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Scaling down non-compliance?
The impact of non-state actors on the implementation of EU environmental policy

Master Thesis

M.Sc. International Public Management and Policy

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Summary

The responsibility of complying with EU legislation lies with the member states. The range, however, of actors involved in the implementation process has widened, making compliance a dynamic interplay between state and non-state actors. The present thesis makes a first attempt to quantitatively analyze the impact of non-state actors on compliance with EU environmental directives, across the 27 EU member states. The thesis adopts a broader conceptualization of non-state actors in order to account for both organized and diffused societal interests and derives hypotheses from the three approaches to compliance (enforcement, management, and legitimacy) in an integrated manner. Subsequently, by taking into account a subset of 24 recently adopted environmental directives, the thesis also seeks to assess cross-national variation and shed light on existing patterns of environmental leaders and laggards. By relying on infringement data to account for member states' levels of *non*-compliance and by employing a cross-classified multilevel method of analysis, the empirical findings reveal a rather surprising mismatch between societal actors' expected role and their actual impact on member states' compliance. The results show that environmental non-state actors are more constrained in their ability to impact policymaking and exert pressure on national governments to comply than what was previously assumed by case studies. This is particularly the case when considering organized societal interests and the role of NGOs in influencing policy outcomes. Furthermore, the findings indicate one factor that can positively influence compliance: citizens' perceived importance of the environment and climate change. By consequence, citizens' perceptions on the importance of specific policy issues can exert domestic pressure on member states' compliance. Moreover, the analysis does not suggest a particular pattern with respect to country groupings or 'worlds of compliance' thus one cannot speak of either a Southern problem or an Eastern one. Southern and Central and Eastern European countries occupy space as both leaders and laggards. In sum, the findings have implications for both the compliance literature and the future of the broader EU environmental policy.

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List of Abbreviations

CAN Europe	Climate Action Network Europe
CEE	Central and Eastern European
CSOs	civil society organizations
EC	European Commission
ECJ	European Court of Justice
EEB	European Environmental Bureau
EFTA	European Free Trade Association
EU	European Union
ICC	intraclass correlation
IR	international relations
NGOs	non-governmental organizations
QMV	qualified majority voting
RAI	Regional Authority Index
SSI	Shapley-Shubik Index
TFEU	Treaty on the Functioning of the European Union
UK	United Kingdom
WGI	Worldwide Governance Indicators

Chapter 1: Introduction

1.1. Background

Three decades ago, Joseph Weiler described the knowledge regarding member states' compliance deficit with European Union (EU) legislation as a "black hole" (1991, p. 2465). Since then, a large body of compliance studies emerged, with scholars shedding light on the magnitude of the compliance deficit as well as on the causes driving some states to comply less than others (Börzel, 2001; Falkner et al., 2004; König & Luetgert, 2009; Mastenbroek, 2003; Tallberg, 2002; Toshkov, 2008). Undoubtedly, the EU offers fertile ground for empirical exploration of compliance both across member states and policy areas, having issued thousands of legislative acts since its inception.

Zooming in on the area of the environment, the EU was granted legislative competences relatively late, in 1987 with the Single European Act. Following the Maastricht Treaty, the competences of the EU were further enhanced, granting the European Parliament co-decision powers, and introducing the qualified majority voting (QMV) rule for almost all environmental issues. More recently, the responsibilities of the EU further expanded when the Lisbon Treaty incorporated combating climate change as well as environmental development promotion in its relations with third countries as specific goals. Over the years, these developments resulted in a rich body of environmental legislation, making the environment one of the most active areas of EU policymaking, in addition to casting the EU as a global environmental rule-setter aiming at improving global environmental standards (Lenschow, 2014). The recent European Green deal is a good case in point.

The deepening of European integration established the EU as the main driver of environmental policymaking, however, this is not without its challenges. Scholars highlight that, since the late 1990s, the environment has been one of the most infringed EU policy areas (Börzel & Buzogány, 2019; Hofmann, 2019). Recent figures produced by the Commission also point in that direction, with the environment having the highest number of violations recorded in 2019, both in terms of infringement cases opened (22 per cent) and cases that remained opened by the end of the same year (21 per cent) (European Commission [EC], 2020a). It is thus not surprising that much of the surge in academic interest on compliance is focused on the environment.

1.2. Problem statement

The question of compliance becomes more relevant if one considers the peculiarities of the different types of EU legislation. Literature on compliance, and compliance with environmental law, has primarily focused on directives for two reasons. First, because directives have been chosen as the main legal instrument for environmental law (Etherington, 2006) and second, because of the directives' binding nature only in relation "to the result to be achieved" (Art. 288, TFEU). In practice, this denotes that directives are not directly applicable, but need to be transposed by the member states into their national legal systems, and as such the responsibility lies with the member state.

Collins and Earnshaw (1992, p. 214) observed years ago that "legislation will not be worth the paper it is printed on if policies break down or obligations are not fulfilled at the implementation stage". What is more, late or incorrect transposition of directives ultimately undermine the success of the European integration process (Falkner, 2013). As a 'community of law', non-compliance endangers the uniformity in laws, creates discriminatory practices among member states, and deprives citizens from the benefits the EU policies are set to safeguard (EC, 2020b). Although a temporal phenomenon, given that all member states ultimately must adhere to EU law, non-compliance remains a costly affair. A recent calculation conducted by the Commission on the annual costs of non-compliance with environmental law estimates the costs to be as high as €50 billion (EC, 2019). To avoid bearing the costs of non-compliance and having the legitimacy of the policies being jeopardized, it comes as no surprise that the EC exercises close scrutiny of the implementation process.

Monitoring is one of the main mechanisms the Commission has put forward to fight the compliance deficit, by regularly reporting on instances of violations regarding the application of EU law. In recent years, the Commission's enforcement instrument has been shifting towards a more decentralized strategy, increasingly relying on non-state actors to flag suspected breaches (Kaya, 2019). Even more so, it has been argued that the EC is "outsourcing" enforcement to environmental non-governmental organizations (NGOs) (Hofmann, 2019). Furthermore, specialized NGOs have been stepping in offering capacity-building and expertise and frequently get involved in the execution of policies (Sedelmeier, 2009; Zhelyazkova et al., 2018). Finally, any discussion on the increasingly central role of non-state actors in EU policy implementation cannot but refer to their role as representatives of societal demands (Trenz, 2009). In this capacity, their involvement in the implementation process increases the overall

acceptance of the policy outputs and ascribes greater legitimacy to the entire policymaking process (Börzel, 2010).

1.2.1. Research question

Based on the above discussion, (non-)compliance with EU environmental directives offers an interesting puzzle given the ever-increasing role of non-state actors. Can environmental non-state actors scale down non-compliance? Given the dynamic interplay between (non-)compliance and non-state actors, the central question the present thesis seeks to investigate is:

To what extent do non-state actors affect member states' level of compliance with EU environmental directives?

Given the Commission's reliance on citizens' complaints in addition to organized actors (Börzel & Knoll, 2012), I adopt a broader conceptualization of non-state actors by accounting for societal attitudes with respect to the environment and the EU environmental policymaking. This is necessary because "citizens are the end users of EU legislation" (Kaya, 2019, p. 26), and as such are directly impacted. Hence, it is implied that citizens' interests, whether organized in the form of NGOs or diffused in society, are the two sides of the same coin. Both have been credited with the ability to influence policymaking and mobilize for policy change (Avdeyeva, 2010).

Moreover, the above question alludes to varying levels of compliance among member states. Indeed, much has been said about different compliance cultures, to the extent that some scholars speak of 'worlds of compliance' (Falkner et al., 2005). Conversely, others assert that grouping countries based on common features does not explain variation (Thomson, 2009; Toshkov, 2007). Therefore, it remains unclear whether these patterns exist and to what degree these can be observed in the environment sector. In seeking to improve our understanding around compliance patterns, the following descriptive sub-question is also addressed:

Are there observable patterns across member states' compliance performance?

1.3. Academic relevance

Even though non-state actors have attracted some scholarly attention in relation to environmental compliance, this is limited to qualitative case studies (Andonova & Tuta, 2014;

Baun & Marek, 2013; Börzel, 2006; Dimitrova & Buzogány, 2014; Koutalakis, 2004). So far evidence suggests that environmentally engaged citizens and groups can exploit different channels available to them and pressure public authorities to comply. It remains relevant to test whether the positive effects found in specific countries can be generalizable across the EU. The thesis aims to fill this gap and makes a first attempt to analyse the role of non-state actors in inducing compliant behavior on the macro-level, across all EU member states.

Second, the quantitative design of the thesis contributes to the literature in two more ways: by empirically evaluating the relative explanatory value of non-state actors under various conditions that previous studies have found to have an impact (Toshkov, 2010; Treib, 2014), and by overcoming studying specific environmental directives that have dominated much of the existing literature (Bondarouk & Mastenbroek, 2018). To this end, the thesis aims to analyse more systematically the impact of non-state actors without restricting the analysis to limited variables and a few frequently studied directives.[1] The latter is achieved by relying on a new dataset containing information on (non-)compliance for 24 recently adopted directives, that to my knowledge have not been studied before.

Third, by adopting a broader conceptualization of non-state actors the thesis combines the three prominent theoretical approaches to compliance and extend the analysis beyond mere enforcement and managerial contributions. The perceived societal importance of the environment and acceptance of EU environmental policymaking are arguably increasing the legitimacy of the policies, yet the legitimacy approach is often overlooked. In employing an integrated model, this thesis seeks to improve our understanding of non-state actors in a more comprehensive way by applying simultaneously rationalist, institutionalist, and normative convictions. This also serves to bridge a gap identified by Börzel and Buzogány (2019) who note that more research is needed that test the theoretical approaches in a combined manner.

1.4. Societal relevance

The purpose of research is not limited to advancing our theoretical understanding of a phenomenon, but also extends to its practical significance (Toshkov, 2011).

Given the much-troubled environmental policy area, the cross-national findings of this thesis will present new insights regarding the size of the deficit, something pertinent to policymakers because poor compliance severely impacts the EU's integration capacity.

[1] Angelova et al. (2012) indentified Directives 80/788/EEC on water quality and 85/337/EEC on environmental assessment to be among the most studied.

Countries who deviate from European norms pose a threat to the widening and deepening of the integration process and a threat to the overall reputation and credibility of the EU as a rule-setter. Moreover, environmental directives are predominantly re-regulatory (or market-correcting). Compliance is a necessary condition to ensure market convergence and competitiveness. In fact, Hix and Høyland (2011, p. 206) posit that EU environmental policy "is primarily driven by the desire to prevent a distrortion of competition in the single makret". Thus, knowing where the deficit is located is particulalry important for EU policymakers in order to address it. No less important is the fact that, by considering a subset of recently adopted environmental directives, member states' level of compliance will further indicate their responsiveness and readiness to meet progressive targets set by the EU as part of its broader agenda on the environment.

Finally, "compliance is no simple game between the EU and a national government" (Toshkov, 2011, p. 12), but depends on multiple actors directly or indirectly involved in the policymaking process. Legal and practical implementation mobilizes various actors which are expected to execute the policies, and directly affects citizens' quality of life, as non-conformity with EU law deprives citizens from the distributive benefits environmental law is to provide. Unpacking the impact actively engaged non-state actors have is thus highly relevant in understanding their strength as a mechanism that can activate a country's compliant behavior. This is particularly important especially considering the Commission's recently revised Better Regulation Agenda, which stresses, inter alia, the need to strengthen public consultations and public involvement in the policymaking process, because "EU policies need to take into account and reflect the values and concerns of citizens" (EC, 2021, p. 4). If citizens can effectively voice their concerns, given their increasing awareness of the adverse consequences of climate change and environmental degradation, and if citizens' concerns are in fact translated into policies, then this may result in more compliance. By consequence, this is highly relevant for the EU in its quest to increase its output legitimacy.

1.5. Outline

The remainder of the thesis is organized around five chapters. Chapter 2 provides an extensive overview of the existing literature. I begin by setting the scene, defining compliance, and describing the stages of the implementation process. I then introduce the two data sources commonly used by quantitative scholars to conceptualize non-compliance and outline their

(dis)advantages. This is followed by an overview of the three prominent theoretical approaches to compliance, and the main empirical findings on the causes of (non-)compliance.

Chapter 3 presents the theoretical framework on which the analysis is based. Drawing insights from the three approaches discussed in the literature, I combine them into an integrated model which is then applied to the case of non-state actors. Based on several theoretically-driven argumentations, I elaborate on societal attitudes, mobilization, and learning, the three causal mechanisms from which the five hypotheses are derived.

Chapter 4 deals with the research design. I discuss why a cross-sectional large-N design is chosen and further delve into the steps taken with regards to the data collection and methodology. I elaborate on the operationalization and measurement of the variables and why a cross-classified multilevel analysis is more appropriate, followed by a reflection on the reliability and validity of the study.

Chapter 6 presents the analysis. The chapter consists of two parts: a descriptive and an explanatory. The descriptive part maps out member states' level of non-compliance to locate the problem and identify potential patterns. Subsequently, I turn to test the hypotheses and present the results. I further discuss the findings in relation to the research question and the existing literature and reflect on the limitations of the study. The main analysis is supplemented with robustness checks which are also reported.

Finally, Chapter 7 summarizes the findings and the main implications of the results and proposes suggestions for future research.

Chapter 2: Literature Review

This chapter starts by setting the scene; it defines the central concept of the thesis and then takes a closer look into the three stages of the implementation process. This paves the way for the existing conceptualizations of non-compliance to be explained and for the two main sources of non-compliance to be introduced. The latter is followed by a detailed overview of the three approaches to compliance, as well as by empirical insights found in the literature.

2.1. Setting the scene: compliance and the implementation process

Compliance has been a prominent concept among international relations (IR) scholars. According to Jacobson and Weiss, "*Compliance* refers to whether countries in fact adhere to the provision of the accord and to the implementing measures that they have instituted" (1995, p. 123, emphasis in original). The definition denotes behavioral change and places the focus on the outcome of the implementation. Hartlapp and Falkner (2009, p. 282) posit that "[compliance] is a potential outcome of the entire implementation process". Accordingly, this implies that throughout the implementation process countries are faced with the option of deviating from their commitments.

In the EU context, the implementation process consists of three stages: *transposition*, *application*, and *enforcement* (Prechal, 2005). First, member states are expected to transpose the directives into their national legal systems. In other words, transposition is "the process of transforming directives into provisions of law by the competent legal body" (Prechal, 2005, pp. 5-6). The second stage deals with the application, where national administrations apply in practice the national measures into concrete cases, and the third stage refers to enforcement as "the process of compelling observance of the national measures" (Mastenbroek, 2007, p. 19). Furthermore, the literature distinguishes between *legal* and *practical* implementation (Versluis, 2007). The former manifests itself when the directive is transposed into national law ('law in the books') and the latter concerns the application and enforcement of the national measures ('law in action') (see Figure 1).

Measures taken by each state when transposing a directive must be communicated to the EC in a timely manner and within the specified deadline—usually two years since the adoption of the directive. The transposition deadline applies to all stages of the implementation process, including application and enforcement, unless otherwise stated in the directive (Mastenbroek, 2007, p. 20). While timeliness is important, directives must also be correctly

transposed. Correctness may take different forms. On the one hand, measures taken by national governments must agree with the content of the directives and, on the other, a number of tasks must be executed by national administrations in order to monitor the application in practice and secure the realization of the results. Furthermore, it is the responsibility of the state to guarantee compliance, thus effective enforcement mechanisms must be put in place. According to Prechal (2005, p. 101) the state is "obliged to provide for an appropriate system of sanctions" in cases of violations.

Figure 1: Stages of the implementation process

<table>
<tr><td>EU</td><td colspan="3">Policy Formation
(Adoption of Directive)</td></tr>
<tr><td rowspan="2">Member State</td><td>Legal
Implementation</td><td colspan="2">Practical
Implementation</td></tr>
<tr><td>Transposition</td><td>Application</td><td>Enforcement</td></tr>
</table>

Source: Own representation

2.2. Types of non-compliance

Assessing non-compliance empirically can be challenging. Hartlapp and Falkner (2009), note how various concepts exist that hamper a clear specification of the scope of compliance. Yet, the two most prominent sources of information pertaining to non-compliance are transposition notifications and infringement proceedings.

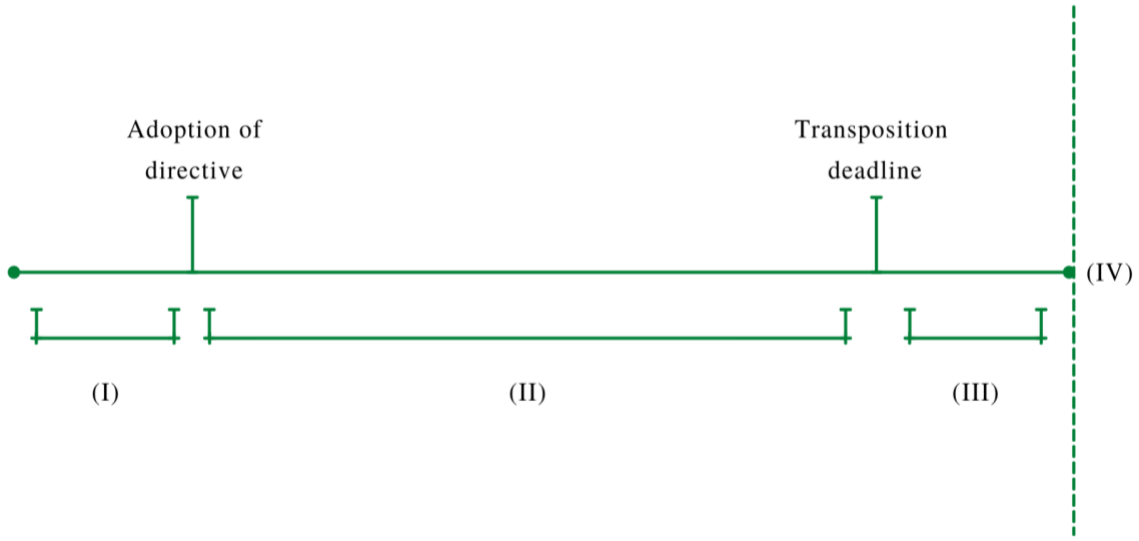
2.2.1. Transposition notifications

One way to approach compliance is by focusing on transposition. Scholars choosing to focus on transposition take into account the timeliness factor (Haverland et al., 2011; Haverland & Romeijn, 2007; König & Luetgert, 2009; Mastenbroek, 2003; Toshkov, 2008). The starting point of the transposition process is the date the directive is adopted at the EU level. However, studies have used different indicators to establish the end point to account for transposition time or delay. The literature distinguishes between the first and the last national measure

adopted (Toshkov, 2010, p. 14). For example, Mastenbroek (2003) used the date the first measure adopted, whereas Haverland and Romeijn (2007) chose the date the measure was enforced. Conversely, Steunenberg and Toshkov (2009, p. 957) argued that "relying on the first notified measure would underestimate the transposition time (and the delay) since it only signifies the start of the transposition process". To that end, in their study they opted for the last national measure adopted.

No matter the indicator to account for delays, all cases take as a point of departure the directive deadline. Member states must notify the Commission on the measures they have adopted before the specified deadline. In the absence of notified measures, this essentially points in two directions: failure to notify the adopted measures or failure to adopt any measures (Toshkov, 2010). Figure 2 presents the different possible classifications member states' notifications can take based on timeliness. The first classification refers to all notified measures that have been enacted prior to the adoption of the directive; the second refers to the measures notified after the adoption of the directive but within the deadline; the third refers to all the directives transposed after the deadline; and finally, the fourth refers to all the directives for which a state has not notified of any measures, despite the passing of the deadline.

Figure 2: Classification of directives according to timeliness



Note: Adapted from "Troubles with Transposition? Explaining Trends in Member-States Notification and Delayed Transposition of EU Directives" by T. König & B. Luetgert, 2008, British Journal of Political Science, 39, (p. 174). Copyright 2008 by Cambridge University Press.

While focus on transposition notifications warrants the timeliness factor, it does not account for effective result achievement or correctness. In such cases, it may well be argued that the level of compliance, as the 'conforming outcome', is misleading (Hartlapp & Falkner, 2009, p. 283). In addition, as already discussed, both timeliness and correctness must be considered during the transposition stage. Notwithstanding an important aspect of compliance, correctness may pose a methodological burden in large-scale studies, owing to the large amount of empirical information one must gather, which is why it is often overlooked. Most scholars begin with a legalistic view distinguishing between national measures either notified or not. One exception, in this regard, is a study by Falkner et al. (2005) on social policy which considered whether the measures adopted at the national level satisfied the standards of the directives 'essentially correctly'.

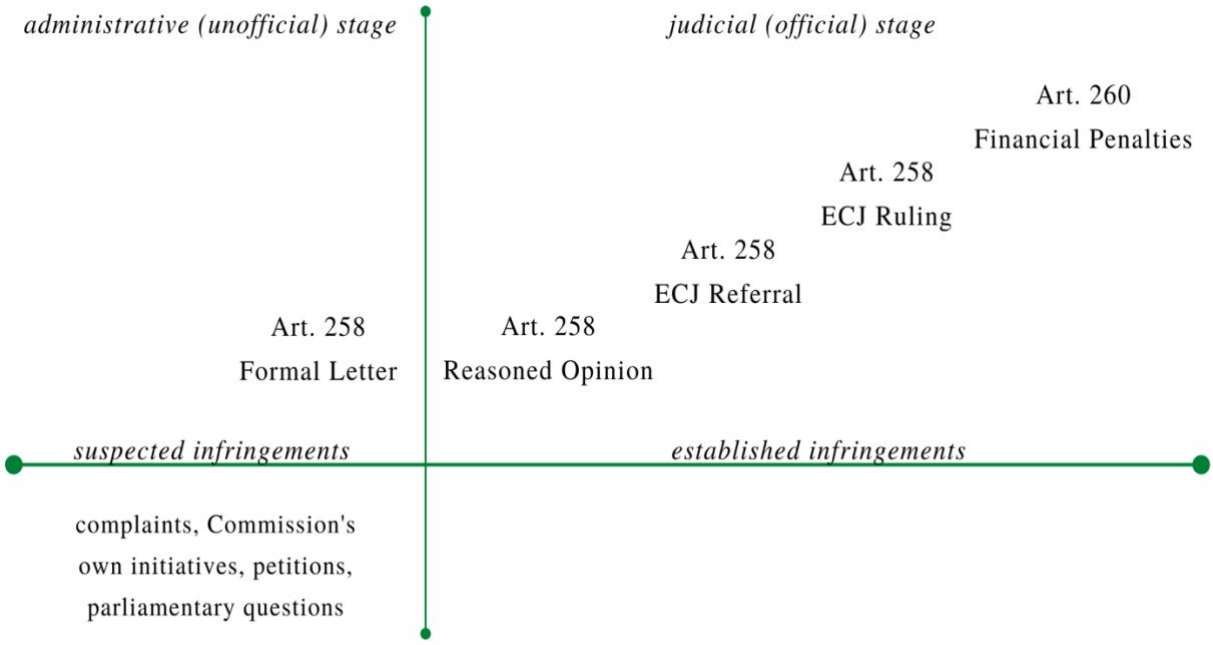
Many studies assessing timely transposition have observed a considerable compliance deficit. Comparing transposition performance across eight policy sectors in five EU member states between 1978-2002, Haverland et al. (2011) found that about 40 per cent of the directives were actually transposed on time. Similarly, Mastenbroek's (2003) case study on the Netherlands found that almost 60 per cent of all directives between 1995-1998 were delayed, while Borghetto et al.'s (2006) study on Italy found the transposition deficit to be at 75 per cent. Comparing the old EU-15 and the new EU-10 member states, Toshkov (2008) noted that in fact the best performing countries in terms of timeliness were the new members, at least immediately after the 2004 Eastern enlargement. At the same time, it has been argued that transposition is a sector-specific matter rather than country-specific, indicating substantial differences between policy sectors (Haverland et al., 2011; Steunenberg, 2007). It appears that the environment area is particularly troubled, and scholars seem to agree that complex and costly directives, such as environmental, are least likely to be transposed on time (König & Luetgert, 2009; Toshkov, 2008).

2.2.2. Infringement proceedings

Looking beyond legal implementation, the second frequently used indicator of non-compliance is infringement proceedings. The EC may initiate infringement proceedings against a member state if it suspects that a country has failed to meet its obligations under the treaties (Articles 258 and 260 TFEU). Suspicions of infringements can be triggered by the Commission's own initiatives or by complaints lodged by citizens, NGOs, or businesses. Following the suspicions,

the EC launches the infringement procedure, which consists of four steps: letter of formal notice, reasoned opinion, referral to the ECJ and judgement by the ECJ (see Figure 3).

Figure 3: Stages of the infringement procedure



Note: Adapted from *Why Noncompliance: The Politics of Law in the European Union* (p. 20), by T. A. Börzel, 2021, Cornell University Press. Copyright 2021 by Cornell University.

The Commission sends a formal notice requesting the member state to submit its observations regarding the suspected infringement within a specified period of usually two months (EC, n.d.). This step is part of the informal dialogue between the Commission and the member state, allowing the latter to regularize its affairs at the administrative stage. If the country fails to respond within the given period, or the Commission concludes that the country continues to violate EU law, it may send a reasoned opinion. With the reasoned opinion the EC sets out legal explanations why the country has breached the law, and requests the country to respond, within a specified period, informing of the measures taken to rectify the matter. If the member state fails to comply, the Commission may start a litigation procedure through referral to the European Court of Justice (ECJ). However, the EC usually tries to resolve the cases bilaterally, before being referred to the Court. If the ECJ rules that a country has indeed violated

EU law, then the national authorities must comply with the ECJ judgement. Failure to do so, the EC may return the case to the Court, asking for financial penalties to be imposed.[2]

The Commission can initiate the procedure on different grounds indicating different types of non-compliance, such as non-notification; improper transposition; or incorrect application, which in turn indicates the interplay among the different stages of implementation (Hartlapp & Falkner, 2009, p. 291). Börzel (2001) provides a straighthood description as to what these types entail. Non-notification deals with the state's failure to notify the Commission of the required national measures; improper transposition concerns either incomplete or incorrect incorporation into national law, and in particular if part of the directive is not enacted or existing national legislation deviating from the directive's provisions is not amended; and incorrect application refers to the active or passive failure of the state to apply and/or enforce EU legislation through its administrative and judicial bodies. Finally, refusal to comply with ECJ judgements has also been described as a type of non-compliance (Börzel, 2001).

Infringements offer an advantage vis-à-vis the notified measures because they are able to cover, at least to some extent, completeness *and* correctness (Treib, 2014, p. 18), and in that sense are more comprehensive in the types of violations they detect. Whereas many studies have used infringements as an indicator of non-compliance, many have questioned their accuracy, arguing that infringement data portray the Commission's reaction to non-compliance rather than states' actual non-compliance (Falkner et al., 2005). On the one hand, the Commission has limited resources when it comes to systematically monitoring and enforcing EU legislation and, on the other, it may refrain from opening official proceedings against a member state, depending on the country concerned or sector priorities (Börzel, 2001; Hartlapp & Falkner, 2009). Thus, our knowledge about the actual level of compliance is "at best, eclectic and partial" (Hartlapp & Falkner, 2009, p. 297). Infringement data may produce a skewed picture yet relying exclusively on formal notification is only telling half the story. While directives can be timely and correctly transposed, countries may be unwilling or unable to apply and enforce them on the ground. Acknowledging that infringement proceedings constitute only "the tip of the iceberg" (Falkner et al., 2005, pp. 204–205), they still allow for an assessment of incorrect implementation or application.

Scholars have used the different stages to account for cross-national variation. For example, Jensen (2007) considered the final stage each case had reached, Knill and Tosun

[2] Financial penalties can be either a lump sum and/or a daily payment, calculated based on the importance of the breached rules, the duration of the infringement, and the ability of the member state to pay (EC, n.d.).

(2009a) used letters of formal notice, whereas Mbaye (2001), Beach (2005), and Panke (2007) focused on the ECJ rulings. In fact, Mbaye (2001, p. 267) argued that only ECJ cases are reflective of non-compliance because only those are deliberately ignored by the member states, as opposed to the rest that are settled at the previous stages. Consequently, a number of studies have addressed infringement cases in the area of the environment, specifically making use of the number of reasoned opinions issued annually against member states (Koutalakis, 2004; Perkins & Neumayer, 2007a), ECJ judgements (Jack, 2011), or the different steps altogether (Börzel, 2000). Nonetheless, cross-sectoral analyses reveal that the environment has one of the highest levels of non-compliance, resulting in a significant amount of infringement proceedings (Angelova et al., 2012; Börzel & Knoll, 2012). Based on the above, this thesis also makes use of infringements in its quest to better capture states' variation of non-compliance.

2.3. Three approaches to compliance

Despite the variety of compliance conceptualizations, scholars make use of similar theoretical arguments to explain why some member states are more reluctant to comply than others. In large, the theoretical premise of compliance studies has been informed by traditional IR theories and theories of Public Administration. The three most prominent approaches to compliance are *enforcement, management* and *legitimacy* (Börzel et al., 2010; Tallberg, 2002).

2.3.1. Enforcement

The enforcement approach builds on realism and locates compliance at the level of the state. Accordingly, "compliance is a matter of state choice" (Haas, 1998, p. 33). This voluntaristic proposition views states as rational actors which deliberately choose to comply or not, based on a cost-benefit calculation (Tallberg, 2002). States choose not to comply when the benefits of defecting exceed the costs of compliance. The unwillingness of states to comply can be best deterred by increasing the likelihood of detection and the costs associated with it, through the establishment of institutionalized monitoring and sanctioning mechanisms. These two mechanisms are central in the enforcement approach, because monitoring exposes non-compliant states and sanctions make defection less attractive (Tallberg, 2002). In developing

an effective method of inducing compliance, the EC adopted a 'name and shame' strategy[3] and regularly reports on member states compliance performance.

A much-emphasized factor associated with this approach, originally suggested by Knill and Lenschow (1998), is the degree of misfit between EU legislation and existing national arrangements (Börzel, 2000; Mastenbroek, 2003; Thomson et al., 2007). The argument stresses that governments wish to protect existing legislation and domestic structures and thus resist any policies that disturb the status quo (Treib, 2014). Intrinsically, the anticipated costs of compliance increase if directives do not satisfy member states' preferences. To avoid the costs, member states seek to shape decision-making outcomes by 'uploading' their preferences during the negotiations at the EU level, in order to minimize the adaptation costs of the 'downloading' process, during implementation (Börzel, 2002).

The literature finds enough support for the impact of misfit on non-compliance (Mastenbroek, 2003; Thomson, 2007). This seems to be the case even if accounting for directives across different policy sectors (Steunenberg & Toshkov, 2009). Zooming in on the environment, qualitative studies have also found support for the misfit argument. Knill and Lenschow's (1998) study on the United Kingdom (UK) and Germany's implementation of four environmental directives concluded that implementation effectiveness is dependent on the level of embeddedness of existing structures. Similarly, comparing Germany and Spain, Börzel (2000) found that when it comes to ill-fitting policies both countries face similar compliance problems. She tested the misfit hypothesis on five environmental directives with varying degrees of pressure for adaptation on national structures and found that in both cases public authorities sought to water down the implementation of those directives that were not compatible with their legal and administrative structures to avoid adaptational costs.

Beyond the policy misfit, EU decision-making entails bargaining and coalition-building. Mbaye (2001) argued that both political power (number of votes in the Council of Ministers) and institutional design (voting rules) are important predictors of (non-)compliance. Directives adopted under unanimity are reflective of the least common denominator since member states can veto proposals that do not fit their preferences. Contrarily, directives adopted under QMV are the result of bargaining and coalition-building and as such any legislation adopted satisfies only the coalition partners, since disagreeing states can be

[3] One example is the Internal Market Scoreboard, established in 1997, with which the Commission publicly reports twice a year on member states' record in implementing Single Market directives, highlighting the worst compliers.

outvoted. Yet, while legislation has to be implemented by all member states, those that voted against have an incentive to delay compliance (Falkner et al., 2004).

It is understood that politically powerful states—as determined by the number of votes in the Council—are less reliant on the least powerful countries in framing a policy according to their preferences, because they can more easily form a coalition among themselves. Therefore, to the extent that powerful countries are able to influence decision-making at the EU, the enforcement proposition predicts that EU legislation is more likely to mirror their preferences instead of those of the less powerful (Thomson et al., 2006). The findings, however, are inconclusive. For example, Jensen (2007) and Perkins and Neumayer (2007b) find support for a positive effect between voting power and compliance, while Börzel et al. (2010) maintain that powerful states are more likely to breach EU law.

An explanation for the mixed support relates to the reputational costs resulting from 'naming and shaming' (Börzel et al., 2010). Smaller member states, in terms of political influence and economic size, wishing to build coalitions rely more on reputation because inevitably they need to count on other states if they are to influence decision-making. Since they cannot rely on their voting power, they dependent on cooperation with other countries, and in the context of bargaining this creates interdependencies (Keohane & Nye, 1977). On the other hand, bigger states need not to rely on their reputation because their political and economic power outweighs the reputation losses, and arguably does not impact their influential position (Thomson et al., 2006). To this end, it is suggested that powerful member states, such as Italy and France, are more inclined to violate EU law, even if this means lower reputational costs, vis-à-vis smaller states, such as Denmark and the Netherlands (Börzel et al., 2010).

Furthermore, countries that fail to upload their preferences at the EU level have an incentive to deviate (Torenvlied, 2000). Non-compliance in this respect is viewed as a protest, or what Falkner et al. (2004) called "opposition through the back door". However, findings for this argument are again mixed. Evidence from the social policy area indicate that opposition at the EU level does not necessarily result in opposing compliance at the domestic level (Falkner et al., 2004; Linos, 2007). On the other hand, correct transposition is likely to suffer when there is conflict in the Council during the decision-making process, owing to member states' diverging policy preferences and disagreement with the content of the directives (König & Luetgert, 2009; Zhelyazkova, 2013). Thomson (2010) also finds effect of incorrect transposition and states' disagreement with provisions, however this effect is conditional on the Commission's behavior. Similar importance for the Commission's role is signaled by Zhelyazkova and Torenvlied (2009), who find that over time conflict in the Council shortens

transposition delays because member states expect that the Commission will monitor more closely the controversial directives.

2.3.2. Management

By contrast, the management approach does not emphasize on governments' deliberate opposition, but rather assumes that states are often willing to comply but lack the capacity to do so. Consequently, cases of non-compliance occur involuntary, as a result of insufficient political and economic state capacities and rule ambiguity (Börzel et al., 2010; Tallberg, 2002). In this respect, "management theorists embrace a problem-solving approach based on capacity building, rule interpretation, and transparency"(Tallberg, 2002, p. 609).

Political capacity limitations refer to the inability of governments to ensure the compliance of public and private actors. The literature frequently indicates the number of veto players, federalism, and corporatism as factors that may affect their ability to comply (Börzel et al., 2012; Jensen, 2007; Kaeding, 2006; Linos, 2007; Mbaye, 2001). The reasoning behind the veto players argument lies in the idea that governments' capacity to implement decisions is reduced when multiple actors need to consent (Börzel et al., 2010, p. 1369; Haverland, 2000). Coalition governments and subnational actors limit governments' autonomy to order the implementation of EU rules. Borghetto and Franchino (2010) note the importance of subnational actors in the field of the environment, due to the territorial nature of the sector, yet they find that the greater their involvement the lengthier the transposition process becomes. Economic capacity limitations refer to the inability of states to comply because of insufficient resources (Börzel et al., 2010). Yet, while some states may not suffer a resource deficit, they may be unable to pool and coordinate them due to inefficient bureaucratic machineries (Börzel et al., 2010, p. 1369; Linos, 2007). To this end, a widely-used indicator to account for states' ability to comply is administrative capacity.

The more efficient a state's public administration is the more likely it is to comply with EU legislation, while the opposite holds for member states with weak or corrupted administrations. This assumption has been tested and corroborated by many studies (Börzel et al., 2010, 2012; Linos, 2007; Mbaye, 2001). In light of this, earlier compliance studies focusing on environmental policy implementation identified a 'Southern problem' (La Spina & Sciortino, 1993; Pridham & Cini, 1994), claiming that the poor compliance record of the Southern member states stemmed from common features, such as patronage and clientelism, dominating their administrative and political systems, rendering them incapable of effectively

implementing environmental law. Research shows that Greece, Italy, Portugal and Spain, as well as France and Belgium that also share some of their administrative deficiencies, are among the worst compliers (Börzel et al., 2010; König & Luetgert, 2009).

The Eastern enlargement brought back to the fore concerns about environmental laggards (Skjærseth & Wettestad, 2007). One would expect that the post-communist Central and Eastern European (CEE) countries, which share equally weak administrations with their Southern counterparts, would face similar compliance problems. However, there is no evidence to support that such scenario has materialized (Börzel & Sedelmeier, 2017; Sedelmeier, 2008), or slowed-down compliance in the area the environment (Börzel & Buzogány, 2019). In fact, post-accession studies suggest that the countries of the Eastern enlargement have better performing transposition record compared to the old EU-15 (Sedelmeier, 2008; Toshkov, 2008; Zhelyazkova et al., 2017). The main explanation found in the literature lies on what Sedelmeier (2008, p. 820) called the "legacy of pre-accession conditionality". Indeed, more recent studies seem to confirm that, as a result of the strict pre-accession criteria set by the EU, that is, the implementation of the *acquis communautaire* as a condition for membership, CEE countries have developed legislative capacities that allows them to timely adopt EU legislation (Börzel & Sedelmeier, 2017; Zhelyazkova et al., 2017). This is also enhanced by the financial and technical assistance provided by the EU to the new members in order to effectively implement environmental legislation, which according to Börzel and Buzogány (2019) can help explain the narrowing of the implementation gap. This aligns well with the managerial reasoning that privileges problem-solving strategies as a means for compliance.

The management approach further points to the level of ambiguity (or complexity) of the directives as a contributing factor for non-compliance. Ambiguous or unclear wording often serves to "accommodate differences in the decision-making process" (Falkner et al., 2004, p. 463). Consequently, the more ambiguous the language of a directive the more problematic the transposition will be because it leaves room for misinterpretations. As a result, managerial theorists suggest rule interpretation by supranational institutions as a problem-solving strategy (Tallberg, 2002). The most used indicator for complexity is the number of recitals, although the empirical record for this is somewhat mixed. While Falkner et al. (2004) Kaeding (2006), and König and Luetgert (2009) find positive effect, Haverland and Romeijn (2007) do not.

2.3.3. Legitimacy

An alternative proposition to the two dominant approaches, one that is less concerned with states' voluntary or involuntary (non-)compliance, is legitimacy. A normative approach drawn from constructivism, legitimacy emphasizes the socialization of states into the norms and rules of international organizations, bringing the logic of appropriateness to the forefront of compliance studies (Börzel et al., 2010). According to March and Olsen (2009, p. 690), the logic of appropriateness "is seen as driven by rules of appropriate or exemplary behavior, organized into institutions. […] Rules are followed because they are seen as natural, rightful, expected, and legitimate". Countries, therefore, comply out of a moral obligation towards a rule or institution rather than self-interest, and as such compliance is relational between the state and the rule (Hurd, 1999).

Interaction between the EU and national actors drives states' behavioral change. Internalization of EU norms happens through socialization. Given that socialization takes time, scholars sought to explore the explanatory power of legitimacy by accounting for the duration of EU membership (Börzel & Sedelmeier, 2017). It has been argued that compliance problems are more likely to occur during the first years of membership and ease over time. Duration of membership, however, does not seem to make a difference considering that two of the founding members states (i.e. France and Italy) are among the 'laggards', whereas CEE countries frequently outperform the old EU-15 (Börzel & Sedelmeier, 2017). To account for cross-national variation, scholars have also focused on states' rule of law culture, as a general principle to accept the rule (Börzel et al., 2010, 2012). Based on this proposition, inclinations to comply with EU law are driven by the degree of support states have towards the rule of law.

Furthermore, it is assumed that compliance will occur if institutions appear to be to legitimate in the eyes of the public, by which it is expected that societal support for the EU as the rule-setter will increase member states' obligation to comply. However, empirical evidence has shown that both rule of law and public support for the EU have no significant effects on compliance (Börzel et al., 2010). Interestingly, the authors note a counterintuitive finding, noting a positive correlation between public support for the EU and non-compliance. Countries such as Italy and Belgium that are more supportive of the EU are less compliant, whereas Denmark and the UK, traditionally less in favor of the EU, are among the best compliers. Similarly, Börzel et al. (2012) found no support for the two indicators discussed above when exploring the effects of legitimacy on the duration of non-compliance. In assessing the impact of enlargement on compliance, Börzel and Sedelmeier (2017) expected that prevailing attitudes

within member states towards European integration would positively influence compliance, and member states of the Northern and European Free Trade Association (EFTA) enlargement rounds, who are generally perceived as more Eurosceptic vis-à-vis the member states of the Southern and Eastern enlargements, would cause more compliance problems. Their expectations, however, found little empirical support.

In addition to the overall societal support for the EU, scholars have also investigated societal support in different policy areas. Zhelyazkova et al. (2016) focused on societal support in four policy areas (Internal Market, Justice and Home Affairs, Environment, and Social Policy) and the effect it has on decoupling practical from legal compliance. Contrary to previous findings, their study confirms that overall EU rule legitimacy is associated with increased practical implementation and decreased decoupling. What is more, rule legitimacy seems to vary across policy areas and be less relevant for policy sectors with influence of organized interest groups.

2.4. Summary

In sum, established explanations of cross-national variation are dominated by enforcement and management propositions, usually in a competing manner. However, both approaches have something to offer. Tallberg (2002) challenged that enforcement and management present competing claims. Indeed, as discussed above, research has found support for both explanations. The mutually reinforcing character of the two propositions shows that non-compliance is best explained—and dealt with—when enforcement and managerial practices interact with each other. Pursuant to the compliance literature, assumptions deriving from the legitimacy approach can also help refine compliance claims, although these are mostly contradicted by the good compliance record of the newcomers and the Eurosceptic states.

Chapter 3: Theoretical Framework

This chapter provides the theoretical framework on which the analysis is based. As discussed in the previous chapter, (non-)compliance is neither purely rational nor entirely institutional. It is also a matter of socialization and perceived legitimacy of the policy outputs. Moreover, existing literature focuses on explaining (non-)compliance within a unitary actor perspective side-lining the multiple actors involved in the policymaking process. Borrowing insights from the three approaches and combining several theoretical arguments in an integrated model tailored towards explaining the role of non-state actors in inducing compliance, I elaborate on five hypotheses. The underlying causal logic is that public support towards EU policymaking and the environment increases the societal acceptance of policy outputs (*legitimacy*), and when paired with social mobilizations they amplify domestic pressure for policy adaptation and implementation (*enforcement*). Additionally, NGOs have the capacity in terms of resources and expertise to facilitate the implementation phase (*management*).

3.1. An integrated approach to compliance

From a constructivist lens, "compliance is a matter of applying socially generated convictions" (Haas, 1998, p. 32). Collective understandings guide states' decisions according to a socially accepted belief of what is perceived as rightful and legitimate (Börzel & Risse, 2003, pp. 65–66). Rules perceived as legitimate can "exert a 'compliance pull' on governments" (Versluis, 2005, p. 9). By the same token, illegitimate rules are less likely to be complied with. In other words, compliant behavior is a normative conviction (Hurd, 1999), and thus states comply if they are convinced of the shared causal understanding around a policy area. However, compliant behavior is also rational since citizens' attitudes towards specific issues drive governmental decisions. Yet, from an institutional standpoint, the socializing influence of non-state actors contributes to channelling information and expertise. Relying on normative, rationalist and institutionalist convictions, compliance is best achieved through three mechanisms: *societal attitudes*, *mobilization*, and *learning* (Börzel et al., 2010; Checkel, 2001).

3.1.1. Societal attitudes

Public support for the EU as the rule-setter increases the legitimacy of the EU law (Börzel et al., 2010). By implication, such normative tenets are expected to motivate domestic actors to be more compliant with EU legislation. Lampinen and Uusikylä (1998) maintain that attitudes

towards the EU determine the conditions under which the implementing process is operating. More favorable attitudes towards the EU are expected to create a more cooperative condition for policy implementation and, thus, increase the level of compliance in a member state. This view is further enhanced by the overall idea that politicians seeking re-election are driven by public opinion (de Vries, 2010); if the public is dissatisfied with the EU it will reflect on the government's compliant behavior as well (Lampinen & Uusikylä, 1998). In addition to legal compliance, a more recent study indicates that the overall societal acceptance of EU policymaking is also closely linked with practical implementation (Zhelyazkova et al., 2018). Implementing actors, be it governmental or non-governmental, respond to societal perceptions, because while, state actors are accountable to citizens, non-state actors are more often than not in direct contact with citizen groups and, thus, are more representative of their preferences.

In a similar vein, as environmental policymaking has shifted to a great extent from the national level to the EU, sector-specific public support is equally important. Zhelyazkova et al. (2016, p. 841) assert that "societal support for a policy helps create a transparent environment for law application and contributes to the legitimacy of the implementation process". While citizens may lack information about the content of specific environmental directives, the overall acceptance of the public with regards to EU environmental policymaking ascribes greater legitimacy to EU law. Based on the above, it is reasonable to expect that cross-national variation in compliance will depend on the public's perceived support of EU environmental policymaking.

H1a: Higher levels of public support for EU environmental policymaking decrease the likelihood of member states' non-compliance.

Moreover, as Börzel (2000, p. 154) notes, considerable attention is paid by citizens when policy outcomes "seriously affect the 'backyard' of a large group of people at the local level". The importance attached to an issue conditions behavior (Versluis, 2007). For example, NGOs or citizen groups may be aware of significant deficiencies in the application of EU law, as was the case with the Spanish transposition of the Industrial Plant Directive, where NGOs chose to refrain from actively mobilizing against their government's opposition to comply because air pollution was not considered a salient issue by the public at the time (Börzel, 2000, p. 152). Spendzharova and Verseluis (2013) argue that there is a rather positive link between issue salience and public opinion, with regards to policymakers. This is because if an issue is

perceived important by the public it becomes visible, forcing policymakers to pay attention and put it on the agenda, because as Wlezien (2005, p. 558) noted "it is in their self-interest to do so, after all".

The underlying assumption is that when the general public views an issue as important and indicates that it should be a top governmental priority, more pressure is put on policymakers to act on it (Spendzharova & Versluis, 2013). This is particularly true for environmental legislation which "frequently receive[s] more public attention and may therefore raise higher audience costs for the implementing member state government" (Angelova et al., 2012, p. 1283). To this end, one would expect that in those member states where the public attaches high salience to environmental issues, environmental directives are more likely to be complied with.

H1b: Higher levels of issue salience among the public decrease the likelihood of member states' non-compliance.

3.1.2. Social mobilization

Social mobilization posits that non-state actors at the domestic level, such as NGOs, trade unions, epistemic communities[4] etc., cooperate with transnational networks and benefit from their exposure to international norms, generating the conditions that allow them to exert pressure on their governments to comply (Checkel, 2001, p. 557). This is particularly true in the area of environmental politics, "where epistemic communities and advocacy networks have placed environmental issues such as ozone depletion, deforestation, climate change and biodiversity loss on the agenda of governments" (Andonova & Tuta, 2014, p. 777). The importance of transnational linkages, such as international NGOs or transnational networks, in strengthening the capacity of non-state actors has also been stressed by Sedelmeier (2009). He notes that a favorable environment for active participation of specialized NGOs can be particularly effective in correct transposition.

Similarly, the social protest dynamic generates active agents organized under a common belief around a policy issue, and as such is further understood as a mechanism that can exert pressure at the domestic level for norm adaptation. However, environmental norms

[4] Haas (1998, p. 32), defines epistemic communities as "transnational networks of policy professionals who share common values and causal understandings".

are not equally internalized by citizens, nor is political activism equally favored among member states. For example, late modernization experienced by some countries slowed-down non-materialist values from surfacing, resulting in the prioritization of economic development over environmental protection, a condition that impeded the emergence of environmental movements (Pridham & Cini, 1994, pp. 255–256). On the other hand, owing to different institutional and administrative cultures across states, countries with an authoritarian legacy have kept weak any potential for societal interests to shape public policies (Börzel, 2006). In this regard, lack of environmental awareness and activism across the EU has been said to negatively impact member states' compliance record with environmental legislation (Börzel, 2000; Pridham, 1996). What is more, conventional wisdom has it that environmental activism was for years absent from Southern Europe (La Spina & Scortino, 1993), and still continues to be weak in CEE countries (Börzel & Buzogány, 2010; Sissenich, 2010). By contrast, others have claimed that environmental activism in Southern Europe is not lacking, but rather "takes different forms" (Koutalakis, 2004, p. 755). Accounting for social protest, scholars note that there is enough evidence indicating grassroot environmental mobilizations across Southern countries (Kousis et al., 2001). Evidence from CEE countries, also shows that non-state actors are in fact able to mobilize citizens to engage in environmental protests as a strategy for policy influence (Andonova & Tuta, 2014)

Driven by 'the logic of membership' (Schmitter & Streeck, 1999), the rationale rests on the idea that non-state actors provide opportunities for citizens to organize and mobilize, and thus raise the consciousness of governments (Schrama & Zhelyazkova, 2018). Mobilizations in the context of a protest create alternative informal channels that expose cases of non-compliance (Andonova & Tuta, 2014). Compliance through the social protest/mobilization mechanism is achieved through 'social sanctioning', whereby the sanction force is 'the social norm' and the mechanism enforcing it is 'the NGO shaming' (Checkel, 2001, p. 558). The concept of 'social sanctioning' views compliance as an outcome of norm internalization. The latter is achieved through processes of socialization, to which NGOs play an important role.

In addition, NGOs, citizen groups, and activists alike have been increasingly vocal in expressing societal demands. Mobilizations, by pressuring governmental actors, persuade them into a commonly accepted behavior. An active civil society and an increased environmental sensitivity among the public may prove to be pulling factors, exercising domestic pressure for adaptation (Börzel, 2000, pp. 147–149). Such a bottom-up approach may persuade state authorities to prioritize environmental policy (Pridham, 1994, p. 84). That said, in cases where

environmental NGOs are active they have turned into "virtual watchdogs" and have successfully instigated member states to comply (Haas, 1998, p. 27). Following the above discussion, it is assumed that in the absence of domestically active environmental NGOs and social protests/mobilizations related to environmental issues, compliance is less likely to occur.

H2a: Higher levels of domestically active environmental NGOs decrease the likelihood of member states' non-compliance.

H2b: Higher levels of social protests decrease the likelihood of member states' non-compliance.

3.1.3. Social learning

The third mechanism by which compliance can be achieved is social learning. According to Checkel (2001, p. 560) learning "lead[s] to preference change", through non-instrumental means and social interaction between agents "where mutual learning and the discovery of new preferences replace unilateral calculation". Again here, the role of NGOs is considered to play an important role in encouraging social learning, (Checkel, 2001; Versluis, 2005, p. 10). Commonly held norms are important in shaping states' interests and decisions to comply. This is however further enhanced by "consensual knowledge", particularly in complex policy areas such as the environment (Haas, 1998, p. 32). Consensual knowledge is developed and diffused by an autonomous epistemic community, a strengthened civil society, and an engaged public.

Furthermore, governments that give space to NGOs to voice their concerns in public consultations are in fact engaging in social learning, and as such NGOs are (in)directly influencing policymaking. Social learning is further enhanced when state actors engage into a dialogue with non-state actors routinely. Routine interaction provides ground for collective learning to come far enough and eventually instill domestic change. In that sense, NGOs act as 'norm entrepreneurs' which do not only exert pressure on state actors to comply, but also persuade them through the process of learning (Börzel & Risse, 2003).

Similarly, routine interactions between state and non-state actors allow specialized NGOs to provide their expertise and technical assistance and act as "actors with an authoritative claim to knowledge" (Börzel & Risse, 2003, p. 11). Owing to their expertise in their respective

fields, NGOs are able to increase the capacity of the implementing actors through resource allocation (i.e. financial and human) and diffusion of information (Andonova & Tuta, 2014), which in turn leads to better norm interpretation, norm internalization, and law application. This is particularly important for a bottom-up approach to compliance because NGOs are perceived to reflect societal interests and, therefore, facilitating policymaking and practical implementation also brings legitimacy to the policy itself. Having said this, routine consultations with environmental NGOs may also allow NGOs to lobby governmental officials to conform with EU legislation in case of suspected breaches (Thomson et al., 2020, p. 1803). Accordingly, it is assumed that governments' consultation with NGOs will positively affect compliance.

H3: Government consultations with NGOs decrease the likelihood of member states' non-compliance.

Chapter 4: Research Design

This chapter presents the research design selected for this thesis to enable a robust answer to the research question. It discusses the rationale behind the methodology employed for studying the problem statement and dives into the choices made with regards to the data collection and methods. It subsequently presents the operationalization and measurement of the concepts used, followed by a reflection on the reliability and validity of the study.

4.1. Research design selection

Compliance studies have used both qualitative and quantitative research designs. While scholars acknowledge that no design is superior to the other, each differs in what it can achieve (Toshkov, 2016). Depending on the researcher's considerations and the research objective one is more appropriate than the other. Based on the research question, this thesis follows a factor-centric research approach, whereby the interest lies in the explanatory power of causal factors (Gschwend & Schimmelfennig, 2007, p. 14). Moreover, the research objective makes it possible to consider all EU member states as well as multiple environmental directives, therefore, this thesis employs a quantitative design. It has been argued that "[m]easuring compliance performance is never perfect, so statistics can address what is essentially a measurement problem. Collecting data on a large number of cases improves our knowledge of the tendencies and patterns of compliance because measurement errors cancel out in the aggregate" (Toshkov, 2010, p. 9). Quantitative studies are without doubt better suited to identify patterns, and as such it also serves the thesis purpose of observing a pattern of compliance among member states.

In establishing causal relationships, compliance studies have solely relied on observational designs (Toshkov, 2011). Researchers are left with "mak[ing] use of the natural variation occurring in the real world" (Toshkov, 2010, p. 22). By taking the world as it is, observational studies consider either comparisons between individual units (i.e. countries) or aggregate quantities varying over time (Kellstedt & Whitten, 2013). The present thesis opted for the former and makes use of a cross-sectional design.

4.1.1. Why a cross-sectional design?

Given the research objective, the thesis focuses on the variation between individual spatial units and explains changes in the dependent variable across them (Kellstedt & Whitten, 2013, p. 84).

The variation of the outcome we seek to assess is the level of compliance across EU member states, with the latter being understood as the individual spatial units.

What distinguishes a cross-sectional design from a time-series design is that in the case of the former measurements of the variables are taken at "approximately the same time" (Buttolph Johnson et al., 2016, p. 203). However, this may be less straightforward here because the measurement of the variables has not been taken over a specific point in time (i.e., year), but rather over a period. Infringement proceedings, the dependent variable, may occur at any point in time, provided that the transposition deadline has expired. In addition, member states failure to implement EU law is not immediately detected by the Commission, therefore some time needs to be allowed for an infringement proceeding against a member state to be initiated. It is up to the researcher to decide the timeframe for which infringement proceedings will be accounted for. Although the measurement is taken over a period of time to enable for variation to be observed, the cross-sectional design of the thesis treats it as a single time point, as it were obtained simultaneously. In this way infringement proceedings are aggregated within a temporal spatial unit which provides for a cross-sectional snapshot of states' non-compliance.

A cross-sectional design must overcome one major challenge: controlling for all possible factors that may affect the dependent variable (Kellstedt & Whitten, 2013, p. 87). In principle, there is a myriad of potential reasons that can drive a member state to comply (or not), which may lead to an 'omitted variable' problem (Toshkov, 2011, p. 14). To overcome this, one must isolate alternative explanations by carefully considering the literature in order to identify variables that may cause plausible causal relationships (Kellstedt & Whitten, 2013, p. 88). Toshkov (2010, p. 11) notes that "statistical research is employed due to the great number of potential determinants […] and the complex nature of the interactions between these factors". This may have significant implications when estimating causal inferences. To this end, in a cross-sectional design one must be cautious with assuming that the requirement for fully 'controlling for' has been met, and thus "be a bit more tentative in its pronouncements about causality" (Kellstedt & Whitten, 2013, p. 88; Toshkov, 2011).

4.2. Data collection

As it has been extensively discussed in Chapter 2 (see sub-chapter 2.2.1), relying on notification data can be helpful in indicating the timeliness of the transposition with respect to the deadline. However, unlike infringement proceedings (see sub-chapter 2.2.2), notifications fail to provide information on completeness and correctness. Acknowledging that data on

infringement proceedings represent only a 'fraction' of all the possible cases of violations (Börzel & Knoll, 2012, p. 7), due to the Commission's limited resources to detect or legally act against all instances of EU law violation, they are nevertheless more comprehensive and for this reason this thesis makes use of infringement proceedings as a proxy for non-compliance.

Collecting all the available data on infringement proceedings initiated for breaches of environmental law would be a rather uneconomical way to approach non-compliance given the large number of cases. Additionally, studying all available cases of infringements would also interfere with the assumption of *unit homogeneity* (King et al., 1994, p. 91), whereby it is assumed that "the observations used for the analysis are governed by the same data-generating process" (Toshkov, 2010, p. 10). By focusing only on one type of legislation—the directives––and one policy area—the environment—I wish to address issues of heterogeneity.

The timeframe covered should also assume that transposition and implementation of EU law are subject to the same conditions throughout the years. Again, to ensure the homogeneity of my sample, I limited the cases to all environmental directives adopted between 2009-2015. Information on the directives is derived from the EUR-Lex database, for which I filtered out all the directives labelled as environmental. The starting year was chosen for three reasons. First, it allows all EU member states to be studied, including the two countries which joined in 2007 as part of the second round of the Eastern enlargement. To refrain from painting a nuanced picture, 2009 serves as a starting year to avoid using data at the very first years of their membership. Second, it is also the year that saw a rapid increase in the number of environmental directives being adopted as opposed to previous years (10 in total–relatively to an average of 3 directives being adopted annually) (EUR-Lex, n.d.), tackling multiple important environmental issues. Third, these directives have been adopted fairly recently and as such this thesis relies on a novel dataset combining directives from across the environmental policy area that, to my knowledge, have not been studied before. In that sense, I circumvent the risk of multiplying similar findings with other compliance studies (Angelova et al., 2012). The cutoff year has been chosen to allow for an acceptable amount of time for potential breaches to be detected by the Commission. The final sample consists of 24 directives (see Appendix I).

To build the dataset, I used the Commission's infringement decision database and obtained all the information on the legal action the EC has taken against a member state for each of the 24 directives. Thus, the unit of analysis is the member state–directive dyad. This created a dataset of 672 observations, for the 28 member states across 24 directives. However,

when collecting the data per member state, Croatia appeared to have only one infringement case, making it the most compliant country. Given its accession in 2013 and the conventional transposition period of two years, the Commission had less time to detect breaches, thus does not provide for a large (non-)compliance record, and for this Croatia is excluded. The final dataset contains 648 observations, for 27 member states across 24 directives.

4.3. Operationalization and measurement

4.3.1. Dependent variable

The phenomenon of interest is member states' non-compliance with EU environmental directives. Irrespective of the violation suspected, the Commission may initiate an infringement proceeding if it suspects that the member state has violated EU law. As discussed in Chapter 2 (see sub-chapter 2.2.2.), infringement proceedings consist of different stages during which the EC communicates with the respective member state to resolve violations. For the purposes of this thesis, only infringement cases that reached at least the reasoned opinion stage are considered. This is the first official stage of the proceedings and the most important one because it "concern[s] issues at that could obviously not be solved through informal negotiations between the European Commission and the member state" (Börzel & Knoll, 2012, p. 12).

Accordingly, non-compliance is operationalized as infringement occurrence; whether an infringement case has been opened against a member state on a given directive. However, while infringement proceedings detect legal *and* practical implementation, (non-)compliance can be temporal. It may be the case that, over time, some member states receive more than one reasoned opinion for a specific directive. While this is common, this thesis focuses on those cases where member states received at least one reasoned opinion for each directive. Therefore, to measure non-compliance, I identified all cases for which the Commission sent a reasoned opinion to a member state regarding a directive from the sample and constructed a binary variable to distinguish between member states that received at least one reasoned opinion for a specific directive (coded as 1) and member states that did not (coded as 0).

4.3.2. Independent variables

The hypotheses presented in Chapter 3 introduced features of non-state actors, which in their interaction with domestic institutional structures may provide a plausible explanation for increased levels of compliance with EU environmental norms.

Public support

To capture citizens' support towards EU environmental policymaking, I follow the example set by many scholars (Börzel et al., 2010; Zhelyazkova et al., 2016) and retrieve relevant information from the Eurobarometer surveys. The Commission regularly explores citizens' attitudes towards different thematic issues, including the environment and climate change, in separate special Eurobarometers. To measure 'public support', I obtain data on perceptions regarding the most appropriate level of environmental decision-making based on various special Eurobarometer surveys conducted between 2011-2019.[5] The surveys ask the following two questions: (1) "When it comes to protecting the environment, do you think that decisions should be made by the (NATIONALITY) Government or made jointly within the EU?", and (2) "Please tell me whether you totally agree, tend to agree, tend to disagree or totally disagree with the following statement: European environmental legislation is necessary for protecting the environment in (OUR COUNTRY)". The questions capture valuable insights on national decision-making perceptions and levels of agreement, however, percentages capturing 'decision at the EU level' and 'total agreement with EU environmental legislation' are arguably more suitable for the variable studied, and thus only focus on these two indicators.

The formulation of the questions is consistent across all surveys considered here, making the combination of the scores feasible. Thus, to capture the variation among respondents with regards to both questions and years, 'public support' is computed by taking the average score for each question for all years there is available information, and then by taking the mean of the two overall scores. The few years for which there is available information does not allow for the data to be matched based on the directive transposition deadline, and thus the variable varies only per country.

Issue salience

The concept of 'issue salience' refers to "the relative importance attached to a certain issue in relation to other issues" (Spendzharova & Versluis, 2013, p. 1499). To measure 'issue salience', I again use the Eurobarometer surveys. Since 2012, the standard Eurobarometer includes the following question: "What do you think are the two most important issues facing (OUR COUNTRY) at the moment?". Respondents are allowed to choose two answers from a list of 15 policy areas. Among the areas listed, one can choose "the environment, climate, and

[5] 'Public support' combines information from the following special Eurobarometers: 365 – EB75.2 (2011), 416 – EB 81.3 (2014), 468 – EB 88.1 (2017), and 501 – EB 92.4 (2020).

energy issues". The variable is thus measured as the percentage of respondents that have indicated "the environment, climate, and energy issues" as the most important issue their country is currently facing. Accordingly, the higher the percentages the greater the salience of environmental issues is among the public.

The question is asked from 2012 onwards, and thus information is obtained from the surveys conducted between 2012-2019.[6] However, while the survey is carried out twice a year, I have only considered the spring Eurobarometer surveys. Since the numbers are relatively stable within the limited period of six months, annual results should suffice to capture variation. The variable is computed by taking the average score (in percentage) of the years considered and, following the same logic as above, the measure again varies only per country.

Active NGOs

Studies on environmental activism suggest that the analysis of NGOs should not be done in isolation from their relational aspect of activism, that is the transnational networks in which they participate, because it would underestimate their real ability to influence policy outcomes (Andonova & Tuta, 2014; Petrova & Tarrow, 2007). Therefore, I follow Knill and Tosun's (2009b) measurement approach and construct a compound indicator, which takes into account the membership of domestic environmental NGOs in the two largest transnational European networks: (a) the European Environmental Bureau (EEB) and (b) the Climate Action Network Europe (CAN Europe). The EEB is an umbrella organization open to membership for all Europe-based environmental organizations. Currently, the EEB consists of over 160 members, across Europe (EEB, n.d.). Similarly, CAN Europe is a network organization open to non-profit organizations active in climate change issues. It currently represents more than 170 Europe-based member organizations in 38 countries across Europe (CAN Europe, n.d.).

Both networks have a member directory on their websites, listing all member organizations per country. I extracted this information and constructed a count variable, whereby 'active NGOs' is measured as the total number of member organizations listed in the EEB and CAN Europe directories for each member state. To avoid duplication, I have cross-checked the membership lists of the two networks to identify NGOs that are members to both networks. In addition, I have also checked the year of establishment of each NGO to make sure they have been active for at least the period of observation and have thus dropped the defunct

[6] 'Issue salience' combines information from the following standard Eurobarometers: EB 77.3 (2012), EB 79.3 (2013), EB 81.4 (2014), EB 83.3 (2015), EB 85.2 (2016), EB 87.3 (2017), EB 89.1 (2018), and EB 91.5 (2019).

organizations prior to 2010. The variable takes values from 1 (Malta, Slovakia) to 32 (Germany).

Social protest

According to Deutsch's (1961, p. 493) conceptualization, social mobilization is "an overall process of change […], these changes tend to influence and sometimes transform political behavior". For change to materialize, citizens mobilize to express their societal demands with respect to environmental issues which often takes the form of protests.

To obtain information on social protests I rely on data from the Mass Mobilization Data Project (Clark & Regan, 2016a). The Project defines a protest as "a gathering of 50 or more people to make a demand of the government" (Clark & Regan, 2016b, p. 3). The data cover all protest activities in all EU member states from 1990 to date and record the protest location, number of participants, protesters' group identity and protesters' demands. Based on this information, I was able to construct an environment-specific protest indicator, by filtering all environment-related protests that were held in each member state in the period of observation and extracted those cases where the words 'enviro' and 'clima' were included in either the protesters' identity description or the protesters' demands.

The data on the number of protests per member state reveal that the occurrence of protests is rather scattered. Almost half of the countries (11 out of 27) have recorded zero protests, with a staggering exception of Germany and the UK, where environmental protests have been held in 63 and 32 occasions respectively, and a less staggering exception of France (16 protests) and Ireland (12 protests).[7] In order to avoid employing a skewed measure, I opted to calculate the median as a better representation of the level of social protest. This is because the mean is expected to be misleading since most values will not be symmetrically distributed near the mean. With the median being one protest, I constructed a binary variable, assigning the value 1 if a country has held at least one protest, and the value 0 if otherwise. Due to limited number of protests recorded the measure varies only at the country level.

NGO consultations

To construct the 'NGO consultations' variable I rely on an indirect proxy and consider data on civil society consultations from the V-Dem Project (Coppedge et al., 2021). Previous studies

[7] The frequency distribution of the raw data on social protest occurance is presented in a histogram and boxplot in Appendix II.

have also used these data for similar measurements (Schrama & Zhelyazkova, 2018; Zhelyazkova & Thomann, 2020).

The Project defines civil society as "an organizational layer of the polity that lies between the state and private life […] composed of voluntary associations of people joined together in common purpose" (Coppedge et al., 2021, p. 387). These organizations include interest groups, labor unions, social movements, and classic NGOs but excludes economic firms and religious organizations. In that sense, the indicator sufficiently covers the broad concept of non-state actors/NGOs employed herein. However, while the data do not distinguish between policy areas (i.e., environment), and as such one cannot obtain policy-specific information on NGO consultation, it is expected that if governments allow space for NGOs to voice their concerns in one policy area, they would equally do so in all areas.

V-Dem asks whether policymakers routinely consult with major civil society organizations (CSOs) on issues relevant to their members. Responses were taken on an ordinal scale, including "No" (coded as 0), "To some degree" (coded as 1), and "Yes" (coded as 2) (Coppedge et al., 2021, p. 194). Based on the data, no EU country received the value 0, therefore, the variable is no longer ordinal, but binary; member states that responded "Yes" are coded as 1 (0 if otherwise). Country scores are taken based on the year of the directives' deadline. For example, if a directive had as transposition deadline the year 2011, then the country score to be considered will be that of 2011. The variable in that sense varies per country and directive.

4.3.3. Control variables

The literature discussed in Chapter 2 points to various factors that may impact states' compliance performance. Tested assumptions on member states' capacity and willingness to comply have been found to hold significant explanatory weight. To this end, member states' institutional (administrative capacity and regional autonomy) and preference-based (government preferences and voting power in the Council) characteristics are used as controls. Since most variables are at the state level, the analysis also includes directive-level controls (complexity and novelty).

Administrative capacity

Compliance literature identifies administrative capacity as one of the main factors influencing member states' compliance record (Treib, 2014). To measure administrative capacity, I use the

'Government Effectiveness' indicator from the Worldwide Governance Indicators (WGI) Project, the most commonly used measure for state's bureaucratic capacity (Schrama & Zhelyazkova, 2018; Thomson et al., 2020).

The indicator "captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies" (World Bank, n.d.). Each country receives an annual score ranging between -2.5 and 2.5, whereby higher values correspond to stronger government effectiveness. The variable considers the scores assigned to each member state at the year of transposition of each directive and is thus directive-specific. The value is assumed to reflect a country's administrative capacity the year directives had to be transposed.

Regional autonomy

Member states' institutional features, such as federalism and regionalism, have been probed as explanatory factors impacting compliance (Haverland & Romeijn, 2007; König & Luetgert, 2009). Particularly in the environmental sector, subnational authorities seem to play an important role in the transposition and implementation of environmental policies (Borghetto & Franchino, 2010).

To account for regional autonomy, I use as a proxy the Regional Authority Index (RAI) developed by Hooghe et al. (2016). The RAI measures annually the authority of regional governments along ten dimensions based on which it provides an aggregated country score: institutional depth, policy scope, fiscal autonomy, borrowing autonomy, representation, law-making, executive control, fiscal control, borrowing control, and constitutional reform (Hooghe et al., 2016, p. 1). Country scores range between 0 (no regional authority) and 40 (full regional authority). Although the index measures authority, I consider it to be an indicative measure of autonomy, meaning that the more authority regional governments have, the more autonomy a region enjoys. The variable considers the country scores at the year of the transposition deadline. Since the index only provides information up to 2016, for the directives adopted in 2015 with transposition year 2017 I take the 2016 country scores. This should not be a problem, considering that member states' scores are fairly static over the years.

Government preferences

Government preferences have also been examined by compliance scholars, mainly accounting for ideological positions on a left/right and pro-/anti- EU integration scale (Jensen, 2007; Toshkov, 2008). Governments expect policy outcomes to favor their political objectives, therefore there is an intuitive plausibility that governments with affinity to green politics may be more inclined to comply with EU environmental directives (Spendzharova & Versluis, 2013). Thus, I control for government preferences towards green politics. To construct the variable, I follow Spendzharova and Versluis's (2013) operationalization and examine Green party presence in member states' governments. I retrieve data on Green parties in governments from the ParlGov database (Döring & Manow, 2020) and check whether parties under the Green/Ecologist family were in the cabinet at the year each directive had to be transposed (Green party presence coded as 1, otherwise 0).

Voting power

Previous studies have found that powerful member states in terms of voting share in the Council are more inclined to violate EU law, because they can more easily bear the reputational costs (Börzel et al., 2010, 2012). In addition, the extension of QMV in environmental policy decisions gives member states with more voting power a bargaining advantage vis-à-vis the less powerful in uploading their preferences during the decision-making process at the EU level. Voting power, thus, means "the probability that a member state is pivotal in turning a losing coalition into a winning coalition" (Hix & Høyland, 2011, p. 64). To account for voting power I use the Shapley-Shubik Index (SSI) as an indicator, calculated by Barr and Passarelli (2009). The values are calculated for the Lisbon Treaty and are normalized between 0 and 1. Smaller member states (Cyprus, Malta, Luxembourg) are assigned the value 0.007 and the bigger member state (Germany) takes 0.163

Complexity

Directive-level factors such as the degree of complexity may also influence compliance, because more complex directives impose higher demands on implementing actors (Zhelyazkova, 2013). A commonly used indicator for complexity employed in quantitative studies is the number of recitals. Recitals is the text that precedes the articles section in a directive, "meant to state the purpose of the directive and to describe each of the main provisions" (Kaeding, 2006, p. 236). A directive with a large number of recitals can therefore translate into one having an extensive scope, as well as addressing important issues (Toshkov,

2008, p. 391). The complexity of a directive is measured by counting the number of recitals preceding the directives' articles section, and thus I construct a count variable. The number of recitals for the directives in the sample varies between 5 and 97.

Table 1: Overview of variables

Variable	Measurement	Data source
Non-compliance	Reasoned opinions, binary (1=at least one reasoned opinion)	Infringement Decisions Database (n.d.)
Public support	Respondents saying environmental decision-making should be done at the EU level—percentages, per country	Eurobarometer (2011-2020)
Issue salience	Respondents saying the environment is the most important issue their country faces—percentages, per country	Eurobarometer (2012-2019)
Active NGOs	Member organizations listed in two environmental networks, total number	EEB (2021) & CAN Europe (2021)
Social protest	Protest occurrence related to environmental issues, binary (1=at least one protest)	Mass Mobilization Data (2016)
NGO consultation	Policymakers routinely consult CSOs, binary (1=yes)	V-Dem Project (2021)
Administrative capacity	Government effectiveness, range—2.5 (weak) to 2.5 (strong)	WGI, World Bank (n.d.)
Regional autonomy	Regional authority, range 0 (no authority) to 40 (full authority)	RAI (2016)
Government preferences	Green parties in government, binary (1=yes)	ParlGov (2020)
Voting power	Voting power at the Council, higher values=more voting power	SSI (2009)
Complexity	Recitals preceding the directive's articles, total number	EUR-Lex (n.d.)
Novelty	New or amending directives, binary (1=new)	EUR-Lex (n.d.)

Novelty

Finally, I control for the novelty of the directive. Haverland et al. (2011) argued that new directives are more demanding as opposed to amending directives because they deal with an issue for the first time. Similarly, Kaeding (2006) argued that amending directives are usually more technical in nature and, thus, easier to transpose than new directives. Accordingly, Börzel and Buzogány (2019, p. 331) noted that "compliance with EU environmental law has become less demanding with the increasing adoption of amending rather than new legislation". In line with the above, I obtain information on the novelty of each directive from their titles and construct a binary variable which indicates whether a directive is new (coded as 1) or amending (coded as 0). Table 1 summarizes the variables and provides an overview of the measurements and sources used. A summary of descriptive statistics is provided in Appendix III.

4.4. Method of analysis

Non-compliant behavior may depend either on member states or directives and therefore one can refer to this situation as one of an 'imperfect hierarchy' (Snijders & Bosker, 2011). To deal with this, the thesis employs a multilevel cross-classified logistic regression, because the dependent variable is binary and the observations at the lower-level unit uniquely belong to more than one higher-level (Snijders & Bosker, 2011, p. 205). In other words, the outcome is nested both within member states and directives and as such is crossed; different member states have to comply with the same directives while at the same time different directives have to be complied with by the same member states.

To treat the cross-classified structure of the data I incorporate a crossed random factor model. I proceed with a random intercept model because it is assumed that the intercept—the outcome variable—varies across different groups. Let $j = 1, \dots, 27$ represent each member state and $k = 1, \dots, 24$ represent each directive. Then a generalized equation of the model takes the form of

$$P(y_i) = logit^{-1}\beta_0 + \sum \beta_i x_{ijk} + u_j + v_k + e_i$$

$$u_j \sim N(\mu_j, \sigma_j^2)\,,$$
$$v_k \sim N(\mu_k, \sigma_k^2),$$
$$e_i \sim N(\mu_i, \sigma_i^2)$$

where $P(y_i)$ is the observed outcome for each member state on a given directive, β_0 represents the mean value across member states and directives (intercept), β_i represents the coefficients of each independent variable x_i, u_j is the effect of member states, i.e. the random effect for the variability between member states, v_k is the effect of directives, i.e. the random effect for the variability between directives, and finally e_i is the residual error term. The model estimates the probability of a member state not to comply with a specific directive given a combination of explanatory variables.

In multilevel data structures one main problem is that the nested structure introduces dependency in the data, which means that residuals will be correlated (Bressoux, 2010), violating the standard assumption of independence where statistical models assume that errors are independent. However, one of the benefits of multilevel modeling is that it is designed precisely to model these relationships between residuals (Field, 2013, p. 818). To overcome this problem, I use the intraclass correlation (ICC) to estimate the dependency between the groups; "the proportion of the total variability in the outcome that is attributable" (Field, 2013, p. 817) to either group. Therefore, two ICC tests were calculated because of the two levels random intercept variance. To determine whether there is enough evidence of substantial clustering I ran two null models, one for each higher level, and subsequently one for both to determine the effect of both groupings (Leckie, 2013). The ICC estimate for the member state level is 0.047 and for the directive level is 0.291, whereas the ICC for both is 0.367. In practice, this means that variance at the member state level is very limited vis-à-vis the directive level, whereas the ICC for both levels indicates that almost 37 per cent of the outcome variance can be explained by considering both member states and directives simultaneously, which also explains why a multilevel analysis is applied.

Finally, multicollinearity can undermine the significance of the effects (Field, 2013), and thus I proceed with testing it. To test the relationship between two continuous variables, as well as between categorical and continuous variables, I used Pearson's correlation coefficient, whereas for categorical variables I used Cramers' V. The closer the values to 0 the weaker the relationship between two variables, however, values closer to 1 indicate strong relationship and that is when multicollinearity occurs. Table 2 presents the correlations among the independent variables.

While most values indicate a weak or moderate relationship, there are three particular cases where predictors are highly correlated (>0.65). The correlation between active NGOs and

Table 2: Correlation matrix

Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**
(1) Public support	1.000										
(2) Issue salience	-0.166	1.000									
(3) Active NGOs	-0.021	0.128	1.000								
(4) Social protest	0.173	0.052	0.413	1.000							
(5) NGO consultation	0.198	0.369	0.211	0.186	1.000						
(6) Administrative capacity	-0.017	0.659	0.217	0.122	0.496	1.000					
(7) Regional autonomy	0.211	0.155	0.618	0.372	0.259	0.162	1.000				
(8) Government preferences	-0.082	0.255	-0.138	-0.128	0.148	0.331	-0.151	1.000			
(9) Voting power	0.003	0.025	0.833	0.369	0.226	0.002	0.661	-0.127	1.000		
(10) Complexity	0.000	0.000	0.000	0.000	-0.006	0.001	0.001	0.000	0.000	1.000	
(11) Novelty	0.000	-0.000	-0.000	0.000	0.005	0.001	-0.003	0.001	-0.000	-0.537	1.000

voting power is 0.833, indicating a strong positive relationship. This implies that something similar is being captured. It may be that bigger states in terms of population, as captured by voting power, are also the ones that have more NGOs active domestically. This yields to an unpleasant outturn: the large parameter variances (Graddy, 1999, p. 404). As the correlation coefficient increases, the variance of the estimates will also increase and thus will make it more difficult to find statistically significant results (Kellstedt & Whitten, 2013, pp. 238–239). To avoid multicollinearity, these two variables will not be included in the same model. Similarly, issue salience is relatively high correlated with administrative capacity (0.659) and regional autonomy with voting power (0.661), which may also interfere with the significance of the results. For this reason, two alternative model specifications will be tested, with only one of these variables included each time. Finally, to avoid multicollinearity among the high correlated control variables, three different models will be specified—one for each set of controls (state–, preference–, and directive–related).

4.5. Reliability and validity

Reliability is defined as the repeatability of the measure aimed at ensuring that similar results are being produced across cases, whereas validity is defined as the extent to which a concept is accurately measured, that is whether the instrument one uses actually measures what it sets to measure (Kellstedt & Whitten, 2013, pp. 99–101). Both are important determinants of research quality. To ensure the reliability and replicability of this study, the data have been approached in a consistent way and as such the operationalization, measurements, and data sources used are clearly specified. For all variables used in this thesis, measurements follow common approaches found in the literature on compliance and the data have been retrieved from open access databases. In addition, where appropriate, the coding of the variables was done in a systematic way in the sense that values that were assigned were based on a specific procedure followed consistently throughout the data-generating process.

When it comes to validity, one must consider two aspects: internal and external validity. The former occurs when a research is designed in a way that allows for high levels of confidence to be produced regarding the causality, that is when one can infer that indeed X causes Y, whereas the latter occurs when the research design allows for results to be generalized beyond the sample (Kellstedt & Whitten, 2013, p. 89). Depending on the research design employed there are a few trade-offs associated with each design. In a quantitative cross-sectional design external validity is enhanced “at the expense of internal validity”, because it

allows a more realistic way of observing phenomena due to the large amount of cases considered (Buttolph Johnson et al., 2016, p. 204). However, in the field of compliance for results to be generalizable to the broader population one must consider which member states and policy areas are included in the study. This thesis considers all EU member states and thus results can be generalized across all member states. In this way, I avoid selecting countries with only a certain level of (non-)compliance that would in any case underestimate the explanatory power of the independent variables (King et al., 1994, p. 130).

On the flip side, the thesis only considers environmental directives. Policy areas differ and each has its own distinct characteristics that may be important contributing factors to member states' willingness and ability to comply. Therefore, it is acknowledged that focusing exclusively on one policy area may be problematic for the generalizability of the findings beyond it. However, the relatively large number of directives considered in the sample is said to ensure the external validity of the findings, albeit limited to the environment sector. Furthermore, the factors used herein have been considered by other studies, which allows for comparisons to be made.

On the other hand, it has been argued that quantitative designs limit the ability to ensure increased internal validity as opposed to qualitative designs (Blatter & Haverland, 2012). This is because case studies have the benefit of providing comprehensive, in-depth analyses that can strengthen the link between the dependent and independent variables. To overcome this hurdle, this thesis takes into account previous qualitative studies on the role of non-state actors in EU compliance (Andonova & Tuta, 2014; Börzel & Buzogány, 2010; Dimitrova & Buzogány, 2014; Koutalakis, 2004; Sedelmeier, 2009) that appear to have found a causal relationship between non-state actors and compliance. Thus, a large-N study can further assess this relationship. Moreover, assuming that there are no other variables that cause the dependent variable may weaken the internal validity of the study. To overcome omitted-variable bias, I include several control variables based on previous studies that have found to impact member states' compliance record. By doing so, I wish to eliminate all other possible factors that may plague with bias the causal relationship between the variables of interest. This is one advantage that quantitative design offers, where multiple confounders can be statistically controlled for. Notwithstanding the inclusion of controls, it has been suggested that inferences on causality should still be made with caution (Kellstedt & Whitten, 2013, p. 88).

Chapter 5: Analysis

This chapter presents the results of the analysis and subsequently reflects critically on the findings based on the theoretical assumptions that were derived from the literature. First, I proceed with the descriptive part of the analysis to empirically illustrate the degree of variation of non-compliance across member states, followed by the explanatory analysis where I test the hypotheses and discuss the findings. Finally, I run robustness tests to check whether the results are robust when observations are clustered in one higher level (directives).

5.1. Descriptive analysis

Before testing the explanatory weight of the hypotheses, it is essential to investigate the size of non-compliance as well as cross-national variation. This is because one must first establish that there is a compliance problem and that indeed some member states comply less than others, before proceeding with inferring causality. As Mastenbroek (2005, p. 1115) put it "we may be investigating a non-problem". Moreover, the descriptive analysis allows us to observe patterns among leaders and laggards, given that states are themselves responsible to ensure compliance.

Figure 4 is a visual depiction of the distribution of the dependent variable across member states. It presents the number of cases where member states received at least one reasoned opinion for a specific directive from 2010-2020. While there is limited variation across countries, the main observation is that no member state has fully complied with environmental directives. Overall, the EC has sent a total of 185 reasoned opinions against member states, for the 24 directives that were included in the sample. This number accounts for 28.5 per cent of all 'violative opportunities',[8] which exhibits a lower deficit estimate than what previous studies have suggested (Angelova et al., 2012).

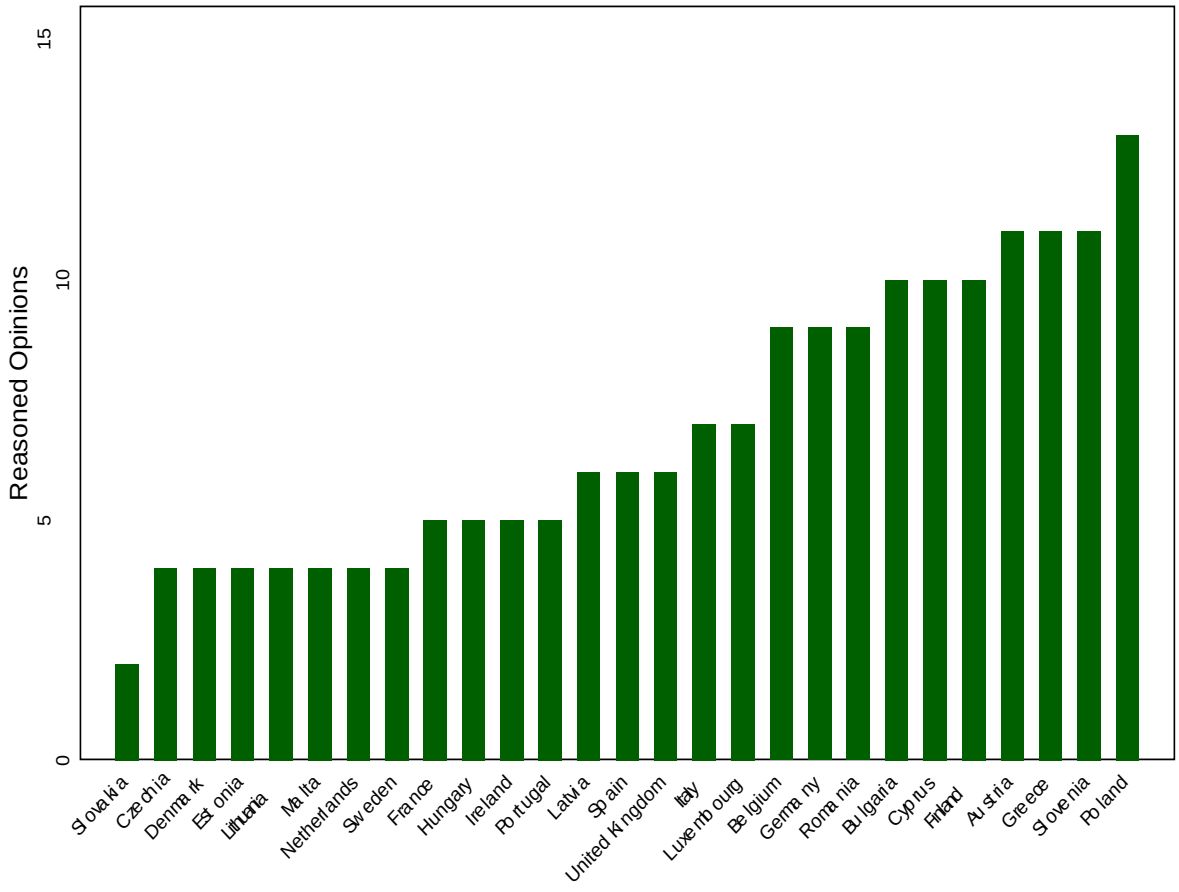
In addition, the bar chart reveals that while all member states suffer from a compliance deficit, they do so to a different degree. Evidently, there is a major contrast between Poland, as the worst complier, and Slovakia, as the best. Both are CEE countries having joined the EU in 2004 as part of the Eastern enlargement. What is more compelling, however, is that Poland is also the country that failed to comply with more than half of the directives (13 out of 24).

[8] The term is taken by Börzel (2021) and is calculated by multiplying the number of directives in force by the number of member states that could potentially infringe on them (directives*member states = violative opportunities).

Laggard Poland is followed by Slovenia, Greece, Austria, Finland, Cyprus, Bulgaria, and Romania. Placing most of these countries at the laggard group is not surprising. For the most part, Poland, Bulgaria, and Romania have been among the countries with a poor environmental record (Andonova, 2004; Buzogány, 2020).

Research also frequently reports Greece, Italy, and Spain as environmental laggards, often leading scholars to argue that there is a 'Southern problem' (Pridham & Cini, 1994) or that Southern countries suffer from a 'Mediterranean syndrome' (La Spina & Sciortino, 1993). However, the descriptive analysis reveals that apart from Greece such an argument does not hold. Interestingly, Italy and Spain are found in the middle field, swaying around the EU average (6.75 reasoned opinions) along with Latvia, the UK, and Luxembourg. Furthermore, the two Mediterranean islands—Cyprus and Malta—are usually left out from the discussion on compliance, and environmental compliance in particular. While both countries share similar characteristics, the figure shows that their compliance performance is moving in opposite directions.

Figure 4: Distribution of the dependent variable across member states



Leader Slovakia is followed by Czech Republic, Estonia, and Lithuania. Czech Republic and Estonia have been noted by previous studies to be among the best performers, although limited to the EU-10 (Andonova, 2004; Knill & Tosun, 2009a). When considering all EU member states, the fact that four CEE countries are among the best compliers confirms previous findings that suggest that CEE countries do not necessarily perform worse that their Western counterparts (Sedelmeier, 2008; Toshkov, 2008). This is also the case when assessing compliance across different areas, including the environment (Zhelyazkova et al., 2017).

It is also indicative that grouping countries based on certain characteristics or their cultural context cannot capture national responses to policy adaptation when one considers the Nordic countries. The descriptive analysis shows that their performance is not uniform; while Denmark and Sweden are arguably among the best compliers, Finland, on the other hand, drops out of the leaders group. This disproves the 'worlds of compliance' typology which groups the Nordic countries in the 'world of law observance' (Falkner et al., 2005). Indeed, Denmark has shown an exemplary record over time, and the same can be said for Sweden (Börzel et al., 2010), yet the data strikingly point Finland to be among the main laggards, despite being often regarded as a compliance leader and an environmental pioneer (Börzel & Buzogány, 2019). Overall, the descriptive analysis does not reveal a particular pattern with respect to country groupings or worlds of compliance, thus one cannot speak of either a 'Southern problem' nor an 'Eastern problem'.

5.2. Explanatory analysis

Due to the dependency of the outcome variable at two higher levels, I test the hypotheses by applying a cross-classified design to account for the variance at the member state and directive levels. Table 3 presents the results on the effects of non-state actors on the likelihood of member states to receive a reasoned opinion for not complying with EU environmental directives. Model 1 includes only the key independent variables related to the five hypotheses, while models 2, 3, and 4 test whether the effects of the main variables change after having controlled for state-, preference-, and directive-related factors respectively.[9] The table shows the coefficients, standard errors, and the statistical significance of the independent variables on non-compliance. The estimated coefficients indicate the association—direction and strength––between each independent variable with the dependent variable. The standard errors represent

[9] The logic following the model specifications is drawn by multicollinearity issues between control variables (see sub-chapter 4.4.).

the distance the observed values have from the population. The table also shows the random effects parameters, which report the variance estimates at the two higher levels to account for the multilevel structure of the data.

Moreover, since the outcome of interest is binary, interpreting the effects of the logit models in log odds no longer has a substantive meaning because of the lack of linearity (Gelman & Hill, 2007). For the independent variables to be interpretable, they must be able to predict the effect they have on either of the two groups of the binary outcome. On this account, the coefficients are transformed into odds ratios[10] by exponentiating them in order to get a multiplicative change in the odds (Long, 1997). Odds ratios can be interpreted[11] as the estimate change in the odds of a member state's non-compliance owing to one unit change in the value of a factor variable when all other variables are held constant.

Model 1 shows that overall non-state actors' responsiveness with respect to environmental issues has a negative effect on the likelihood of non-compliance. Hypotheses 1, 2 and 4 predicted that the likelihood of non-compliance will decrease in those member states where the public supports EU environmental policymaking, perceives environmental issues as salient, and mobilizes against their governments' environmental inaction. In the cases of public support and social protest the results indicate negative effects on non-compliance, although these did not reach statistical significance. On the other hand, with respect to environmental salience, model 1 shows that issue salience has a significant negative effect on non-compliance and thus it is in line with hypothesis 2. The odds ratio of non-compliance for issue salience is 0.95, meaning that for a unit of increase in issue salience the odds of non-compliance decrease 5 per cent. In contrast to expectations in hypotheses 3 and 5, the results in model 1 show that active NGOs and NGO consultations are positively associated with member states' non-compliance, although not significant. Put differently, countries in which NGOs are active and engage in consultations are more likely to receive a reasoned opinion by the Commission, and therefore the results find no evidence for hypotheses 3 and 5.

According to model 2, when controlling for regional autonomy,[12] issue salience continues to appear negatively significant. In agreement with the theoretical expectation, the model shows that member states are more likely to comply with environmental directives when

[10] Odds ratios are not included in the table but instead are reported and discussed in the text, where appropriate.

[11] In Long's (1997, p. 133) words, "For a unit change in x_k, the odds are expected to change by a factor of $\exp(\beta_k)$, holding all other variables constant".

[12] Because administrative capacity was highly correlated with issue salience it was excluded from model 2. An alternative model excluding issue salience and including administrative capacity is presented in Table A3 in Appendix IV.

Table 3: Cross-classified logistic regression analysis

Variables	Model 1	Model 2	Model 3	Model 4
Public support	-0.0135 (0.0219)	-0.0163 (0.0225)	-0.0145 (0.0221)	-0.0139 (0.0219)
Issue salience	-0.0465** (0.0226)	-0.0480** (0.0227)	-0.0410* (0.0232)	-0.0471** (0.0226)
Active NGOs	0.0276 (0.0230)	0.0201 (0.0276)	0.0238 (0.0234)	0.0274 (0.0230)
Social protest (=1)	-0.234 (0.318)	-0.249 (0.318)	-0.256 (0.322)	-0.235 (0.318)
NGO Consultations (=1)	0.371 (0.330)	0.364 (0.330)	0.399 (0.334)	0.392 (0.329)
Regional autonomy		0.00828 (0.0172)		
Govt preferences (=1)			-0.488 (0.391)	
Complexity				0.0538*** (0.0113)
Novelty (=1)				0.921* (0.551)
Constant	-0.211 (1.609)	-0.0202 (1.648)	-0.106 (1.625)	-2.721 (1.748)
Random effects (variance)				
Member state-level	0.239 (0.152)	0.234 (0.148)	0.248 (0.154)	0.238 (0.147)
Directive-level	1.529*** (0.544)	1.529*** (0.546)	1.542*** (0.550)	0.593** (0.252)
N	648	648	648	648

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

the public considers the environment a top priority. The odds ratio remains 0.95. As in model 1, the rest of the factors related to the hypotheses seem to be stable across state-related characteristics, with public support and social protest still having a negative albeit insignificant effect, and NGO-related variables having a positive non-significant effect. In an alternative model excluding issue salience (presented in Table A2 in Appendix IV), I tested the effects of the remaining four key independent variables when controlling for administrative capacity. No substantial change has been recorded as far as the explanatory variables of interests are concerned. The control administrative capacity, however, appears to have a significantly negative effect on non-compliance, albeit marginally (p-value=0.09). The odds ratio is 0.62, meaning that for a unit increase in administrative capacity, non-compliance decreases almost 40 per cent. In line with the literature, effective bureaucracies impede non-compliant behavior (Toshkov, 2010).

When controlling for preference-related factors in model 3,[13] such as Green parties in government, all the coefficient values seem to be once again stable with no substantial changes. The effect of issue salience on non-compliance remains significant, though only under $p<0.1$. Interestingly, the low significance is consistent across all models that include government preferences as control (see also Table A3 in Appendix IV). One explanation for this may be that when Green parties are in power it is more likely to act in accordance with citizens' attitudes towards the environment because this is also in line with their own political priorities. The odds ratio of non-compliance for issue salience remains 0.95 as in the previous models, and therefore the odds for a member state to fail to comply with environmental directives is 5 per cent less when the public considers the environment a salient matter.

Model 4 presents the results when controlling for directive-related factors, such as complexity and novelty. Again, no substantial changes are recorded. The only noticeable difference in relation to the factors pertaining to the hypotheses is the increase in the level of significance of issue salience (p-value=0.03) as opposed to model 3. As with other models, issue salience odds ratio is 0.95. Model 4 is distinct in that it is the only model in which the controls appear to have a significant effect on non-compliance with the anticipated coefficient signs. A strong determinant of non-compliance is the increased complexity owing to a higher number of recitals. Additionally, newly adopted directives are also significantly increasing the likelihood of non-compliance as already the literature suggests (Kaeding, 2006). This means

[13] The control variable voting power was excluded from the analysis due to collinearity with active NGOs. Alternative model specification to model 3, including voting power and excluding active NGOs is presented in Table A3 in Appendix IV.

that an increase in recitals as well as in newly adopted directives as opposed to amending, the odds of member states receiving a reasoned opinion are approximately 1.05 and 2.5 times more, respectively. In other words, the more recitals directives contain, the more compliance problems will occur, and the same goes for new directives.

Moving onto the variance of the two levels in the data, it remains pertinent to consider the random effects parameters. Table 3 shows that the variance for between member states is 0.239 whereas for between directives is 1.529. These values are conditional variances coming from the model that includes all hypotheses-related factors and help explain the dispersion of the observations around the mean of the two levels. Evidently, the observed variance in the directive level is much bigger than the member state level, and this seems to hold across all models. However, to recall sub-chapter 4.4, the degree of variation of the outcome variable in each of the two levels is also captured by the ICC. As discussed earlier, the ICC for the directive level is 0.291, meaning that almost 30 per cent of the variance in the observations is explained by differences across directives. This is also in agreement with the random effects estimates as seen in Table 3 and can also explain the significance of the two directive-related controls when included in model 4.

5.2.1. Discussion

Overall, the results are stable and consistent across the different model specifications. Despite adding different control variables, the results seem to hold as the strength, direction and (in)significance of the coefficients remain steady. While the estimates of domestic support towards EU environmental policymaking is in the expected direction, the strength of the effect is rather small. In other words, acceptance of EU environmental legislation does not guarantee good compliance. The almost no effect yields to one possible alternative explanation; citizens in the least compliant countries may rely more on the EU as the legitimate institution for effective policymaking than their national institutions *because* of their growing distrust towards national governments and their abilities to effectively implement environmental policies (Börzel et al., 2010). This argument has also been confirmed elsewhere (Sánchez-Cuenca, 2000). There are, however, signals that environmental mobilizations in the form of protests have an effect, but this is not significant. On the other hand, mobilizations can in fact be a reaction to governmental non-compliance with respect to environmental policy, and more likely expose decisions that go against environmental protection (Andonova & Tuta, 2014). This may be true in those member states where influential interest groups lobby in favor of

economic development at the expense of stricter market-correcting policies, given the link of environmental directives to energy and transport domains (Börzel & Buzogány, 2019).

Contrary to theoretical expectations, there is no evidence that NGOs activeness, as captured by their participation in European networks, impacts policy adaptation and implementation. This has also been corroborated by other studies (Knill & Tosun, 2009b; Zhelyazkova et al., 2018). Paradoxically, the models indicate that non-compliance is positively affected by organized societal actors. One possible explanation may relate to the Commission's decentralized monitoring mechanism ('fire-alarm') (McCubbins & Schwartz, 1984; Tallberg, 2002). It could be that the more active non-state actors are in a member state the more likely for persistent cases of bad application or non-conformity to be flagged by NGOs (Hofmann, 2019; Kaya, 2019), to the extent that drives the Commission to open more infringement proceedings against those member states. A methodological explanation for the positive effect may be the inaccurate measurement of the variable. While NGOs membership in European network organizations may be used as an indirect proxy of measuring activeness, there is no reason to believe that there are no other smaller-scale NGOs that are also actively involved. What is more, it is also reasonable to say that the larger the size of a country the more likely it is that more NGOs will be active. In that case, Germany's 32 organizations in relation to Malta's one NGO is more likely to indicate their population size than NGOs' activeness.

Turning to the influence of NGO consultations, in percentage terms the odds ratio of non-compliance is approximately 50 per cent greater when member states routinely consult with civil society. Again, this finding is surprising and not in line with the hypothesis, because not only does it appear that civil society does not influence policy implementation, but it also hampers it. Although, there are two plausible explanations for this; one being that the variable does not specifically measure governmental consultations with environmental NGOs, but rather measures whether CSOs irrespective of field of expertise are routinely consulted, and second being that the measure includes broadly all sorts of CSOs in addition to NGOs, such as interest groups, labor unions, religious organizations, professional associations etc. (Coppedge et al., 2021, p. 192). In turn, this diverse range of non-state actors may explain the ambivalent effect, on the grounds of the veto player argumentation (Jensen, 2007).

Finally, the explanatory analysis reveals that hypothesis 2 on environmental salience among the public is supported by the results and is congruent with other recent findings (Spendzharova & Versluis, 2013). In line with the theoretical expectation, member states are indeed significantly less likely to receive a reasoned opinion when their citizens perceive environmental protection and climate change as a top priority. This effect is robust under

different model specifications and when controlled for state-, preference-, and directive-related factors. The finding shows that societal perceptions on the importance of a policy area can exert influence on governmental and administrative officials and drive policy responsiveness. At the same time, it lends support to preference-based arguments, pointing to governmental preferences being shaped by public attitudes (de Vries, 2010), because non-compliance with highly salient issues would raise the costs of re-election.

5.2.2. Robustness analysis

Given the high ICC at the directive level and the significant effect of the directive-level random effects, as shown above, I proceed with testing the robustness of the effects reported in the main analysis when considering only one higher-level, the directives. This is also necessary to ensure that the findings are not affected by the multiple state-specific variables.

The robustness checks, presented in Table 4, show that the effects of all variables are stronger than in the main analysis, although to a different degree depending on the variable, yet the direction of the coefficients remains the same. Issue salience remains significant with a slightly stronger effect on non-compliance, meaning that in fact issue salience is better captured by the variance of the observations at the directive level. A noteworthy difference is the effect NGO consultations have on non-compliance. Interestingly, when accounting only for the directive level, the effects turn significant. Although significant under $p<0.1$, this signals that governments' routine consultations with CSOs contribute to non-compliance.

As in the main analysis, due to collinearity different models were tested (see also Table A4 in Appendix IV). The results pertaining to all key independent variables seem to hold even when controlling for state-, preference-, and directive-level variables. It should be noted, however, that similarly to the main analysis, the effects of the control variables administrative capacity, complexity and novelty remain significant and with the expected coefficient signs, whereas regional autonomy, government preferences, and voting power remain insignificant, yet in the expected direction. In sum, the effects of non-state actors, as captured by citizens' attitudes as well as organized societal interests, to member states' non-compliance are robust to a range of relevant model specifications, with no substantial changes across the different levels considered.

Table 4: Robustness checks–clustered in directives

Variables	Model 1	Model 2	Model 3	Model 4
Public support	-0.0148	-0.0176	-0.0155	-0.0150
	(0.0157)	(0.0163)	(0.0157)	(0.0157)
Issue salience	-0.0469***	-0.0483***	-0.0428**	-0.0473***
	(0.0168)	(0.0170)	(0.0171)	(0.0168)
Active NGOs	0.0248	0.0178	0.0217	0.0247
	(0.0164)	(0.0196)	(0.0166)	(0.0164)
Social protest (=1)	-0.252	-0.267	-0.275	-0.253
	(0.229)	(0.231)	(0.231)	(0.230)
NGO Consultations (=1)	0.464*	0.454*	0.500*	0.475*
	(0.262)	(0.263)	(0.264)	(0.262)
Regional autonomy		0.00807		
		(0.0124)		
Govt preferences (=1)			-0.400	
			(0.336)	
Complexity				0.0514***
				(0.0108)
Novelty (=1)				0.881*
				(0.530)
Constant	-0.0986	0.0921	-0.0213	-2.500*
	(1.161)	(1.195)	(1.162)	(1.335)
Random effects (variance)				
Directive-level	1.413***	1.416***	1.421***	0.542**
	(0.508)	(0.509)	(0.511)	(0.237)
N	648	648	648	648

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Chapter 6: Conclusion

The previous chapter presented and discussed the findings, yet several empirical, theoretical, and methodological conclusions can be drawn. This concluding chapter reflects on the results and discusses the implications of the study, as well as provides recommendations for future research.

6.1. Reflection on results

The responsibility of complying with EU legislation lies with the member states. The range, however, of actors involved in the implementation process has increasingly widened, making compliance a dynamic interplay between state and non-state actors. The thesis sought to systematically analyze the impact of non-state actors on member states' level of compliance with EU environmental policy, by adopting a broader conceptualization of non-state actors to account for both organized and diffused societal interests. Considering all EU member states, the thesis fills a gap in the literature on non-state actors and EU environmental compliance, that has so far been dominated by qualitative studies (Andonova & Tuta, 2014; Dimitrova & Buzogány, 2014; Koutalakis, 2004). Subsequently, accounting for a subset of 24 environmental directives adopted between 2009-2015, the thesis sought to assess cross-national variation, with the aim to improve our understanding on existing patterns and contribute to the ongoing debate about environmental leaders and laggards.

The empirical findings revealed a rather surprising mismatch between societal actors' expected role and their actual impact on member states' compliance. The results show that environmental non-state actors are more constrained in their ability to impact policymaking and exert pressure on national governments to comply than what was previously assumed by case studies (Andonova & Tuta, 2014; Baun & Marek, 2013; Dimitrova & Buzogány, 2014). This is particularly the case when considering organized societal interests and the role of NGOs in influencing policy outcomes. Neither NGOs activeness nor governments routine consultations with NGOs facilitate compliance. If anything, the latter appears to contribute to more non-compliance. Similarly, citizens' support of EU environmental policymaking and increased civic engagement in environmental mobilizations do not seem to improve member states' compliance. In that sense, mobilizations are not able to communicate societal demands in a way that facilitates government responsiveness.

Conversely, the findings indicate one factor that determines the level of compliance: citizens' perceived importance of the environment and climate change. The significant effect of issue salience affirms previous studies who found similar evidence (Spendzharova & Versluis, 2013). The fact that compliance is conditioned by the saliency citizens attach to environmental issues is not puzzling. Citizens' issue prioritization influences its "prominence in the minds of decision-makers" (Oppermann & De Vries, 2011, p. 3). Issue salience raises the costs of non-compliance, because public opinion shapes government preferences (de Vries, 2010). By consequence, citizens' perceptions on the importance of specific policy issues can exert domestic pressure on member states' compliance.

The findings on the different aspects of non-state actors remained unaltered when accounting for different conditions under which these could have been strengthened. In this regard, the thesis points to additional structural and directive-specific factors determining compliant behavior. In line with the literature, states' administrative capacity improves compliance, while new and complex directives pose obstacles to timely and correct norm adaptation (Treib, 2014). Moreover, the descriptive analysis suggests that there is no indication of a Southern or Eastern problem. While no member state seems to be without a compliance problem, no geographical division or country grouping is observable in relation to non-compliance. With the Eastern enlargement countries in mind, CEE countries occupy space as both leaders and laggards, whereas Greece seems to be the only troubled Southern state.

Despite the finding on issue salience, the thesis posits that it cannot be argued that non-state actors' strength is a good predictor of member states' level of compliance. That said, the rather limited impact of non-state actors should be treated with caution due to several methodological shortcomings. Admittedly, accounting for the impact of non-state actors in a large-N study can be challenging, owing to their multifaceted and often indirect way of action. Detecting their influence can be hard, especially given the fact that quantitative studies often rely on indirect proxies to construct measurable variables. More precisely, one methodological shortcoming pertains to how NGOs activeness was quantified to provide for an appropriate measure. As already discussed, it is reasonable to assume that NGOs' membership to the two largest European environmental networks indicates their activeness, since all member NGOs voluntarily become members, yet there is no guarantee that there are no other smaller-scale grassroot organizations that are equally active domestically. Additionally, a count variable may be in fact measuring the size of the country, as it is expected that the bigger the country the more NGOs are registered. This is an inherent limitation, since there was no other way to obtain

a more accurate measure on active NGOs across all member states given the quantitative design of the thesis.

As a result of the limited years for which there was available information for some of the key independent variables (i.e. public support towards EU environmental policymaking, issue salience, and social protests), these could not be matched with the years the relevant directives had to be transposed, and thus varied only per country. Essentially, this can be a methodological shortcoming, since in those cases the variables did not capture temporal variation. It should also be acknowledged that the findings on NGO consultations could be partially due to the proxy used. This study was not able to differentiate between policy areas for which non-state actors are engaging in government consultation practices to ensure that only environmental consultations were included in the measure nor was able to capture policy-specific information provided by the non-state actors during the consultations. On this account, to better understand their actual contributions with respect to the environmental policy, a clearer distinction between the motivations of environmental non-state actors and other interest groups should be made.

Nevertheless, the thesis still provides a first quantitative illustration. It concludes that while non-state actors do not hold much weight in explaining member states' compliance levels, issue salience among the public certainly matters. However, to rule out alternative explanations, better data need to be gathered that can reflect more accurately the variables we are to test and avoid counterfactual situations.

6.2. Implications

The findings of this thesis have implications for the EU-state-society relations and the future of EU environmental policy. First, it seems that despite the growing body of environmental legislation, the implementation gap is in decline, at least considering recently adopted directives. This could signal that recent environmental legislation has become less demanding or that member states are better prepared to implement it on the ground.

Second, somewhat surprisingly, the little evidence of non-state actors scaling down non-compliance is not without implications for the prospects of the Commission's decentralized monitoring mechanism. While I can only speculate at this point, this might indicate that the Commission effectively managed to shift monitoring to domestic non-state actors, as well as point to non-state actors' dual role to act as 'watchdogs' besides offering their expertise, since domestically active NGOs are more aware of the implementation reality in

each country. In that sense, the impact of non-state actors could also be seen through the increase in the number of infringement proceedings. However, more in-depth analyses on complaints lodged by NGOs need to be conducted to be able to reach any conclusions. From this perspective it could be said that non-state actors utilizing opportunities offered by decentralized monitoring is a promising way to bring suspected cases of violations to the Commission's attention.

Finally, the fact that issue salience matters for compliance hints that in fact the Commission's strategy to strengthen the role of citizens in shaping policy outcomes at the national level by activating public consultations as described by the Better Regulation Agenda is not unfounded. Public perceptions about environmental importance can be a pulling factor and indirectly can affect policy responsiveness. Citizens' prioritization of the environment shows their strength in raising the costs of non-compliance. This creates an additional leverage for the Commission and its strategy to strengthen the dialogue with EU citizens and aligns well with the objectives set forth in the Environmental Compliance Assurance Action Plan published in 2018. In that sense, capitalizing on citizens' priorities is rather likely to lead to more compliance and ultimately increase the legitimacy of the policy outcomes.

6.3. Future research

This thesis provided a first quantitative overview of the impact non-state actors have on member states' implementation of EU environmental policy, which largely contradicted the findings of previous qualitative research. It remains relevant from both a theoretical and practical standpoint to further investigate their impact on environmental compliance to make the findings less dubious. Future research should thus focus on improving the accuracy of the measurement of NGOs activeness and try to disentangle their dual work, as 'watchdogs' and as providers of expertise and capacity. By consequence, this calls for a better theoretical refinement as to the underlying causal mechanisms and the expected direction of their impact on compliance. Moreover, environmental issues have grown to become a priority for the EU, and this reflects the diversity of issues the legislation addresses (i.e. climate change, energy, transport). Yet, we know little about how environmental NGOs interact with industry-related interest groups that also try to influence policymaking. Future research should try to shed light on how potential opposing motivations among non-state actors operating in the boarder environmental area influence governmental preferences.

Admittedly, environmental issues are often controversial and receive much more public attention that other policy areas. Since the findings could be sector-specific, compliance scholars are encouraged to further focus on governments' responsiveness to societal actors across different policy areas in a cross-national and cross-sectoral framework, and in particular across Justice and Home Affairs and Social Policy, which usually are domains in which many NGOs are active and deal with issues that are both salient and sensitive to the general public and often become topics of heated public debates.

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Appendix I: Directives in the sample

Table A1: Directives used for the analysis

Directive	Title
2009/147/EC	Conservation of wild birds
2009/126/EC	Petrol vapour recovery during refuelling of motor vehicles at service stations
2009/128/EC	Framework for Community action to achieve the sustainable use of pesticides
2009/20/EC	Insurance of shipowners for maritime claims
2009/41/EC	Contained use of genetically modified micro-organisms (Recast)
2009/31/EC	Geological storage of carbon dioxide (Amending)
2009/28/EC	Promotion of the use of energy from renewable sources and amending and subsequently (Repealing)
2009/33/EC	Promotion of clean and energy-efficient road transport vehicles
2009/90/EC	Technical specifications for chemical analysis and monitoring of water status
2009/71/Euratom	Framework for the nuclear safety of nuclear installations
2010/75/EU	Industrial emissions (integrated pollution prevention and control)
2010/31/EU	Energy performance of buildings
2010/79/EU	Adaptation to technical progress on the limitation of emissions of volatile organic compounds
2011/92/EU	Assessment of the effects of certain public and private projects on the environment
2011/65/EU	Restriction of the use of certain hazardous substances in electrical and electronic equipment
2011/70/Euratom	Establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste
2012/19/EU	Waste electrical and electronic equipment
2012/18/EU	Control of major-accident hazards involving dangerous substances, amending and subsequently (Repealing)
2013/30/EU	Safety of offshore oil and gas operations (Amending)
2014/94/EU	Deployment of alternative fuels infrastructure
2014/89/EU	Framework for maritime spatial planning
2014/87/Euratom	Framework for the nuclear safety of nuclear installations (Amending)
2015/2193/EU	Limitation of emissions of certain pollutants into the air from medium combustion plants
2015/652/EU	Laying down calculation methods and reporting requirements relating to the quality of petrol and diesel fuels

Source: EUR-Lex

Appendix II: Social mobilization

Figure A1: Histogram on the frequency distribution of the raw data on social protest occurrence.

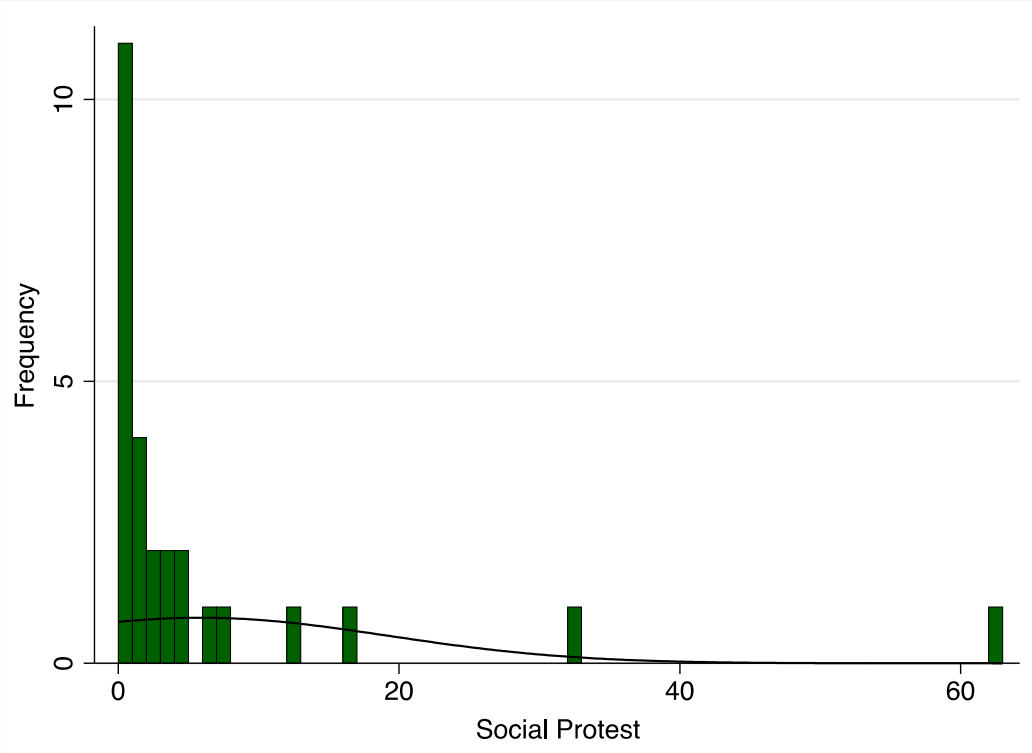
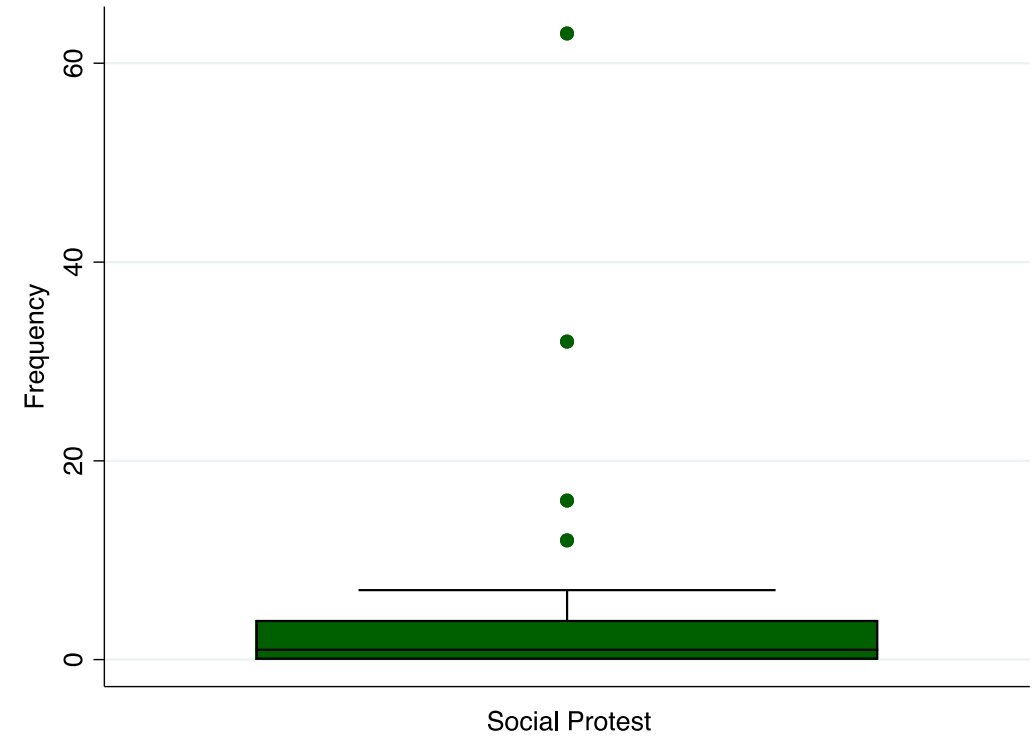


Figure A2: Boxplot on the frequency distribution of the raw data on social protest occurrence.



Appendix III: Summary of descriptive statistics

Table A2: Summary statistics of the variables in the analysis

Variable	N	Mean	Min	Max	Std. Dev.
Non-compliance (RO=1)	648	0.285	0	1	
Public support	648	72.6	59.5	85.6	6.668
Issue salience	648	7.907	0.6	25.3	7.032
Active NGOs	648	7.667	1	32	6.633
Social protest (=1)	648	0.593	0	1	
NGO consultation (=1)	648	0.745	0	1	
Administrative capacity	648	1.143	-0.329	2.241	0.576
Regional autonomy	648	11.448	0	37.41	10.599
Govt preferences (Green party=1)	648	0.127	0	1	
Voting power	648	0.037	0.007	0.163	0.04
Complexity	648	33.5	5	97	20.357
Novelty (new=1)	648	0.792	0	1	

Note: RO = reasoned opinion

Appendix IV: Robustness checks

Table A3: Robustness checks

Variables	Model 1	Model 2	Model 3
Public support	-0.00725	-0.0155	-0.0168
	(0.0227)	(0.0224)	(0.0227)
Issue salience		-0.0382*	-0.0428*
		(0.0233)	(0.0234)
Active NGOs	0.0267		0.0183
	(0.0287)		(0.0279)
Social protest (=1)	-0.246	-0.191	-0.267
	(0.329)	(0.320)	(0.322)
NGO Consultations (=1)	0.366	0.399	0.414
	(0.348)	(0.339)	(0.332)
Administrative capacity	-0.466*		
	(0.275)		
Regional autonomy	0.00362		-0.488
	(0.0177)		(0.391)
Government preferences (=1)		-0.518	-0.470
		(0.390)	(0.392)
Voting power		2.244	
		(3.841)	
Complexity			0.0540***
			(0.0113)
Novelty (=1)			0.928*
			(0.554)
Constant	-0.527	0.00744	-2.494
	(1.665)	(1.645)	(1.800)
Random effects (variance)			
Member state-level	0.268*	0.262*	0.248
	(0.160)	(0.157)	(0.154)
Directive-level	1.531***	1.543***	1.542***
	(0.543)	(0.552)	(0.550)
N	648	648	648

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Table A4: Robustness checks–clustered in directives

Variables	Model 1	Model 2	Model 3
Public support	-0.00898	-0.0170	-0.0178
	(0.0161)	(0.0158)	(0.0162)
Issue salience		-0.0404**	-0.0445**
		(0.0169)	(0.0173)
Active NGOs	0.0248		0.0163
	(0.0197)		(0.0196)
Social protest (=1)	-0.267	-0.210	-0.285
	(0.230)	(0.225)	(0.232)
NGO Consultations (=1)	0.481*	0.511*	0.501*
	(0.275)	(0.267)	(0.265)
Administrative capacity	-0.493**		
	(0.200)		
Regional autonomy	0.00332		0.00629
	(0.0125)		(0.0124)
Government preferences (=1)		-0.437	-0.378
		(0.334)	(0.339)
Voting power		1.882	
		(2.720)	
Complexity			0.0516***
			(0.0108)
Novelty (=1)			0.887*
			(0.533)
Constant	-0.368	0.120	-2.292*
	(1.186)	(1.162)	(1.362)
Random effects (variance)			
Directive-level	1.401***	1.414***	1.547**
	(0.504)	(0.508)	(0.239)
N	648	648	648

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1