions required to achieve a pre-determined environmental outcome take place where the cost of reduction is the lowest (European Commission, 2000a [8]).” Assuming applicability of the theories themselves, foregoing on the interconnectedness with other policies as mentioned before. Because of this interconnectedness, the policy should, according to the Deliberative Policy Analysis, be designed in a flexible and adaptive framework. Which can continuously update based on stakeholder feedback (Wagenaar & Wenninger, 2020).

### 4.3 Designing the EU ETS

In 1997, the Commission released a statement, in which they argue that “A successful climate change strategy needs to be, cost-effective, technically and politically feasible and avoid negative social or regional side effects from the policy necessary to implement it.” (European Commission, 1997). To implement such strategy, an international emissions trading system was first initiated in 1998 as a supplement on existing legislation. Also arguing that when a framework is in place, it should be implemented in a step-by-step approach due to the lack of experience of multi-country emissions trading and therefore high uncertainties (European

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Commission, 1998; 1999). This resulted in the Green Paper on greenhouse gas emissions trading within the European Union (European Commission, 2000b).

Politically, the Green Paper especially focuses on the involvement of various stakeholders, both governmental and non-governmental. It underscores the need for a European wide agreement to ensure the effectiveness of a emissions reduction policy and serves as an invitation to join and start the political debate. It paved the way for political discussion on the 6<sup>th</sup> Conference of the Parties to the UN Framework Convention on Climate Change (COP6), which took place in November 2000 in The Hague. COP6 was organized to discuss the implementation of the Kyoto protocol, including flexible mechanisms such as a market for emissions trading, which unfortunately did not result in an agreement (Begg, 2002; European Commission, 2000b).

On the technical dimension, the Green Paper serves as a foundation for the architecture of the trading system by elaborating on the economic concepts of cap-and-trade systems, market making as a policy instrument, and the compliance part including monitoring, reporting, and verification (European Commission, 2000b). To build this technical framework, external consultants 'Centre for Clean Air Policy' (CCAP) and the 'Foundation for International Law and Development (FIELD), were hired. Attracting external consultants was done because of the lack of knowledge within European emissions trading. CCAP is an American firm and already had experience with the introduction of cap-and-trade system as they were involved in the establishment of the U.S. Acid Rain Trading Program. They were chosen by the Commission as the lead designer of the EU ETS, later helped to convince member states to adopt the system, and led a team to develop the monitoring, reporting and verification guidelines for the EU ETS (CCAP, n.d.). FIELD was a UK based independent NGO, mainly focussing on international environmental law. It especially focussed on the legal necessities for establishing the EU ETS (Field, 2000; IIED, 2008). In designing the framework for the EU ETS, interdisciplinary teams were used and themselves advised by several experts, including economists (CCAP, n.d.; FIELD, 2000, p. 1). Showcasing the active involvement of economists and economic theory in the design stage of the EU ETS.

Although the Green Paper does use economic theory in the design options for an emission trading system, it does not yet go into depth since the Commission first had to decide on the degree to which the EU ETS could be harmonized among the member states, considering the internal functioning of the market and the autonomy of the member states (FIELD, 2000). The recommendations were to a large extent adopted in the Green Paper itself (Skjærseth & Wettestad, 2009).

The Green Paper was mainly focused on opening the political debate, which it did. After the publication of the Green Paper, the Commission was mainly focused on the debate regarding political considerations such as the impact on competition, allocation, and interaction with existing national policies. The technical debate on the cap size and distribution of the permits was barely touched upon. Debate on the Green Paper eventually resulted in the legal basis for the EU ETS captured in Directive 2003/87/EC (Convery & Redmond, 2007; European Commission, 2003). The Political debate resulting in the Directive 2003/87/EC asked for some technical solutions and provided the cornerstones on which market makers had to build (CCAP, 2002). One of the solutions was the production of National Allocation Plans (NAPs). The NAPs are the plans of member states on the allocation volume and allocation methodology of emission allowances, which then need to be approved by the Commission. By doing so, it should make up for the fear countries had of losing autonomy (Neuhoff, et al., 2010). The solutions were not directly part of the directive, but their creation and implementation was a mandate. This resulted in monitoring, reporting, and verification procedures, National Allocation Plans, technical support for implementation, and establishing the necessary market structure. Showcasing that when the directive was adopted, the focus shifted from the political to the technical debate.

The adoption of Directive/2003/87/EC did not assume that concerns mentioned in the political debate would be solved. While directives establish the legal basis for the EU ETS, the uncertainty in the market based system constantly causes concerns mentioned in political debate. Concerns include broader political implications such as the impact of market prices on businesses, and sharing the burdens caused by pricing the emissions evenly (Peeters & Weishaar, 2009). These political focus points are still there, but they are framed into a technical debate on the distribution of emission allowances. Political concerns are debated within the technical framework of the market (Dirix, et al., 2015; Markard & Roosenbloom, 2020). Arguing for a shift towards politics in markets, where, in theory neutral markets, are shaped by politics. This technical framework is laid by the implementation of Directive 2003/87/EC. The transition from political to technical debate demonstrates the dynamics through which economic theory influences the design of a market domain.

#### 4.4 Interventions in the EU ETS

Market making does not stop when there is a domain for the market in place. For the ETS to be effective, it requires governance that balances long-term goals with short-term interventions (De Perthuis & Trotignon, 2014). These interventions constantly shape the market and allow to research not only on the dynamics of initial policymaking, but also on how they are adapted in the real-world. It shows how existing policies are tested and adjusted, allowing for researching the dynamics of the performativity of economics also after the market is in place (Callon, 2007).

While the legal foundation for the market was already there after the approval of Directive 2003/87/EC, the real domain was carved in 2007 after the key infrastructure was implemented of the cap-and-trade system, such as monitoring, reporting, verification, and the matching of supply and demand for permits which should in a price for pollution. The period between 2005 and 2007, often referred to as Phase 1, was used as a pilot because experience with a big international trading system was not present within the EU. The idea was to learn by doing which allowed for full implementation in 2008. In the first period, the implementation of the market did barely result in putting a price on emissions. Because of unreliable data on emissions, the cap was set too high and exceeded emissions. At its absolute lowest point, the price for a permit almost equalled zero (European Commission, n.d.; Hintermann, 2010; Trading Economics, 2024). Because of its experimental intend, this paper sees the period before 2008, referred to as phase 1, as a period that laid the foundation for the ETS to function.

After entering the second phase in January 2008, the cap on allowances was reduced resulting in a short increase in permit prices. However, the rise did not take long, and short afterwards the price fell because there was already a surplus of permits on the market. Not because of the 'hot air' effect that the Commission was afraid of in the market making, but because of the financial crisis which hit in 2008. Because of the economic crisis, industrial activity decreased and therefore pollution. This caused a fall in demand for permits and a rise of supply, leading to a lower price (European Commission, n.d.b).

In the short run, the Commission intervened by postponing the auctioning of 900 allowances, leading to a 400 million reduction in 2014, 300 million in 2015, and 200 million in 2016. These allowances were than 'backloaded' in 2019 and 2020, with 300 and 600 million respectively. This backloading regarded about 30% of the 2013-2015 cap (European Commission, 2014). However, the intervention in the market faced criticism with regards to ETS' market autonomy. Intervening to affect the market prices could undermine the economic principles and rationale behind the system and leading to countries acting out of self-interest

instead of from the collective goal of emissions reduction (Dirix, et al., 2015; Lewis & Chestney, 2013; Perino & Willner, 2017). After rejecting it once, the law on backloading did eventually pass. This happened only after the law included that backloading options should only be allowed in exceptional circumstances and that the Commission should not intent to make more of such adjustments (ENVI, 2013). Showcasing the challenges of balancing the interaction between a technical market domain and political decision-making.

The discussion highlights that in pure essence, whether an emissions trading scheme lowers emissions adequately is a political agreement. If policymakers do not have the will to solve market failures, the market will not function accordingly. The effectiveness of a policy tool is to a large extent dependent on the political climate ambition to reduce emissions (Beckert, 2011; Dirix, et al., 2015). The outcome of the market, in this case prices of the permits, is influenced by broader societal, cultural, and institutional dynamics (Fourcade, 2011). The carbon permit prices within the EU ETS are not based on technical outcomes, but involve ongoing negotiations and interpretations of political values within policymaking.

The Commission did recognise that postponing the auctions does not solve the structural entitlements surplus. Without long-term measures, the effect of the backloading would disappear after the permits are being issued and the surplus would remain (European Commission, 2012; Herman & Matthes, 2012). Postponing the auctions fails to address the root cause of the surplus, which is the fixed cap on emissions that does not adjust to market conditions. The solution has eventually come in the form of the introduction of the Market Stability Reserve (MSR) (European Commission, 2015). As mentioned earlier, the cap on emissions was fixed by the Commission after the abolition of the NAPs. The MSR replaces this fixed cap with one that is a function of market outcomes. To briefly describe the mechanism, if the supplied allowances exceeds a certain threshold, a portion of them is transferred to the MSR instead of being auctioned. On the contrary, when the amount of allowances falls below a threshold, allowances are released into the market. When the number of permits in the MSR exceeds the number of auctioned permits of the previous year, all excess allowances are permanently taken out of the market. Therefore, the EU ETS also affects long-term supply of allowances (Richstein, et al., 2015; Rosendahl, 2019). In practice, this means that the EU ETS can better balance supply and demand for emission allowances, preventing long-term surpluses. Surpluses caused by overlapping emission reducing policies can be mitigated in this way. By adjusting the cap dynamically based on market conditions, the MSR improves the system's ability to incentivise emission reductions and maintain robust carbon pricing (Perino, 2018; 2019)

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As a result, the EU ETS cap is not fixed, but is determined by market outcomes. After the centralisation of the decision-making on the cap, this decision-making is further shifted away from member states since the debate on the level of this cap was further left to the market rather than by the Commission. The Commission itself articulates it as follows: “*The reserve operates entirely according to pre-defined rules that leave no discretion to the Commission or Member States in its implementation.*” (European Commission, n.d.b).

One of the first noteworthy interventions at the start of phase 3 was the redesign of the National Allocation Plans (NAPs) mentioned as an important component of the emissions trading framework. The decentralised setting of emissions targets and allocation of permits was a requirement of reaching an agreement on the continuation of the ETS (Skjærseth & Wettestad, 2008). Until 2012, this decentralised setting was in place. Every member state was required to specify the quantity of emission allowances and its distribution, outlined in their NAP. These NAPs had to adhere criteria non-discrimination and consistency with other legislation within the EU. The Commission made guidelines to assist member states in making these NAPs and had to approve the plans before they could be adopted. The production of these plans was proved to be long and the power of the Commission has been challenged by member states before the European Court of First instance (Bogojevic, 2010; Ellerman, et al., 2010, p.42-60).

The disputes all regarded the debate whether the Commission exceeded its authority by rejecting or modifying the NAPs made by the member states. The General Court concluded three things: 1) The Committee cannot restrict member states to propose changes to their NAPs, 2) the power of the Commission is limited to ensuring that NAPs comply with the Directive's area and 3) the data models of the Commission may not override the data provided by member states unless explicitly authorized by the directive. The verdicts of the General Court illustrate the Commission's aim to uphold the principles of a single international cap-and-trade system, and member states seeking to maintain their regulatory autonomy (Bogojevic, 2010). Economic theory can be used to improve the internal working of the market, but there is, and according to some should be, political debate in these market (Fisher, et al., 2010). The legal activities illustrate the necessities for a balanced approach which respects both economic theory and political realities.

While decentralised decision-making allows for tailoring policies to national conditions and flexibility, it also makes coordination and harmonization difficult, which goes at the expense of reaching the environmental objective. Because the commission found this to be the case in the EU ETS, they introduced a central EU wide cap. In doing so, the commission sidelined the political debate of member states in favour of the internal market functioning

(Ellerman, et al., 2014). It showcases a shift in the institutional structure in which the political debate takes place, called the polity of political decision-making (Größler, 2010).

Both interventions depoliticises the debate on reducing emissions by shifting discretion to the market, demonstrating the changing relationship between politics and the market domain (Gerlagh, et al., 2020). This provides insights and justification to deep dive into the depoliticisation of the EU ETS which may be a result of the performativity of economics.

#### 4.5 The Policy of Depoliticisation

EU climate policies are often presented as an issue for experts, which are often justified through scientific and technocratic arguments (Delbeke, et al., 2015). Nevertheless, it should not omit to acknowledge that decisions regarding climate change are political choices and favour some interests over others. They affect social relations, involve resource redistribution, and often result in unforeseen side-effects (Godet, 2022).

The system's reliance on technical expertise and separate entity of the market has led to a constant complex interplay with various stakeholders (Galindo Fernández, et al., 2022). While the market making of the ETS can increase efficiency and cost-effectiveness, it can also create a situation where political considerations and stakeholders are less influential. One key dynamic is the interaction between governments of the member states and the Commission of the EU. The tension between member states and the Commission already came to light at the design of the EU ETS when the member states demanded autonomy on the pace of their reductions and the distribution of the permits, followed by the introduction of NAPs as mentioned in the previous section (Skjærseth & Wettestad, 2008). This resulted in decentralised decision-making on the cap and allocation of the permits. Member states repeatedly over-allocated their permits and, although the Commission had to approve the NAPs, the Commission was unable to control this cap. It granted significant autonomy to member states which resulted in a constant surplus of allowances and reduced incentives for actual emissions reductions (Bogojevic, 2010; European Commission, 2009).

The ambiguity in discretion of the member states resulted in several court cases (Galeigh, 2008). In most cases, the commission assumed they had the authority to safeguard the criteria for the NAPs, this often proved to be legally unsubstantiated (Bogojevic, 2010). As the Commission felt this led to a distortion of the internal market, and would lead to increased uncertainty, the Commission sets the cap since 2012. This shift from a decentralised to a centralised decision-making highlights a significant reconfiguration of power within the EU

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ETS. In doing so, the Commission got more grip on the quantity of allowances in order to increase permit prices and provide transparency on the cap-setting process (European Commission, 2009). The transparency of the cap-setting decision-making was improved by setting the cap based on historical emissions. The question remains whether the decentralisation also resulted in higher permit prices. In theory, the absence of distortions to internal competition should favour a centralised approach leading to higher permit prices (González, 2006). However, this can be questioned since the permit prices remained stable, if not further decreased, in the period after 2012 when the centralised cap-setting process was introduced (Trading Economics, 2024).

In a decentralised setting, member states each decide on their national cap-setting, whereas a centralised setting represents a situation where a single authority, in this case the Commission, makes the decision for all member states. The centralisation illustrates the Commission's responsibility in enforcing consistency and technical drivers within the market. Shifting the decision-making process strengthens the role of the Commission as the main designer and controller of the future development of the market, but also standardises and streamlines the evaluation process across member states. This takes away most of the political debate on national emission targets (European Commission, 2009; Kruger, et al., 2007; Von Zeben, 2009; Wettestad, et al., 2012).

This trend towards depoliticisation is also seen in the introduction of independent regulatory agencies, such as the Competent Authority (CA) and a National Accreditation Body (NAB) (ECA, 2015; European Commission, n.d.c). Although both agencies decentralise the decision-making process to national bodies, they both operate within the framework of EU wide regulation set by the Commission. This prevents member states to politicize the accreditation process based on their own interests. By assigning responsibilities to these specialized agencies, the EU aims to ensure that regulatory decisions are based on technical expertise and objective criteria rather than political considerations alone. This not only shifts the political debate away from the member states, but also from the Commission itself (CNI, 2021; European Commission, 2022).

While the policy of depoliticisation can improve the functioning of the internal market, increase transparency and integrity, it also has its drawback. When technical expertise dominates over political debate, the real challenges of climate change may not be brought to light, such as its societal and ethical dimension. For example, the question of how emissions reductions can benefit all member states equally, considering their varying economic capacities and industrial structures has historically been sidelined (Skjærseth & Wettestad, 2016).

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Furthermore, the depoliticisation on the debate on how to reduce emissions causes alternative policies to be not or hardly discussed (Bryant, 2016; Methmann & Stephan, 2014). This case study shows that the implementation and adjustments on the EU ETS do represent the replacement of democratic choices with a rule-based form of governance, expert power, and the creation of independent regulatory agencies (Felli, 2015). This opens the discussion on whether it is desirable for this depoliticisation to occur, rather than whether it occurs at all.

## 5. Conclusion

### 5.1 Research outcomes

Economics is not just a theoretical concept which describes reality. Rather, it is an active force that shapes society. In this research, different dynamics through which it does are touched upon by researching the design and implementation process of the European Union Emissions Trading System (EU ETS). The case study serves as an example of how economic ideas are translated into policies and how this performativity of economics can influence political decision-making. In order to answer the research question: *'To what extent does the theory of performativity explain the design and implementation of the EU Emissions Trading System (ETS) within the political dynamics of market making?'*, the paper tests two hypotheses. The testing of qualitative hypotheses goes beyond accepting or rejecting the hypotheses. Rather, they are used to reflect on the claims made in the hypotheses, taking into account the complex environment within social science (Chigbu, 2019).

The first hypothesis *"The evolution of the EU ETS underscores the ongoing need for political intervention to balance economic theory and practical complexities, thereby navigating the performativity of economics"* contributes to answering the research question by claiming the need for political intervention in addressing the practical complexities of implementing economic theory. A key aspect in the emergence of the market was adjusting for the over-allocation of allowances. The surplus represents a gap between theoretical predictions of efficient market outcomes and the practical challenges of political negotiations, and external shocks. The political negotiations caused initial decentralised decision-making and authority of member-states in the form of the National Allocation Plans (NAPs). This initially allowed for the over-allocation after which the Commission had to adjust the decision-making to a more centralised form and the introduction of the Market Stability Reserve (MSR).

These interventions highlight how political intervention is essential for effective functioning of the EU ETS' market mechanism to ensure it meets the environmental goals while maintaining international competitiveness. The case study shows a constant interaction between economic theory and the real-world which mediated by political decision-making, validating the hypothesis.

The second hypothesis elaborates upon the depoliticised working which the performativity of economics may have on the decision-making within the EU ETS. It claims: *“As the European Commission relies more on economic theory, technical expertise, and independent regulatory bodies, there is a decrease in the influence of political interest in the decision-making process of the EU ETS.”*. Although several observations are in favour of this claim, the claim of the hypothesis does not do justice to the important influence politics still has on decision-making regarding the EU ETS. Especially on the markets as politics, the EU ETS stays a politically charged arena where stakeholders try to influence policymaking.

However, the political influence in the market is moderated as the decision-making process is further centralised and the Commission relies more on economic theory, technical expertise and independent regulatory bodies. The trend towards depoliticisation is for example evident in the implementation of the MSR. The introduction of the MSR showcases a shift from political decision-making on the cap of the market, to a flexible cap which comes to place by market forces. Also, the shift towards more centralised decision-making reduces the room for political debate by individual member states.

To answer the research question: *‘To what extent does the theory of performativity explain the design and implementation of the EU Emissions Trading System (ETS) within the political dynamics of market making?’*, both hypotheses reflect the performativity of economics within the political dimension of market making. The case study shows different dynamics between politics and economic theory, emphasising the nuanced interplay. This paper illustrates that markets can be used to depoliticise debate, can be shaped by political debate, shape political debate, and produce political debate.

## 5.2 Discussion

This study contributes to the broader literature on the performativity of economics. The EU ETS exemplifies how economic theory shapes real-world policies. As previous research has shown that economics is performative, this study elaborates upon the dynamics in decision-making through which it does so. Decision-making within the market has moved from

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decentralised to rather centralised decision-making in favour of the internal working of the market. However, the effectiveness of the EU ETS in reaching its primary objective of reducing greenhouse gas emissions relies on careful market design and ongoing adjustments.

To make best use of the findings from this study, it is important to address its limitations. The most important one is the specific focus on the EU ETS, which limits the generalizability of the findings to other market based policies. Furthermore, including quantitative data could provide better insights into the effectiveness of economic theory in policymaking. For instance it would be interesting to research whether more depoliticisation in EU ETS decision-making would contribute to more emissions reduction.

Further research could elaborate further on the contributions of this study. To generalize the findings within the EU ETS, comparative analyses on other market based policies could provide broader insights on the interactions between economics and politics. Also, diving deeper in the case of the EU ETS could provide further insights. Exploring stakeholders' behaviours and lobbying within the EU ETS could elaborate upon the understandings of how political interests shape policy design and its implementations. Combining the insights of stakeholders' interests and economic theory could provide a more comprehensive understanding of policies. This paper has shown evidence of a shift towards depoliticisation of debate around the EU ETS. Thereby facilitating an opening for discussion on the desirability of this shift.

Closing this study should not be seen as closing a book. It opens doors for dialogue and further research. Every conversation and study brings us closer to addressing societal challenges like global warming. If economics can play a role in that, then the performativity of economics is money well spent.

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