CONFORMING OR MUDDLING THROUGH: EXPLAINING VARIATIONS IN COMPLIANCE WITH EUROPEAN UNION ENVIRONMENTAL POLICY

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To my parents Theodosios and Konstantina; my brothers Charilaos and Grigorios; and my sister in law Maria, who all made this happen
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European Union (EU) member states have often failed to transpose and implement EU directives into their national legal order. While this is the case in most sectors of policy, the environment sector seems to bear the brunt of non-compliance. The danger is obvious. Failure in a ‘less salient’ sector such as the environment could decrease members’ belief in ‘European solutions’ for more salient sectors, and if EU policy is not fully implemented by all member states it risks becoming an empty paper with only a slight effect on environmental quality. Most importantly, non-compliance is an expensive and time consuming reality that serves to take up most of what the Commission time.

Three waves of literature have failed to produce an empirically reliable understanding of the determinants of non-compliance, while there is also little theoretical cumulativeness. This study uses transposition rates of EU environmental directives for the 1998-2007 period, distinguishing between the supranational and intergovernmental characteristics of the EU construct, which leads to different sources of theory (in particular International Relations and Regulatory Federalism), and different explanations of non-compliance than previously envisioned.
A time-specific fixed effects Poisson estimator is used to demonstrate that non-compliance is a function of both domestic and EU level influences. This study lends support to the ability of supranational institutions to induce compliance using management mechanisms. For instance, it finds that the European Commission’s funding of Non-Governmental Organizations increases compliance. However it also lends support to the strateginess of the decision to comply by member states. Bargaining power in the Council of Ministers increases non-compliance, and so does the existence of powerful industries and cozy regulatory efficiencies. Finally, from a domestic politics standpoint, policy salience and governmental commitment are shown to increase compliance, while corruption and need for regulation are shown to decrease compliance. These findings suggest that the full picture of non-compliance can be attained if theorists take a complementary rather than disjunctive look into the explanations of non-compliance, as implementation in the EU is an intergovernmental enterprise and it should be understood in its own terms, always keeping in mind to look both ways.
CHAPTER 1
INTRODUCTION

1.1 Introduction

The European Union is the world’s largest and richest single consumer market in the World, with a total gross domestic product that exceeds that of the United States, as well as that of the North American Free Trade Agreement, and accounts for 40% of the world’s total international trade. As such stability and progress in the EU is very important not only for the EU but also for the rest of the world. The founders of the original European Economic Community (EEC), the predecessor of the modern EU, supported the development of a fully integrated union of European states. However, they were pragmatic in their belief that this goal could only be achieved through the initial promotion of cooperation and integration in the less salient issues of ‘low politics.’ Jean Monnet and Robert Schuman firmly believed that the cause of political integration would be served better if the Commission would promote cooperation and integration in less salient issues of ‘low politics’ such as the environment, in hope that the enthusiasm for ‘European solutions’ would spill-over to the more salient issues such as common foreign and security policy.

However, and contrary to the belief that the EU is an environmental leader in world environmental politics, implementation of EU environmental policy is very much at the ‘sharp end’ of the EU policy process. The danger is that failure in a ‘less salient’ sector such as the environment could decrease members’ belief in ‘European solutions’ for more salient sectors (i.e. foreign policy), and if EU policy is not fully implemented and enforced equally by all member states it risks becoming a paper exercise with only a slight effect on environmental quality. Thus non-implementation does not only have negative consequences on the environment, but also on the integration process, which in turn may have negative consequences
globally, as so much of the EU’s present and future seems to be intertwined with the rest of the world. These negative consequences of non-compliance in the environmental sector make the need to explain and model this situation obvious, especially since compliance with Environmental directives is the policy sector riddled with the biggest deficit (by far).

The European Commission has created a complex mix of enforcement and management mechanisms to induce compliance that practically forms a ladder of patrolling. From simple fire-alarm mechanisms through citizen complaints, to more complex enforcement oriented mechanisms that entangle the European Court of Justice (ECJ), to the most extreme deterrence mechanism of financial penalties. However, non-compliance is still a possibility, and initial non-compliance a definite reality. An expensive, time consuming, and alienating reality that serves to take up most of what the Commission does as ‘guardian’ of the treaties, instead of more important functions like policy innovation.

Although the empirical question of implementation (or the lack thereof) has sparked the interest of academics and attracted the attention of bureaucrats and politicians alike, their various attempts to assess the forces that may influence or shape national responses to EU legislation have been largely unsuccessful. Three waves of literature have failed to produce an empirically reliable understanding of the determinants of non-compliance, while there is also little theoretical cumulation. First, in the late 1980s various researchers focused on the administrative and legal implications of transposition of directives, but their attempts to assess the forces that may influence or shape national responses to EU legislation, were largely a-theoretical. A second wave of researchers offered a more theoretical institutionalist theory of compliance. Based on arguments of costs and appropriateness, they focused on the ‘goodness of fit’ hypothesis as the key to compliance deficit, which pertains to cases of high institutional incompatibility between
national administrative practices and European requirements. But the results were largely mixed and inconsistent. The same issues plague the third wave of research, which has focused on the domestic politics of compliance. Arguably this last strand of theorists have exponentially increased our understanding of the determinants of compliance, but the theoretical murkiness created has left researchers still muddling through competitive, complementary and disjunctive explanations.

1.2 Objectives

The main objective of this research is to evaluate alternative compliance models. Special consideration is given to the American literature as a guide to non-compliance modeling; especially the literatures on regulatory federalism and bureaucratic control. I hope the research will contribute to the academic debate here on regulatory enforcement, as well as to a more dynamic modeling of the EU situation.

The specific objectives are the following:

- Determine what factors are likely to account for differences in member state compliance with environmental mandates.
- Determine what things can (and have) EU officials do (done) to promote state compliance. What considerations both limit and facilitate these efforts?
- Determine what guidance (if any) principal agent theory can provide to EU officials and those who study environmental federalism in Europe.

However, inasmuch as non-compliance can be located in the intergovernmental dynamics at play in the European Union, then, insights can be provided from the extensive literature of International Relations. Hence, I will also review prominent approaches in explaining non-compliance in the International Relations literature, distinguishing the various theories according to the assumptions they make about the source of non-compliance and lack of enforcement and the hypotheses those entail (free-ridership, wrong institutions, etc). My contribution consists in:
a) delineating the ‘analytical borders’ of these theories in terms of explaining non-compliance, and b) proposing new ways of looking at the issue that when combined with the existing ones will provide for a better understanding of the issue of non-compliance.

As such this research should appeal not only to researchers and academics interested in EU politics and policy, but also to academics involved in the fields of American federal and state politics, regulatory politics, environmental politics, international relations, and cooperation academics in general. Hopefully it will also help create an inter-disciplinary bridge between the much alienated literatures of Public Administration and International Relations while offering a powerful explanation of non-compliance in the EU environmental policy context.

1.3 Overview

The second Chapter in this study will offer a review of the prominent EU studies approaches in explaining non-compliance. These are distinguished according to the theoretical (or not) stance they take and the methodological line they follow. From simple administrative explanations, to ‘misfits’, to domestic politics, the EU studies literature has made considerable steps in enhancing our theoretical and empirical understanding of compliance with EU directives. However, several criticisms are offered, in the later parts of this Chapter, which should help explain the reasons why the EU studies literature has collectively failed to offer an adequately reliable understanding of compliance dynamics.

The basic background information and relevant actors in the environmental arena are discussed in detail in Chapter 3. Specifically, this chapter offers a small history of environmental governance in the EU, exemplifying the ways different governance approaches came to be and evaluating whether the EU has kept up with its theoretical commitments to new forms of governance. The second part of this chapter provides a detailed examination of the institutional actors involved in environmental policy in the EU, and the specific compliance mechanisms
employed by these actors. The final part of this chapter provides an extensive look into the purported compliance deficit with EU policy requirements in general, and specifically with the environmental gap, its magnitude as compared with other sectors, and its importance to the Commission and European Union at large.

Chapter 4 in this study follows the literature of international relations as it leads through different conceptualizations about the source of non-compliant behavior. From realist to neoliberal institutionalist to more novel approaches like constructivism, this chapter offers a fresh way to look at the issue of non-compliance, delivering important theoretical insights into the ability of power, supranational institutions, and domestic forces to influence compliance. The same tactic is followed in Chapter 5. After offering a short introduction into how we can perceive the EU and whether it can be compared to other federal states, it goes through centralized and decentralized theories of regulatory federalism, offering such insights as the importance of salience and business climate, among others.

After offering the conceptualization of compliance as the initial stage of policy implementation, Chapter 6 of this study provides an overview of the issues and faults of infringements as the dependent variable in non-compliance research and offers support for the use of transposition rates as the dependent variable. The next two sections cover the operationalization of the independent variables, while the chapter also provides an overview of the different econometric models available given the count data in this study. After a short discussion of the attributes of the employed data, the econometric model of choice becomes evident through the use of several statistical tests. The time-specific fixed effects Poisson estimator provides the best fit for the dataset of this study, and it is used to assess the empirical strength of the hypothesized relationships in the last section of this chapter.
Finally, the conclusion to this study offers a further overview and elaboration on the specific contribution to both theory and methodology offered by this study. Specific attention is paid to the goodness of fit hypothesis that has so far dominated the EU studies literature, making sure to illustrate the faults and spuriousness of the hypothesis using the results of this study. A further discussion is also offered on the slipups of domestic politics theorists pertaining to theoretical and methodological issues. The last part of this chapter provides a discussion of the enforcement and management approaches to non-compliance as they have developed in both the international relations and regulatory federalism theories, while it also discusses the limitations of this study and makes several suggestions for future research.
CHAPTER 2
THE EU IMPLEMENTATION RESEARCH

2.1 Introduction

While European legal and economic integration has made great strides since the mid 1980s, it has exposed a major deficiency within the EU policy-making system. Implementation of EU policy, and more specifically in this analysis environmental policy, is very much at the ‘sharp end’ of the EU policy process (Jordan, 2002).

Non-implementation of EU directives and regulations, even in low salience policy arenas, is potentially of great importance in terms of the overall functioning of the EU and its significance in world politics. The potential scale of the negative consequences of non-compliance highlights the need to investigate, model and explain patterns of implementation and non-implementation in the EU, beginning with low saliency policy sectors. Although the empirical question of implementation (or the lack thereof) has sparked the interest of academics and attracted the attention of bureaucrats and politicians alike, their various attempts to assess the forces that may influence or shape national responses to EU legislation have been largely unsuccessful for different reasons.

The purported compliance gap already attracted academic attention as early as the 1980s. The stepping-stone was set in 1986, when legal scholars Krislov, Ehlermann and Weiler drew attention to the growing problem of compliance (Krislov et al., 1986), while Siedentopf and Ziller (1988), analyzed the implementation of seventeen directives in the twelve member states. However it was not until the early 1990s that the European Commission focused more on the problem. This was partly due to the advent of the Single Market Program that acted as the catalyst for both Commission attention and the advent of implementation studies in the EU context. Researchers have tried to fill-in the ‘gap of compliance’ in EU policy implementation,
and according to their empirical and theoretical focus they can be categorized into three broad waves of research.

This chapter offers an introduction to the Europeanization literature, as it has developed under the rubrics of International Relations, Comparative Politics and Public Administration, without necessarily making a distinction of who belongs where. This is because, in their attempt to complement, fix, or expand on previously empirically disconfirmed hypotheses about the source of non-compliance, theorists have moved seamlessly from simple administrative explanations, to adding international relations explanations, to more complex comparative politics ones without regard for model parsimony or theoretical source. Sometimes, even competing theories are used together to explain variation; management and enforcement theories of compliance are used under the same theory and ‘top-down’ mechanisms are inter-changed with ‘bottom-up’ ones.

Most of contributions emanate from the disjunction between voluntary and involuntary source of non-compliance as found in the international relations literature. Non-compliance can be voluntary (cost-avoidance) or involuntary (lacking capacity) and the accompanying logic for influencing this behavior can be enforcement (for voluntary), or management (for involuntary). These two dominating perspectives about source and solution are commonly referred to as the enforcement and the management approach (Chayes and Chayes, 1995; Downs et al., 1996).

Under the enforcement approach states are conceived as rational actors that weigh the costs and benefits of alternative choices when making compliance decisions in cooperative situations. Enforcement approaches assume that states violate international norms and rules voluntarily because they are not willing to bear the costs of compliance (Borzel, 2002). As such, hypotheses pertaining to the understanding of adjustment costs fall under this rubric. States will always
choose non-compliance when the benefits of shirking exceed the costs of detection. It becomes clear then that compliance problems, under this approach, are best remedied by increasing the likelihood and costs of detection through monitoring and the threat of sanctions (Tallberg, 2002).

In contrast, the management approach assumes that states are in principle willing to meet previously agreed upon international commitments but simply lack the wherewithal to do so (i.e. the material resources, technology, expertise, administrative manpower, financial means, etc.), or are simply confused about their required role due to the ambiguity of international rules. By consequence, non-compliance is best addressed through a problem-solving strategy of capacity building, rule interpretation, and transparency, rather than through coercive enforcement (Keohane, Haas, and Levy, 1993; Janicke, 1990).

Of course, there is nothing wrong with using all theories or some theories, as they most likely represent different understandings and more than likely look at different aspects of non-compliance. However, the theoretical underpinnings of each of the following waves of implementation research must be decomposed, to gain both theoretical and empirical parsimony, while also correcting for the mishaps that happened along the way of theoretical and empirical construction.

2.2 An ‘A-Political’ Beginning

The first wave of scholarship seeking to fill the hole of non-compliance lacked a strong theoretical framework and focused on compliance mostly as an ‘a-political’ process, with legal or administrative barriers in the way of governmental will. The main inspiration came from the ‘top-down’ school of policy implementation that focuses on uniform measures, which must be satisfied in all locations, using a great deal of top-down influence and ‘deterrence’ (Pressman and Wildavsky, 1973; Bardach, 1977; van Meter and van Horn, 1975; Sabatier and Mazmanian, 1981; Mazmanian and Sabatier, 1983). From this perspective, administrative barriers comprised
of such variables as internal coordination problems (Krislov et al., 1986), the inefficiency of
domestic institutions and corporatism (Lampinen and Uusikyla, 1998), and the lack of resources
(Ciavarini Azzi, 2000; Dimitrakopoulos, 2001). Additionally, explanations for failed
implementation includes legal variables, such as the national constitutional characteristics
(Krislov et al, 1986), the national legal culture (Collins and Earnshaw, 1992), and the legal
complexity and poor quality of directives (Krislov et al., 1986; Weiler, 1988; Dimitrakopoulos,
2001).

However, most of the first wave studies failed to make a distinction between the
199) postulates that “Community law, once it has been incorporated, is applied neither better nor
worse than national law,” which, of course, falsely assumes that implementers are unaware of the
European origins of the law to be transposed. This created an array of counterarguments and
some scholars went so far as to characterize compliance as post-decisional politics (Puchala,
1975; Collins and Earnshaw, 1992). It is argued that governments wish to appear as ‘good
Europeans’ by agreeing to a European directive knowing that policy will be eroded at the
lower/non-visible channels of state implementation due to the intergovernmental nature of the
implementation system (Jordan, 1999).

Yet, recent quantitative investigations of the various legal and administrative variables
suggested over time, have been largely inconclusive. Lampinen and Uusikyla (1998) found that
efficient domestic administrative institutions and political culture play a great role, while Demke
(2001) found that organizational, legal and technical resources are more important. Mbaye
(2001) concludes that there is a positive effect between political power and non-compliance, and
Mastenbroek (2003) finds administrative and legal variables to be of credible importance in the
Netherlands. The absence of a ‘political’ conceptualization of the implementation process might have something to do with the administrative and legal theoretical underpinnings of the authors in this first wave of research, but as we will see later on in this chapter, implementation research has returned back to these ‘a-political’ explanations in their attempt to complement failing (empirically) theoretical propositions about the importance of institutional structures.

2.3 The ‘Misfits’

The relaunch of Europe in the 1990s (Single European Act) and the resulting revival of grand integration theory encouraged compliance research to take on a more theoretical stance. Several theorists dubbed neo-institutionalists focused their attention on EU institutions to determine whether they are independent of member state control or not, seeking to explain the degree of influence of the EU policy-making on member states. This which goes a long way in settling the debate between supranationalists and intergovernmentalists1 but narrows the debate to just the impact of EU policies rather than the mechanisms of successful implementation.

Focusing mainly on environmental policy, the key hypothesis was that regulatory policies are prone to have administrative impacts and that in cases of high institutional incompatibility between national administrative practices and European requirements, member states will have trouble implementing European directives. This expectation was premised on the assumption that implementation would require fundamental changes of core administrative structures (Knill and Lenschow, 1998; Heritier et al., 2001; Borzel, 2003). But generally scholars make a distinction between institutional and policy misfit, with the policy dimension relating to the content of the

---

1 Supranationalists and intergovernmentalists hold in common a respect for institutions as shapers of human behavior. Their main disagreement is at what constitutes an institution and the degree of their independence from national principals, with supranationalists affording great influence and independence to institutions of the EU. Proving that institutions act independently from their political principals (the states), would mean that the EU has moved to a new “supranational” state of affairs, where institutions (agents) influence the states (principals).
policies, while the institutional dimension relates to the regulatory style and administrative practices in a particular policy sector (Heritier et al., 2001; Borzel and Risse, 2003).

One of the most basic strengths of this approach is that it is theoretically rigorous while also being focused on empirical confirmation. However, in this latter strength emanates its largest fault. Empirical investigation of the hypothesis has been less encouraging than its promise to solve the debate between supranationalists and intergovernmentalists. Various empirically oriented researchers, focusing primarily on environmental policy, investigated the hypothesis’ empirical grounds; unfortunately the results were rather dispiriting. Knill and Lenschow (1998), in an analysis of compliance focusing exclusively ‘on the goodness of fit’ on four environmental directives in Germany and the UK found that their hypothesis was validated in three of the eight cases at hand.

Similarly, Haverland (2000) analyzing the implementation of the Packaging Waste directive in Germany, the Netherlands, and the UK found that the country with the greatest misfit (the UK) adopted more successfully than the country that needed only incremental adjustments (Germany), while the latter’s record was even worse than the Dutch, despite the higher adaptation pressure for them (more incompatibility). The reason for this unexpected result is traced to the existence of institutional veto points (institutional structures that afford players with the ability to modify and block legislation). While the UK had to dramatically increase its recycling levels and introduce binding legislation which run counter to its tradition of negotiating bilateral solutions, the British industry did not have an effective veto point in contrast with Germany, where the Bundesrat raged a two-year battle with the German government.

Mastenbroek and Van Keulen (2005) found that the political will of the government was more important than the goodness of fit in explaining the timeliness of transposition in two
internal market directives in the Netherlands, which points toward the need to bring ‘domestic politics back’ in explaining compliance variation, mainly along the lines of the first wave of compliance research. Finally, even more evidence against the ‘goodness of fit’ as a stand-alone hypothesis has been offered by Falkner et al. (2005), who, in a comparative study on the implementation of six labor directives, report a lack of confirmation, as only 22% of their cases on non-compliance could be attributed to ‘fitness’. The authors argue that we must take into account the role of domestic politics (also see Treib, 2003), and the culture of compliance (Falkner et al., 2005) of the different member states.

It is clear that the main weakness of this second wave of research was that the preferences of domestic actors remained largely un-theorized, and while theoretical and empirical rigor was offered, empirical confirmation was remote and it accentuated the need to offer an explanation for the “deviant cases.” The misfit argument was in principle based on the insights of earlier research on EU decision-making (Heritier, 1995), which postulated that EU Member States attempt to export their policy-making attributes to the EU. This of course implied that Member States will try to protect their administrative and legal traditions by shirking the implementation of EU legislation. Member States are seen as “guardians of the status quo, as the shield protecting national legal-administrative traditions” (Duina, 1997, p. 157). As a consequence governments who failed to “upload” their own policies to the EU level would try to resist during the “downloading” process, when the agreed-upon measures were to be implemented (Borzel, 2002).

This argument makes a case for the enforcement camp of international relations, which postulates that states will resist what does not match their preferences. However, it does not take into account the effect of power in the ability to either ‘upload’ legislation or ‘shirk’
implementation. This study argues that power (defined as bargaining power in the Council of Ministers or membership in the European Parliament’s Environment Committee), will mediate the misfit of policies. In addition, as Treib (2003) argues, it is possible that national actors and Member States may want to change existing policies and institutions, and they may even use EU venues to accomplish just that. Hence, even the most basic assumption of the ‘misfit’ theorization can be challenged as ‘misfit’ may not always be due to an inability to ‘upload’ but due to the presence and preferences of domestic political forces that make or break promises to the EU.

A final weakness of second wave of literature has been the inability to distinguish between factors that influence transposition and application/enforcement of legislation. Most contributions treated the implementation process in a linear manner that tends to ignore the different actors involved and the different processes that take place in implementation. The misfit of European requirements to administrative traditions refers to the application/enforcement stage of policy implementation of EU policies by the states. This is not to say that administrative agencies are not directly involved in the transposition stage of implementation but transposition is the stage where states pick the right instruments to implement directives, through a process closely resembling policy formulation (even if the goal is handed down by the EU directives), which entails participation and politics. As such, most ‘goodness of fit’ explanations need to be supplemented with ‘political’ explanations that take into account the presence of different actors in this stage. Or more to the point, that take into account the presence of the biggest constellation of actors possible in any of the implementation stages.

2.4 Politics are “In”

These last realizations, along with the limited explanatory value of the ‘misfit’ hypothesis, have led most ‘goodness of fit’ advocates to supplement their models to account for domestic
political influence. Knill and Lenschow (1998) suggested the inclusion of the degree of embeddedness that national institutions experience, while the explanatory value of the policy context becomes important only in situations where the level of institutional embeddedness suggests the more ambiguous picture of moderate adaptation pressure, and it is with this picture that such notions as policy salience become important (Knill and Lenschow, 1998, p. 611). Borzel (2003), with her ‘push-pull’ model incorporates policy misfit (as an initial reason for non-compliance), mobilization of domestic actors pressuring for implementation, and pressure from ‘above’ where the Commission may initiate infringement proceedings, as the venues for effective implementation.

Knill and Lenschow (1998), treat policy salience as a mediating factor or a secondary casual factor to the constraints created by the institutional framework in which the policy will take place. This study argues that, in cases where the salience of policy is high, then this will be enough to attract the attention of the political principals of agencies, and make them pressure agencies to treat the environmental issue at hand as a crisis and thus with an added degree of professionalism, hence increasing compliance. More to the point, the salience of an issue to private actors will create the need for attention to agency workings from politicians, judges, and journalists, which of course in turn pressure agencies to be more efficient and effective with legislation, regardless of the existence of veto points (more on this below) or change agents. In this case, it makes sense that the existence of parties, which are favorable to the proposed policy change, in legislatures will have a positive effect on compliance, since it increases salience and creates a direct link with institutional players.

Along these lines, Treib (2003; 2004) argues that the preferences of political parties holding sway over the transposition of EU law are important, and that governments may accept
wide-ranging deviations from the status quo if the direction of the required reforms is in line with their political party preferences. Similarly, in an empirical case study on the transposition of two directives with significant misfit in the Netherlands, Mastenbroek and van Keulen (2006, p. 38) showed that favorable government preferences “may work wonders in overcoming misfit.”

Markus Haverland (2000) takes a different stance and makes a case, using the Packaging Waste directive, for institutional veto points and their effect on implementation. The number of institutional veto points central governments have to face when imposing European provisions upon their countries tends to shape the pace and quality of implementation regardless of different degrees in ‘goodness of fit’. In this study it is made evident that even when a country has the “appropriate” institutional arrangements it needs to pay attention to its domestic political conditions as they will decide the quality and timeliness of the implementation, which has been further researched by Mbaye (2001) and Giuliani (2003), who both investigate the effect of the number of veto players. A similar strategy is developed by Risse et al. (2001), and Borzel and Risse (2003). Even though misfit is still a necessary condition, it is not the only one. Other ‘mediating factors’ such as the number of veto points in a political system, will make it harder to comply. Also, the political and organizational culture will affect whether domestic actors can use adaptation pressure to induce structural change.

Along slightly different lines, Dimitrova and Steunenberg (2000) present a spatial voting model of transposition in which various domestic veto players have to co-operate on transposition. Another line of research, formalizes earlier insights which stipulate that domestic politics matter for compliance (Steunenberg, 2004; 2005), and explicitly models the process in which domestic actors must co-operate to transpose a directive into national law (Mastenbroek, 2005). Corporatism is also back in the limelight (Lampinen and Uusikyla, 1998; Mbaye, 2001;
Kaeding, 2006). As the argument goes, a high level of corporatism will have an adverse effect on the level of veto players and thus result in increased compliance (Lampinen and Uusikyla, 1998). Conversely, a close and cooperative arrangement between the state and interest groups will increase compliance while an increased interest group involvement (level of pluralism) will lead to non-compliance (Konig and Luetgert, 2008). Finally, the level of partisan conflict and polarization within domestic veto players (Treib, 2003; Kaeding, 2006; Konig and Luetgert, 2008) are also hypothesized to affect compliance at the domestic level.

A caveat should be offered on the presumed negative impact of veto points on compliance. The existence of veto points should not necessarily mean that the process of transposition becomes slower. Even the wealthiest and most powerful of actors (the industry), may not always be opposed to policy that goes against its preferences (Wurzel, 2002). For instance, industry may actually be favorable to environmental legislation especially in ‘green’ countries, and push for Europeanization of state environmental regulations to level the playing field with competition in other states. Hence, the business climate of a state should be taken into account as the industry represents one of the stronger players, but the ability of players to use veto points to stall compliance, will also depend on the receptivity of the bureaucracy to behavioral modification (Wood, 1988).

Interestingly, regardless of their empirical rigor, the theoretical insights of the third wave quantitative studies have been rather inconclusive (as was the case with most ‘misfits’). First off, it has been argued that support for European integration is an important factor that facilitates compliance (Mbaye, 2001: public support; Linos, 2006: support by government parties), while others do not (Lampinen and Uusikyla, 1998). And some have even found statistically significant negative correlation between these two variables (Borzel et al., 2004). However, it can be also
argued that support for the EU might not be evident in all policy domains. After all, it would take a lot of entrepreneurship to create the required linkages between policy domains to achieve normative compliance in all sectors of policy. Consequently, decisions to comply in one area must not be confused as normative acceptance of compliance in all policy areas as there is a considerable amount of linkage required to disseminate normative compliance to other policy sectors, which have actors with different interests, ideas and beliefs (Haas, 1998).

Second, studies have found that the structural properties of domestic politics, such as the number of veto players, have a significant impact on compliance (Lampinen and Uusikyla, 1998; Giuliani, 2003; Linos, 2006; Kaeding, 2006; Perkins and Neumayer, 2007), while others do not (Mbaye, 2001; Borzel et al., 2004; Borghetto et al., 2005), in fact some find an insignificant negative relationship between veto players and non-compliance (i.e. the existence of veto players increases compliance, Mbaye, 2001). Corporatism is found to be insignificant while also shown to have a negative effect on compliance (contrary to the hypothesized relationship, Mbaye, 2001) or a positive effect on compliance (Kaeding, 2006).\(^2\) Pluralism and partisan conflict is shown to increase non-compliance (Konig and Luetgert, 2008), while Kaeding (2006) finds a positive yet insignificant relationship.

This ‘back and forth’ in empirical confirmation might have to do with comparing different fields of policy or with indicator strength, but this study offers a different explanation. The literature on veto points, and all the subsequent mediating factors, focuses mainly on the ability of citizen groups to use institutional veto points to affect compliance at the domestic level. The ability and possibility of citizen groups circumventing national politics and using the Commission’s formal monitoring mechanisms to hit the ‘fire-alarm’ has been neglected by the literature. Hitting the fire alarm initiates the EU’s formidable enforcement mechanisms and

\(^2\) For a discussion on quantitative measures of corporatism refer to Kenworthy (2000).
serves to induce compliance from above (in which of course the domestic players played a big role). It stands to reason, that veto points or other mediating factors that involve citizen groups are not as important in inducing compliance as the ability of those groups to utilize top-level monitoring and enforcement mechanisms to induce compliance.

The only factors that seemed to find support in most quantitative analyses up until 2007 were the various aspects of administrative capabilities (Mbaye, 2001; Borzel et al., 2004; Linos 2006; Borghetto et al. 2005; Berglund et al. 2005). Bureaucratic efficiency was thought to decrease non-compliance (also Haverland and Romeijn, 2007), while Perkins and Neumayer (2007) find that efficiency has an insignificant positive effect on non-compliance. The EU studies literature has focused on the effect of governmental capacity on compliance, but the ability of the EU to affect compliance by increasing this capacity has been neglected. One would think that since administrative capacity has so far been researched as a determinant of the ability to comply by various quantitative and qualitative studies, that the ability of the Commission to provide states with such ‘management’ mechanisms would also have been addressed, especially since capacity is, as theorized by the management camp, one of the major sources of involuntary non-compliance.

Additionally, it may also be the case that administrations are efficient in doing what they do, and states do have the capacity to implement legislation. Regardless of the existence of veto points, and the degree of ‘fitness’ between European requirements, it can be argued that some states are simply focused on doing different things (that serve their preferences), and are, indeed, very efficient in doing those. For instance, it is true that some states (especially the poor ones) are more focused on private sector development rather than environmental protection; hence their bureaucracies will be efficient in promoting private sector development rather than
environmental protection. Even if these two goals are not necessarily mutually exclusive, the efficiency focus of the administration and its capacity is pointed toward different goals and values. It should be then more important, to investigate how administrations internalize new values than whether their structure precludes change (as with the goodness of fit argument). In this case, the effect of political principals and state commitment should be problematized along with the existence of powerful lobbies that keep the focus of bureaucratic efficiency closer to their own preferences. Under the specific context of this study, we should expect to find that when states are focused toward private development and a cozy relationship exists between business interests, bureaucracies and political principals alike, then compliance with environmental policy will be less (of course, corruption should also be important in this respect).

Others have abandoned the goodness of fit hypothesis altogether and claim that the nature of European policies (degree of prescription and flexibility, market-making or market-correcting) combined with the variance in domestic constellations (the degree of liberalization, a country’s reform capacity, and its dominant belief system) account for the variance in compliance (Heritier et al., 2001). EU compliance is increasingly modeled along the lines of sociological institutionalism. Such studies start from the assumption that a rule will be complied with if it is deemed appropriate by the stakeholders (Mastenbroek, 2005). It is argued that compliance will not be automatic and will dependent on a process whereby the rule becomes internalized through socialization, persuasion, or learning (Finnemore and Sikkink, 1998; Checkel, 2001; Risse, 2000; Sending, 2002).

This approach argues for the innate notion of the ‘culture of compliance’, which holds that member states differ in their basic proclivity to comply with EU requirements (Tallberg, 2002, p. 619; Falkner et al., 2005). For instance, a group of scholars who analyzed the implementation of
six directives from the field of EU social policy in the fifteen “old” member states illustrate that arguments, such as the misfit or veto points hypotheses, or the first-wave focus on administrative and procedural factors, do not hold across their cases. Rather, they propose that a complex web of administrative, institutional and actor-based factors affects transposition outcomes (Falkner et al., 2002; 2004; Falkner et al. 2005, pp. 277-316).

However, these propositions are not unlike most quantitative and qualitative studies. The major contribution here is the typology (grouping) of countries according to individual characteristics they may possess that make them stand together in compliance or non-compliance. This typology consists of three ‘worlds of compliance’. The first of these, the ‘world of law observance’ consists of the Nordic countries. “Obedience differs. Not all Europeans are equally law-abiding citizens” (Waarden, 1999, p. 96). In Denmark, “when an act is issued it is obeyed, even if one has opposed its adoption and disagrees with its content,” (Biering 2000, p. 959). The presence of a culture of respect for the rule of law among political and administrative actors usually ensures fast and correct transposition (Falkner et al., 2005, pp. 317-341). However, transparency and efficient organization of the administration also help the Nordic countries, to react more readily in compliance conflicts (Sverdrup, 2002; 2003).

Greece, France or Portugal are members of the ‘world of neglect’, where the absence of a compliance culture in both the political and administrative systems leads to long phases of bureaucratic inertia and rather apolitical transposition processes (Falkner et al., 2005, pp. 317-341), which means that administrative factors should be of particular importance for these states. Finally, in the ‘world of domestic politics’ a third group of states (Germany, Netherlands, Ireland, UK), may have efficient administrations but the absence of a culture of compliance, means that the transposition of EU law will depend on the fit between European requirements
and domestic preferences (Falkner et al., 2005, pp. 317-341), which means that powerful actors should have a major impact in these states.

However, to group states according to the most dominant characteristic they exemplify is a rather deterministic approach that neglects the value of both the ‘top-down’ and ‘bottom up’ influences on compliance. To say that Greece, France or Portugal will always behave the same, regardless of the existence of ‘top-down’ mechanisms to induce compliance from the Commission (like monitoring, or enforcement), is to miss half of the explanatory power that these ‘top-down’ mechanisms offer. A typology like this seems to suggest that any such mechanisms will be inefficient in raising governmental concern, and thus compliance, through the use of non-governmental actors (which are assumed to be absent in these countries). This study argues that both ‘top-down’ and ‘bottom up’ mechanisms will be effective in determining compliance, while the presence of domestic actors will be the biggest qualifying factor of success in all member states, regardless of the prevailing legal culture or administrative style, or veto points. To be precise, the presence of domestic actors or their relative power to affect results can be influenced by supranational institutions as well, and not only by the domestic legal traditions and institutionalized structures.

The identification of a Nordic world of compliance ties in with the findings of Sverdrup (2004) and with a recent study by Perkins and Neumayer (2007) who found that compliance is significantly different in the Nordic states than others. However, the later study grouped states according to their legal origin\(^3\) which distinguishes between English origin (UK and Ireland), French origin (Belgium, France, Greece, Italy, Luxembourg, Netherlands, Portugal and Spain), German origin (Germany, Austria), and finally Scandinavian origin (Denmark, Finland and Sweden). As such the above typology of Falkner et al. (2005) is miss-specified as to who belongs

\(^3\) The data is available through La Porta et al. (1999, pp. 268-275).
where when it comes to a respect of law and the existence of a compliance culture. To be fair, the Nordic states do have a better transposition record but so do the Netherlands and Austria, and according to Perkins and Neumayer’s (2007) findings the typology does not hold-up when it comes to the rest of the “worlds” as countries slip in and out of worlds according to their legal origin.

Hence, theoretical and empirical investigation, it seems, is not without a sense of irony. At the same time as qualitative studies in the third wave have increasingly accepted the domestic political dimension of compliance, the results of quantitative research seem to point back to the arguments of the early ‘a-political’ research that stressed the importance of efficient and well coordinated administrations (Treib, 2006).

2.5 Quantitative, Qualitative, and Dependent Variables: Faults and Caveats

A remarkable feature of existing implementation research is that neither these novel approaches nor the ‘goodness of fit’ hypothesis (much less the first wave of research) have the ability to explain non-compliance given their adherence to theoretical and methodological ambiguity respectively. Even though the adherents of the ‘goodness if fit’ hypothesis where methodologically rigorous, their empirical results were disappointing largely due to the use of ‘easy-to-measure’ variables. These miss the importance of more interesting ones, like domestic politics, and for which ‘domestic politics’ theorizers can account more effectively.

From their side, ‘domestic politics’ (third wave) adherents are theoretically rigorous but their methodological stance leaves little room for empirical reliability. The strength of most ‘domestic politics’ designs is that they allow for controlling key ‘domestic’ variables, that are broadly agreed to be major determinants of compliance, yet they encounter several shortcomings. First, both qualitative and quantitative studies seem to suffer from selection bias, as they almost invariably exclude states from the analysis. Although some qualitative researchers have covered
all member states (Siedentopf and Ziller, 1988; Demmke, 2001; Falker et al., 2005) most quantitative and qualitative studies do not. Qualitative researchers tend to focus on countries with a bad record of compliance (see UK), or countries with supposedly good records (see Germany), and disregard such countries as France (but see Falkner et al., 2005). While small countries such as Austria, Finland, and Sweden, which, as we shall see later on, possess the best compliance records on environmental policy in the EU are left out of both qualitative and quantitative studies. This could lead to inaccurate conclusions supporting the ‘non-existence of compliance problems’ thesis (Borzel, 2001; 2003), as spatial variation is more evident if we include the aforementioned ‘compliers’ in environmental policy specifically. This selection would not present a considerable disadvantage for the generalizability of their findings if the reasons for selecting those specific states were explained, but in most cases they are not.

From their side, most quantitative studies either use data from before the 1995 accession, or use data up to 2004 (see Kaeding, 2006) that exclude Austria, Finland, and Sweden from the analysis (for a review of the literature, see Mastenbroek, 2005). The exclusion of the ‘environmental leaders’ in quantitative studies creates a gap in the possible hypotheses, as there is much to be said about the presence of these member states in European political institutions (like the European Parliament Environment Committee). Any study wishing to include these countries, though, must take into account the “newcomer” effect, whereby the Commission grants a period of grace to newly accessed countries for approximately 2 years (Svedrup, 2004; Perkins and Neumayer, 2007).

However, the biggest problem does not come from between the qualitative and quantitative divide; it comes from within the quantitative studies. The most important development, in the above third wave of research, was that authors started conducting predominantly quantitative
studies. The Commission’s infringement proceedings against member states datasets were widely used to gauge noncompliance with EU law (Mbaye, 2001; Borzel, 2001; 2003; Tallberg, 2002; Borzel et al., 2004; Sverdrup, 2004; Beach, 2005). A second strand of quantitative studies used the transposition measures that member states officially notify to the Commission (Lampinen and Uusikyla, 1998, Haverland and Romeijn, 2007; Konig and Luetgert, 2008), sometimes also in combination with infringement data (Giuliani 2003), while in a few cases, researchers complement transposition data with national legislative sources (Mastenbroek, 2003; Kaeding, 2006).

As indicated by the rather inconclusive results described above, quantitative EU implementation research seems to be ridden with problems, almost invariably having to do with the dependent variable. First, there is simply no way to know whether the Commission, for whatever reason (resources, strategic-ness), responds to all infringements with the same fervor. Put differently, the Commission’s unwillingness or inability to monitor and enforce all infringements of EU law introduces a bias in the dependent variable, and this type of research looks only at the 'tip of the iceberg' of non-compliance (Hartlapp and Falkner, 2009, p. 292). Further complicating the reliability of infringements as a measure of compliance is the odd practice by the Commission to change counting rules, eliminate categories altogether for years and then bring them back. For instance, complaints were reported from 1982-1991, then lumped into a category that doesn’t signify whether it is complaints of not from 1992-1997, and then in 1998 complaints reappear with the addition of own investigations and non-communication (Borzel, 2001). This makes the use of pre-1998 data highly unreliable, especially for infringement data. For example infringements by state and sector were only reported for 1988-1992, while since then

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4 These rates, which represent the share of transposed directives against all applicable directives at a certain period of time, are regularly reported in the Commission’s annual reports on monitoring the application of Community law.
infringements are reported per member state or per sector, making cross country comparisons in the same sector of policy practically impossible.\(^5\)

To be fair, transposition rates come with their own problems. The data is consistent when it comes to years with only a few changes needed as the Commission switches names on sectors and categories within them. The biggest problem is that the date of notification may differ from the date of actual transposition. This should not be an alarming issue as states may complement their early transposition with additional measures. Some researchers have even attempted to complement notification data with national legislative sources (see Mastenbroek, 2003; Kaeding, 2006), however under the understanding of compliance as conformity offered by this study this is not necessary, as a state’s notification of implementing measures is enough to designate compliance. A more important but equally not alarming issue with transpositions as indicators of compliance is that the data do not contain an official statement differentiating between ‘timely’ and ‘correct’ transposition (Hartlapp and Falkner, 2009). The issue here is that, data do not provide any information on whether the timely notification of measures implementing a directive, are the correct measures. To worry about correctness though is to introduce the same selection bias to the data as with relying on the Commission’s data on infringement proceedings, as explained earlier.\(^6\)

All of the aforementioned shortcomings are considerable, but not forbidding, especially if we correct for some of the biases mentioned here. It seems that most of the empirical disconfirmation of otherwise credible hypotheses in all three waves of EU implementation research has to do with two recurring issues. The first, is the aversion of theorists to deconstruct their theoretical underpinning and reconstruct them under the correct premises. And the second is

\(^5\) Requests for original datasets to extract per state and per sector data to both the Commission Secretariat and Environment DG remain unanswered for 6 months now and counting.

\(^6\) For more on this and other issues, please refer to chapter 6 of this study.
the aversion of quantitative studies to include important states. More to the point, a large N quantitative study including all the ‘old’ 15 member states for a series of years, has never before been offered on environmental transposition rates.

As to the first shortcoming, because most studies are based on different policies, methodologies, and samples (states), it is very difficult to draw comparable conclusions from them. Even though, the third wave of research has added considerably to our understanding of non-compliance, most approaches are rather disjunctive than complementary to each other. It becomes evident then that we need to model the compliance deficit facing EU policy using a more theoretically integrative and methodologically rigorous design. In this respect I intend to offer a theoretical model of compliance that obtains the benefits of all three approaches (administrative, goodness of fit, domestic politics) and adds control over the potentially important influence of domestic politics as conceived under the rubrics of International Relations and Regulatory Federalism.

Theoretical rigor, and in the end, theoretical integration can be achieved if this research speaks to the intergovernmental-supranational divide that lurks in the background of non-compliance scholarship. If the EU is an intergovernmental organization then realist theoretical reflexes command the abolition of intra-state research. On the other hand, if the EU has more supranational elements than a simple intergovernmental organization, then neo-institutionalist, and ‘domestic politics’ reflexes command an investigation of the effects of institutional structures and domestic opposition. To proceed we must, therefore, also identify the intergovernmental and supranational characteristics of the EU construct. In particular, determine to what extent the EU is the result of normal international relations and to what extent it should be understood as a new domestic polity.
In this sense, if we conceive the issue of non-compliance in the EU as an internal political conflict between a central authority and a set of semi-autonomous sub-units; then models of state implementation of federal policies drawn from the American context (in particular theories of regulatory federalism and bureaucratic control), may be particularly useful in explaining domestic patterns of non-compliance in the EU. However, inasmuch as non-compliance within the EU can be understood in terms of intergovernmental dynamics, insights may also be drawn from the extensive international relations literature on state compliance with international agreements, regarding the domestic forces at play.

Evidence for one or the other model hardly constitutes conclusive evidence that it is more important in explaining non-compliance. Adding several variables that represent different theoretical approaches to one full econometric model allows for capturing the full effect of all variables when taken together rather than disjunctively. The benefit is both theoretical and empirical. Adding all approaches to a single model allows the researcher to determine whether variables capturing predictions might lose their explanatory power once variables from other theoretical approaches are included. This allows for an evaluation of whether a theoretical approach actually adds to explanatory power. If this is the case, then the approach should be thought as complementing existing theoretical approaches (rather than providing and alternative), when attempting to gain a full understanding of the bigger picture on what determines non-compliance.

In regards to the second problem, mentioned above on including all ‘old’ member states; as I have already argued, the turn to quantitative ‘goodness of fit’ approaches came with the use of rather ‘easy-to-measure’ variables, which miss the importance of more interesting ones, like domestic politics, and suffer from case selection bias (member states). The use of a large N
quantitative approach offers considerable advantages in the present context. Econometric estimation techniques allow us to investigate large numbers of cases, and even though the time-span examined by this study is relatively short (1998-2007), it comprises and accounts for spatial variation between all states and environmental policies, rather than just the states that perform worse than the ones excluded in previous studies. As mentioned earlier, the focus on transposition rates should also serve to provide for a better estimation of what determines compliance (of course as compliance is understood in this study). This estimation will not suffer from additional selection biases introduced when using infringement data that are riddled with several omitted (and almost impossible to measure) variables pertaining to the willingness and ability (resources) of the Commission to pursue infringements proceedings in all cases. This study should therefore yield insights that are potentially more generalizable than small N qualitative studies, and missing N quantitative studies, while also provide insights more credible than infringement based quantitative examinations of non-compliance. This is of particular importance in testing theoretical approaches of compliance, where there is an added interest in clarifying whether specific casual relationships hold across the full range of countries.

2.6 Conclusion

EU compliance is far from being under-studied, yet problems stubbornly persist in our understanding of what affects compliance. Researchers have been fascinated with this topic for the last twenty years. First, in the late 1980s various researchers focused on the administrative and legal implications of transposition of directives, but their attempts to assess the forces that may influence or shape national responses to EU legislation, were largely a-political. A second wave of researchers offered a more theoretical institutionalist theory of compliance. Based on arguments of costs and appropriateness, they focused on the ‘goodness of fit’ hypothesis as the
key to compliance deficit, which pertains to cases of high institutional incompatibility between national administrative practices and European requirements.

Unfortunately, empirical investigation of this hypothesis showed that a ‘good fit’ is neither a necessary, nor a sufficient, condition for unobstructed implementation (Knill and Lenchow, 1998; Haverland, 2000; Heritier et al., 2001; Falkner et al., 2005). This disappointing result has sparked a renewed interest in ‘bringing domestic politics back in’ as an explanation of the implementation deficit that accounts for domestic political influence, yet the challenge is to theorize how and under what conditions domestic opposition plays a role. As such, the domestic forces that may influence or shape national responses to EU legislation remain largely unexplored. This is also where the importance of methods comes in. Previous attempts (administrative, goodness-of-fit, and domestic politics) suffer from an ‘a-theoretical posture’, empirical disconfirmation, and selection bias respectively. The goal of this research is to begin to address this lacuna through the development, application and empirical testing of possible theoretical models of EU member state compliance, using EU environmental policy as the primary forum of analysis, while also correcting for selections biases that exclude, arguably, the best compliers of EU legislation.
3.1 Introduction

Environmental policy in the European Union has developed from a state of relative obscurity to a voluminous body of law encompassing more than 500 measures and six Action Programs (Jordan, 2000). Surprisingly, the Treaties of Rome (1957) made no mention of environmental policy; there was no environment bureaucracy, and no environmental groups active in lobbying the, then, nascent European Commission. Given the absence of a formal treaty base and the subsequent need to secure lowest common denominator decisions, environmental policy before the 70s started slow and followed a process that has been frequently characterized as integration ‘by stealth’ (Weale, 1999). The Commission had to go to great lengths to justify it because it did not appear to have much to do with the EEC’s core objective, that of creating a common market in economic goods and services.

It wasn’t until the member states broadly endorsed the European Community’s involvement in environmental policy at the 1972 Paris Summit, and formally embedded it as a policy domain open for europeanization by the Single European Act (SEA), that the environment began to escape its unimportant status. Even so, ‘stealthy’ practices where the norm for decades and Action Programs to come. Any extension in the legal competence of the European Community (EC) in the environmental field followed the ‘Monnet method’ of packaging the environment into “technical” regulations and duping states into deeper integration than they might have otherwise accepted (Wallace, 1996).

Environmental Action Programs (EAP) provided a broad route map, while the Commission was left to work up specific proposals packaging them in a ‘low politics’ technical nature legislation (such as standards), that required very little input from the public or from sub-
national actors. This allowed the Commission, to avoid difficult questions regarding who, and at what level of governance, is responsible for a particular environmental issue.

This also allowed for Environmental Actions Programs to be sufficiently vague and grandiose in intention, without providing for adequate applicability in the field. Goals set forth by EAPs have only marginally been implemented in reality, if at all (Holzinger at al., 2006). The Commission’s opportunism with ‘technical’ legislation served it well in not antagonizing the Member States, and integration by ‘stealth’ was overlooked by the states as long as it did not encroach on their sovereignty, or as long as states did not realize their sovereignty was being encroached. It is exactly these sovereignty issues that derailed envisioned EAP changes in strategy and environmental instruments from becoming realized in the field. And it is exactly these sovereignty issues caused by the ascendancy of the ‘subsidiarity’ principle that reversed the tide of environmental legislation toward the states. Adherence to interventionist governance models, which encroach on the national scope of action, could hardly continue to be politically legitimizsed.

So long as the European Union preoccupied itself with ‘technical’ environmental legislation and used a strategy of command-and-control interventionism that did not allow or ask for national input, the states were complacent in their ignorance. However, three decades later, with an impressive body of environmental legislation in place, with the end of the permissive consensus, and with financial situations worsening, an unavoidable maturation in EU politics and conceptions of subsidiarity has occurred, that brought European Union (EU) environmental policy to crossroads regarding its future. The very content and scope of environmental legislation is now being reworked and rethought, at both the national and EU levels, as a response to the
challenges of global competition and demands for deregulation and re-nationalization of environmental policy.

3.2 A Short History of Environmental Governance: Instruments and Strategies

There have been six main periods of environmental policy heralded by the six Environmental Action Programs and roughly corresponding to three main governance approaches. Idealistic as the beginning was, it also came with a non-idealistic technical focus on command and control instruments, supporting a highly interventionist governance approach (Rehbinder and Stewart, 1985). Without eliminating these command and control instruments, the EU moved to a new paradigm on environmental governance during the mid-1980s and early 1990s. This ‘new’ paradigm was underlined by the market approach to the environment (such as environmental taxes, tradable permits, or risk liability schemes), popular in other areas at the time and corresponding to the Single European Act’s dedication to complete the single market. A final approach, prevalent since the 1990s, has been primarily focused on ‘context-oriented instruments’ that aim to allow discretion and openness in both policy formulation and enforcement (Holzinger et al., 2006).

3.2.1 Idealistic Beginnings, 1973-1982

In June of 1972, the United Nations Conference on the Human Environment held a conference in Stockholm, Sweden. It was the first conference of its kind to concentrate on international environmental issues. The 116 nations that attended discussed such things as the impact of industrialization on the environment, conservation efforts, environmental poisons, and monitoring environmental protection (Emmelin, 1972). Months following the Stockholm Conference, the European Community held its own gathering: the Paris Summit of 1972. It called for the creation of a European Community environmental policy, and one shortly followed by means of the First Environmental Action Program (EAP) in 1973 which argued that “the
protection of the environment belongs to the essential tasks of the Community” (OJ C112/1 from 20/12/1973). This program would be followed by continued multiannual programs of the same style, which are still present today.

Environmental Action Programs are “medium-term, strategic policy documents that reflect the fundamental elements of contemporary environmental thinking and problem perceptions, as well as strategic policy orientation” (Hey 2006, p. 18). They are lists of planned activities, but are not binding, and they help to shape environmental policy by highlighting the specific legislation needed to improve the environmental conditions of Europe. Each of them has led to the adoption of several series of directives on protection of natural resources (specifically, water and air), noise abatement, nature conservation, and waste management (Pinder, 1998).

The first EAP identified the objectives and formed the foundation for future environmental policies. The focus was on prevention, reduction and containment of environmental damage; the conservation of an ecological equilibrium; and the rational use of natural resources (Hey, 2006). It also emphasized the need for a comprehensive assessment of the impacts of other policies on the environment but left the environment outside the influence of internal market objectives, thus rendering the environment as its own field of policy. This had mixed results. On one hand, it served to insulate the environment from internal market bickering in the initial years and conserved the spirit of optimism for far reaching policy change. On the other hand, eventually, and as the internal market became more crucial, it served to frustrate environmental policy and its relevancy to European future development, as it now had to be ‘argued-in’ into other areas of policy, in which it was an integral part to begin with anyway.

The first EAP also highlighted that environmental policy should be created with a preventative, aside from fundamentally corrective, approach. For this reason, it called for
research activities on the causes and effects of pollutants, as well as the criteria for environmental objectives. In light of the research on these pollutants, corrective measures appeared in the form of directives. Several specific products were targeted by these directives, such as the lead content of fuel and crockery, the toxicity of detergents and paints, and the emissions of vehicles. A number of industries also faced scrutiny, such as the chemical, food, metallurgic, and textile industries. The specific sectors of water pollution, noise pollution, and the pollution created in energy production were also main foci (Barnes, 2000).

Through the first EAP, the European Community assigned itself the role of releasing environmental information to the public to increase their awareness and their personal responsibility. It also took on the role of international actor in the environmental arena, agreeing to cooperate and support the work of the United Nations in particular (EU Environmental Information and Legislation Database). In all of these ways, the second EAP (1977-1981) essentially served as a follow-up to the first, continuing to emphasize the need for corrective measures, with a preventative outlook. However, it expanded on the list of environmental concerns of the first. It placed more emphasis on protection of nature, as seen in new sections dealing with specific protection of fauna and flora. Also, as proposed by the Commission, the second EAP included a new section on Environmental Impact Assessments (EIA). EIAs would provide a process of examining the environmental impact of proposed private or public projects or developments. They were legally established in Directive 85/337/EC, but the implementation of this directive was unsuccessful, and so it was put aside in the EC Environmental agenda until 1996 (Barnes, 2000, pp. 35-36). A project regarding environmental labels on products was also introduced in the second EAP, and faced the same result. The labels were meant to provide consumers with environmental information about specific products, encouraging them to make
more eco-friendly choices by purchasing items with minimized pollution and waste created in the fabrication process. Yet, this project was not adopted until 1993, and was not as successful as anticipated (Barnes, 2000).

In terms of a governance approach, the First and the Second Programs (1973-1981) advocated and used, almost exclusively, interventionist instruments such as emissions and quality standards, but also technical specifications prohibitions and other obligations for water and air (Holzinger et al., 2006). The quality objectives for drinking water were very strict – those for air could be achieved without strong policy intervention.

The first and second EAPs were able to form a solid base for EC Environmental Policy because they outlined how environmental issues should be dealt with in the future. They introduced strict quality objectives for air and water, developed a number of framework directives for water and waste, and developed many ideas that would flourish in future programs (Hey, 2006). Their successes lead to the establishment of a separate Environment Directorate-General (DG) within the Commission in 1981. Through this DG, environmental activism grew because the DG provided a channel for environmental organizations to pressure the Commission to pursue “greener” policies. The main criticism about the first and second programs was that their directives were not influential enough. Their approaches to environmental policy were often restricted to trade interests or to very general provisions that could not target the main sources of pollution. This inability was largely due to lack of enthusiasm during instances of economic recession, from 1975 to 1978 and from 1981 to 1983, which prompted a change of focus toward carrying out environmental protection cost-effectively, and using the environment to solve economic problems (Holzinger et al., 2006).
3.2.2 The Internal Market is Coming, 1982-1987

The third EAP found itself in more difficult economic times than its predecessors, but dealt with them in a different way. Mediterranean enlargements, the aftermath of the Arab-Israeli war crisis and the resulting quadrupled price of oil, along with the oscillating exchange rates caused by U.S. devaluation of the dollar and massive CAP spending, made the completion of the Single Market even more urgent (Dinan, 2005). Therefore, the top priority of the third EAP was to use market principles to achieve generally accepted environmental objectives.

Through integration with the area of EC enlargement, environmental policy was able to emphasize the importance of candidate countries’ pollution levels. Accession agreements of a candidate country could come to a halt if it could not implement the EC’s environmental acquis. Yet, the economic difficulties in sections of the European Union put the financing of environmental policy low on several national policy agendas, including the agendas of candidate countries. Therefore, the European Commission proposed limited funding towards the environment for the first time, through the use of Structural Funds (Barnes, 2000). It also proposed that a financial instrument should be set up as a tool of incentive and a catalyst for action. The former was implemented during the span of the third program, but the latter was not put into action until the establishment of the Financial Instrument for the Environment (LIFE) in 1991 (Dinan, 2005). Due to the economic malaise of the time, the third EAP was explicitly called upon to consider the potential risks of environmental legislation on the distressed economic sector. Therefore, it worked to emphasize the links between the environment and the completion of the single market. Both harmonized environmental emissions and product regulations would be needed from the environmental sector to avoid distortion in industry competition and the creation of non-tariff barriers (due to different national product norms).
Another benefit of this integration would be the expansion of the job market, due to the Environmental sector’s creation of less-polluting industries (Hey, 2006).

More importantly, the third EAP presented a marked difference in governance instruments from intervention to economic incentives. In particular, the Commission proposed applying a stricter form of the polluter-pays principle in the development of the third and fourth action programs (Hey, 2006). The initial definition, already included in the first action program allowed the polluter-pays principle to refer only to the costs of avoiding pollution, while also permitted exceptions as long as they did not impair the general market functions (Holzinger et al., 2006). In the third and fourth action programs, the Commission expanded the definition of the principle to include social costs emerging from residual pollution, by specifying ‘new instruments’, such as environmental taxes and charges, liability and funding schemes, as well as international agreements.7

In regard to directives, the third EAP prioritized the areas of waste avoidance, clean-air policies, and noise and risk management for industrial sites. It proposed formulating emission limit values for both mobile and stationary sources, and introducing better filter technologies for the reduction of emissions at the pipe. At this time, the member states had great influence over the environment in the EC, and they became more concerned and involved than in the past. The German industries and government lobbied for harmonized European emissions control policy, while the Netherlands pushed for a tradition of strategic environmental planning, the UK for setting of environmental quality objectives, and the Scandinavian countries for reform of chemical policies (Hey, 2006). Under the third EAP, all of these points were taken into consideration and obtained generally successful results.

7 In the fourth action program, the same instruments are listed, expanded to include state aid, tradable permits, and negotiated agreements with polluters (Holzinger et al, 2006).
3.2.3 The Single European Act and the Fourth EAP, 1987 – 1992

The Single European Act was the first major revision to the 1957 Treaty of Rome, created with the objective of speeding up the completion of the internal market. It was created in support of the “White Paper”, a document pushed by Jacques Delors that identified the 279 legislative measures needed to complete the internal market with a proposed deadline of December 31, 1992. The SEA included a section on environmental policy and included an article on environment in its single market provisions. It identified environmental protection as having an important role in the improvement of quality of life, and in the process of job creation. Signed in February 1986, it began to have effect on July 1, 1987, just a few months before the start of the fourth EAP’s term. For this reason, it served as a great influence on the fourth EAP. Environmental policy was more frequently mentioned in Council conclusions, and environmental standards were integrated into the policymaking process of the Commission.

The Commission also began to work specifically into the areas of atmospheric pollution, marine pollution, waste management, biotechnology, and enforcement of environmental legislation (Dinan, 2005). The latter was one of the largest priorities identified for action in the fourth EAP. Complete and effective implementation of environmental measures could only be assured if integration was carried out at the level of Community policy, the national government’s implementation, and in a “generalized way so that developments in the private and public sector would meet the environmental requirements included in both the planning and execution of the proposals” (Barnes, 2000, p. 40).

Yet, in terms of approach and practice the fourth EAP can be considered more of an extension of the third EAP rather than a radical reorientation. As with the third EAP, the economics of European environmental policies remained central to the governance approach put forth by the fourth EAP (Hey, 2006). Due to the Single European Act, the fourth EAP (1987-
1993) found more reason to implement an effective environmental education policy. This was accomplished through the declaration of 1987 as the “European Year of the Environment”, the adoption of Directive 92/313/EEC on the freedom of access to environmental legislation, and through the development of the Community Information System on the State of the Environment and Natural Resources (Barnes, 2000).

The fourth EAP also changed its methods. While its quality policy and emissions-oriented approaches were successful in fighting problems caused by emissions of pollutants from many sources into one medium with little crossover effect, a better use was determined possible through a multimedia approach. Under the fourth EAP, environmental protection was not perceived as an additive, but rather as an integrated activity within the whole production process (Hey, 2006). The impacts of transport and of electricity generation proved to be the most problematic factors from the creation of the single market, and the chemicals sector proved to be in need of substance-oriented controls. An integrative approach would make possible the introduction of substance-oriented controls, the targeting of the most threatening industries within a sector, and the use of integrated risk assessment procedures (Barnes, 2000). Yet, this integrative approach would also come with a tightening of environmental standards and an introduction of more stringent measures. For a second time, economic instruments rather than interventionist approaches to governance were used to promote change. The fourth EAP reiterated the use of such instruments as taxes, and subsidies (initiated under the third EAP), expanding them with tradable emissions permits, state aid, and negotiated agreements with polluters (Holzinger et al., 2006). This new regulatory approach was a better ‘fit’ with the global trend of neo-liberal macroeconomic philosophies about market liberalization and deregulation;
based on which, marketing the environment seemed sensible and desirable as a requirement for sustainable and unobstructed economic growth.

The use of a new approach, sector analysis, and new environmental instruments emphasized a shift in the frame of EAPs, from trade-oriented to “sustainability”-oriented. Environmental policy was gradually perceived as an integrated part of economic decision-making and the term “sustainable development” slowly became a normative reference for environmental policy in the EU from 1990 onwards. Sustainable thinking was seen as “a tool that could improve the environment, social efficiency, and economic competitiveness simultaneously” (Hey, 2006, p. 21). Influenced by this sustainable movement, and outside factors such as the emergence of new global threats, a new wave of environmentalism in Europe, wider support for economic instruments, and preparations for the United Nations Conference on Environment and Development (UNCED) conference in 1992, the Commission proposed a strategy to stabilize emissions through efficiency standards, fiscal instruments, and research. Additionally, the climate change debate began to take hold and its nature required a long-term perspective of environmental policy in the European Union. It meant that with the aim of CO₂ reduction, many sectors, such as energy, transport, agriculture, and the chemical industry, would have to undergo changes. The result of this new focus was the CO₂/Energy tax (proposed in 1992), that advocated energy efficiency and fuel substitution (Hey, 2006).

3.2.4 Roll-Back and Context-Oriented Governance, 1992-2002

Even though economic incentives, as an instrument of environmental governance, were widely accepted (and requested by many of the states), the proposal for an environmental/energy tax was not received with the same equanimity. In fact the period after the UNCED conference
was characterized by a more global reform wave where such catchwords as ‘privatization’ and ‘new public management’ advocated a re-nationalization of EU environmental policy.

Sustainability remained on the agenda and in fact was strengthened as a Community target in the Amsterdam Treaty (1997), but the ideas developed in the fifth program reflected a major departure from traditional tools of environmental governance. Intervention and incentive based governance types were complemented and sometimes replaced by what became called “context-oriented governance” (Knill and Lenschow, 2005). The Commission launched several new initiatives\(^8\) but most lacked commitment and were ultimately frustrated by the demands from member states about the competitiveness of industries and the decentralization of environmental policies. This new agenda partly contradicted the ambitious ideas of the fifth EAP and therefore little progress could be achieved as the instruments used by the Commission were even sometimes self-canceling. For instance, the proposal for an energy tax coming out of the economic incentives governance approach, was watered down during two years of negotiations and eventually suffered re-nationalization, which transferred responsibility for introducing such a tax to the states.

Several other existing and proposed pieces of legislation were attacked under this push. The Drinking Water, Packaging Waste, and Environmental Impact Assessment (EIA) directives faced serious opposition from member states and even from other directorates-general within the Commission (Hey, 2006). In short, the ambitious new elements of the fifth EAP caused a nationalization backlash by the states. The subsidiarity principle, established in EU law by the 1992 Treaty of Maastricht, had a large part in both awakening the states and promoting the development of new governance models more open to national input.

\(^8\) Like the Cardiff Process, whereby sectoral Council formations were asked to identify the key problems of their sectors, to define objectives and to formulate activities in order to meet the objectives (Hey, 2006).
The new regulatory approach focused on procedural requirements, framework directives, voluntary agreements and self-regulatory information and management tools (Hey, 2006). As the argument went, effective governance is best guaranteed by collaboration between public and private actors at the various levels of policy formulation. This shared responsibility, benefits not only the content of legislation (as it becomes more context-specific), but also its successful implementation. This meant that both states and non-governmental actors had to be included in the process. States where brought to the process with the use of broad objectives and avoiding detailed specification, thus enhancing flexibility and allowing the states to choose their own instruments to achieve these objectives. Non-governmental actors where afforded new and revised/strengthened civil society rights. Most notably the three Aarhus pillars (1998): freedom to information,9 participation rights,10 and access to justice11 (Directives 2003/4, 2003/35 and CEC Directive proposal 2003/624). The consensus built by public and private actors assured that the ‘correct’ legislation would be formulated and that domestic opposition would be minimal, as the use of information and publicity also raised environmental awareness.

To summarize, the fifth EAP started out with interventionist and economic instruments of governance, but ended up with a patchwork of different, partially contradictory trends, with both economic and context-oriented environmental policy approaches being promoted simultaneously (Hey, 2006). This confusion and constant change could not be different in the environment than it was for the entire EU. The 1990s were a period of constant change, with two major treaties signed and ratified (Maastricht, Amsterdam) and one more in the works (2001 Treaty of Nice),

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9 The access to environmental information directives existed much earlier (90/313/EEC), but was transformed to a new information directive (2003/4/EC).
10 Arrangements are to be made by public authorities to enable the public affected and environmental non-governmental organizations to comment on, for example, proposals for projects affecting the environment, or plans and programs relating to the environment. Amending 85/337/EEC and 96/61/EC.
11 This proposal grants citizens the right to initiate administrative or judicial procedures against acts or omissions that do not comply with environmental law, but this instrument has not yet been adopted.
with the completion of the single market and pending introduction of the Euro, and with the EU’s biggest enlargement looming in the future. Moreover, states found themselves maturing into the EU, and new additions (Finland, Sweden) brought concerns about openness and participation. All these transformed the environmental policy horizon radically, and accounted for the lack of consistency within this period.

3.2.5 The 6th EAP and the Thematic Strategies, 2002-2012

The sixth EAP was written shortly after Sweden took over the presidency of the European Union Council of Ministers from France in 2001. Sweden, as one of the most environmentally concerned EU states, set sustainable development, employment, and enlargement as the priorities of its agenda. The sixth EAP listed its four main areas of concern as nature and biodiversity, environment and health, natural resource and waste, and climate change, while in its third year, the concept of ‘thematic strategies’, a “modernization of EU environmental policy-making, taking a broader, strategic approach,” was introduced (EC-Environment: 6th EAP). These thematic strategies where nothing more than a framework of general principles and objectives on key issues. In short, the EU identifies themes and principles and further specifies them by strategies, which are partially frameworks for further frameworks (Hey, 2006).

It is clear from the above sentence, that the sixth EAP took an unclear approach to environmental legislation in the decade of enlargements. It seems that the EU was wary of potentially contentious and controversial political decisions, and chose to leave it up to the states and non-governmental actors to figure out the specifics, while it assumed a role of manager rather than initiator (Hey, 2006). This was partially due to uncertainty as to the scale and solution of certain environmental problems (such as chemicals). But mostly it was due to the realization that if environmentalists, consumers, businesses, industries, and interest groups would give their input on large issues, more effective strategies could be created, and these
organizations would naturally become more involved in enforcement. Also, if information on the environment was more readily available and simplified for the general population, as through eco-friendly product tags, the member state citizens would further their involvement by making new eco-friendly decisions on a daily basis.

Environmental policy in the sixth EAP is thus left to the hands of cooperative arrangements and the increasing influence of expert communities. This development may save the EU time and money and political capital (that it doesn’t have), but it also runs the danger of becoming too ‘expertly’ defined and too narrow and short-sighted to address environmental problems given the limited horizons of member state politicians. With subsidiarity in the hands of the states, as per the procedure set-up by the Lisbon Treaty of 2009, the cooperative management of the policy process can prove to be very demanding, especially for smaller states that lack the resources and staff (or the dedication to environmental protection for some states) to deliver comprehensive answers to environmental problems.

However, it is far from evident that context-oriented instruments deliver more than interventionist and economic incentive approaches. As Hey (2006, p.27) aptly remarks “holistic and integrated approaches promise to tackle and balance everything with everything at the same time,” and that “in the end they amount only to fine rhetoric on principles - and little action.” Hey couldn’t be more right, but that’s just on the ‘rhetoric’ part, as that is what most economic and context-oriented “approaches” have been. In a study of whether the advertised instruments in EAPs matches what is actually used in practice by the EU, Holzinger et al. (2006) find that regardless of the fanfare behind the introduction of novel ideas like economic incentives and cooperativeness, interventionist instruments still claim the lion’s share in mechanisms used to

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12 Any national parliament may flag a proposal for EU action which it believes does not respect this principle. This triggers a two-stage procedure, which makes it politically difficult to continue with a proposal if a majority of national parliaments objects to it.
conduct environmental policy. In fact, between 1967 and 2000, interventionist instruments amounted to 85% of the instruments used, while the context-oriented ones were only present 11% of the time. Economic instruments, the ones advertised for two whole EAPs (the third and fourth one) amounted to a measly 4% of legislation (Holzinger et al., 2006). It is true, however, that EAP declarations did find themselves being transferred in the practice of EU legislation, just not at the amount advertised, and certainly not in the amount required to produce any real change in governance modes.

All this, points to the reality that governance ‘ideas’ in Environmental Action Programs remain just that, ideas devoid of practical use. Certainly, EAPs are non-binding agreements but they represent what the states, the Commission, and the societal conditions of each time demand. And even though states, society, and theorists demanded a more open method of policy formulation and implementation in later years, the Commission agreed and then continued to use the same centralized ‘deterrence’ system of command-and control instruments used since the beginning. The next section deals specifically with them.

3.3 The EU Institutions and Compliance Mechanisms: Cooperation and Deterrence

The European Union uses an integrated system of governance characterized by a mix of ‘deterrence” and ‘cooperation’ (Gormley, 1998). Even though in later years the focus and rhetoric has switched to more cooperative models and decentralization in the policy making process, the Commission still uses deterrence instruments by a large extent (Holzinger et al., 2006). The primary centralized enforcement mechanisms (monitoring, sanctions) are indeed complemented with management tools seeking to enhance the capacity of states to comply and prevent involuntary non-compliance, but the weight is largely on monitoring and sanctions.
3.3.1 The Commission and Monitoring

As is so often the case in Europe, the Commission was the first of central government bodies to initiate legalization (inclusion in Treaty clauses) on environmental policy. Nevertheless no one can refer to the Commission as the body that deals with the environment as it is made up of very different bodies with very different views on the environment. As mentioned earlier, the internal market DG played a negative role in various occasions, using the collegiality principle to block or otherwise delay environmental legislation (e.g. drinking water, packaging waste directives in the early 1990s). The Environment DG is one of 41 Directorates-General (DGs) and specialized services which make up the European Commission. Its main role is to initiate and define new environmental legislation and to ensure that measures, which have been agreed, are actually put into practice by Member States. The Environment DG is based largely in Brussels and has around 750 staff, something that is striking since for example only 15 officials are charged with the supervision of chemicals, while 500 officials are so charged in the United States Environmental Protection Agency (Sbragia, 1996).

The Commission is the sole body responsible for proposing legislation and acts as “guardian of the treaties” ensuring that treaty obligations are fully met by individuals, companies and Member States under Article 155 of the TEC employing the procedure laid down in Article 226 of the TEU. In practical terms this entails checking that transposition measures are notified and that they implement directives properly, while monitoring the application of regulations. The Commission carries out these tasks based on its own initiative, complaints from citizens, non-governmental organization (NGOs), or businesses, questions from members of the European Parliament and petitions received by the European Parliament exposing possible infringements

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of Community law (Nugent, 2001). Hence monitoring, as a ‘deterrence’ control mechanism is a sufficiently decentralized mix of deterrence and cooperation mechanisms for the EU.

The Commission is ill-equipped and too underfunded to detect violations by “police-patrol” mechanisms alone (McCubbins and Schwartz, 1984). Collecting and assessing information on state compliance through its own initiative is, thus, complemented by reliance on non-governmental organizations, institutions and other actors (such as states) to hit the “fire alarm” by filling official complaints or by parliamentary petitions and questions. Any individual or non-governmental organization may submit a formal complaint to the Commission,\(^\text{14}\) or petition the European Parliament\(^\text{15}\) (EP), about a state’s purported failure to comply with Community legislation, while the same can also be done by a Member of the EP (through official questions). Finally, since 2008, the Commission has also decided to use more cooperative scheme for ‘fire-alarm’ detection, whereby citizen or NGO complaints are referred directly to the implicated state (an informal stage), allowing the state to resolve the issue privately (without Commission involvement). However, the Commission does still have the option of taking further action, if it so chooses, by launching infringement proceedings.\(^\text{16}\) Figure 3-1 shows the trends in detection over the last 10 years: It is evident, from the figure below, that even though the number of detections is generally increasing, the source of these detections is not what one would expect given the rhetoric about an increase in cooperative (fire-alarm) mechanisms of monitoring. Both the 5\(^{\text{th}}\) and 6\(^{\text{th}}\) EAP declared a dedication to cooperative governance instruments, which of course entails a cooperative monitoring instrument.

\(^{15}\) The Petitions Committee of the EP assesses the validity of these petitions and transfers responsibility for investigation to the European Commission.
\(^{16}\) This is a pilot project active only in the EU 15. The goal seems to be to reduce the administrative workload of the Commission, while also enhancing cooperation between national and non-governmental actors. Further information can be found online at: Hhttp://ec.europa.eu/environment/legal/law/complaints.htm.
Holzinger et al.’s (2006) findings on the gap between declarations made through EAPs and actual practices are evident through the increase of ‘police-patrol’ monitoring mechanisms used by the Commission (own-initiative detection). Conversely, ‘police patrol’ mechanisms of monitoring should be decreasing or at least remain the same, whereas complaints (as a cooperative monitoring mechanism) should be steadily increasing, especially since the Commission has declared its dedication to making it easier for citizens to complain and making its presence less intrusive (e.g. the 2008 pilot project), however, this is not the case. Still, monitoring is half of the semi-centralized enforcement mechanisms utilized by the Commission.

3.3.2 The Commission and the European Court of Justice

As guardian of the EU Treaty, the Commission has powers to take legal action against Member States not following their obligations (under Article 226). To induce compliance the threat of sanctions has to be credible, and even though the Commission does not like
antagonizing the states, the formal stage of infringement proceedings can be a fearful yardstick for the states. The infringement procedure has both formal (judicial) and informal stages where deterrence and cooperation play an equally influential role. Both unofficial and official stages of these proceedings of infringement are portrayed in Figure 3-2 (Borzel 2001, p. 807) below and explained in detail afterwards:

Figure 3-2. Stages in infringement proceedings

If the Commission considers that there may be an infringement of Community law that warrants the opening of an infringement procedure, it addresses a “Letter of Formal Notice” to the Member State, requesting it to submit its observations by a specified date, usually two months (Borzel, 2001). This instrument is less formal that the subsequent ones, and is mostly used by the Commission to weed-out simple cases of misunderstandings and cases of involuntary non-compliance, as such it is highly cooperative in nature.

In the light of an unsatisfactory reply, or absence of a reply, from the Member State, the Commission may decide to issue a “Reasoned Opinion” (or second written warning). This instrument is clearly more formal and it is where the Commission clearly and definitively explains the reasons why it considers there to have been an infringement of Community law and
calls upon the Member State to comply within a specified period, normally two months (Borzel, 2001). This stage serves to turn up the pressure against the state, as referral to the court is eminent, but it still falls under the cooperative instruments designed to induce compliance with a mix of eminent threat and assistance (informing states why and how they are not complying, and what they need to do to avoid referral).

If the Member State fails to comply with the Reasoned Opinion, the Commission may decide to refer the case to the European Court of Justice. This is one of the most important stages as the states are normally eager to avoid being “named and shamed” (Tallberg, 2002, p.617). Still, the Commission is not quick to refer cases to the ECJ (especially with bigger states), as both sides feel the pressure of costly litigation and reputations are on the line. This environment of shared interest (or fear) to avoid litigation creates a fertile ground for negotiation and alternative forms of dispute settlement. In fact, the Commission has institutionalized compliance bargaining in a procedure that involves direct negotiations with member states. It should be of no surprise that most infringement proceedings end here.

Looking at Figure 3-3 below, letters of formal notice and reasons opinions, as instruments that deliver a mix of cooperative and deterrence instruments to induce compliance, work very well in most cases. In fact out of all the infringement proceedings opened for 1996-2007 only 26% reached the stage of reasoned opinions, and a meager 9% were referred to the European Court of Justice. However not all states have the same respect for the Commission’s carrots and sticks. States like Denmark, Netherlands, Sweden and Finland, already identified as environmental leaders, retain their scepter even in dealing with infringement proceedings in a timely and cooperative manner. In contrast, others, such as Greece, France, Italy, and
Luxembourg seem to defy Commission mechanisms and end up going to court frequently as a result.

Figure 3-3. Number of infringement procedures opened within a year, broken down by stage of the procedure and by Member State

But of course, sometimes referral to the ECJ is inevitable. The European Court of Justice is not a real venue for negotiations though, and referrals to the court almost always end up in favor of the Commission (Tallberg, 2002), as such Court judgments are a definite ‘deterrence’ tool in the EU’s arsenal. However, it does have some ‘cooperative’ functions as it serves to clarify legislation and provide precedents, which clearly reduces the legal uncertainty about the meaning of rules, and hence decreases involuntary non-compliance due to ambiguity.

In the past, after the ECJ ruling, and if the state involved refuses to comply with the Court’s decision, the only measure available was to renew the infringement proceedings.

However, after the 1992 Treaty of Maastricht, an article 228 procedure may be initiated, which
may end in a daily fine for as long as the state fails to effectively comply with requirements. This procedure consists of the same stages as the first infringement procedure (under Article 226), but this time it can end with the imposition of financial penalties. Table 3-1 below provides a description of the closure of cases from 1998 until 2007:

Table 3-1. Closure decisions 1998-2007, by stage reached

<table>
<thead>
<tr>
<th>State of the procedure</th>
<th>Total Closures</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before sending of formal notice (art. 226)</td>
<td>8211</td>
<td>38.21%</td>
</tr>
<tr>
<td>Before sending of reasoned opinion (art. 226)</td>
<td>8354</td>
<td>38.88%</td>
</tr>
<tr>
<td>Before referral to Court of Justice (art. 226)</td>
<td>2580</td>
<td>12.01%</td>
</tr>
<tr>
<td>Before lodging the application before the Court (art. 226)</td>
<td>927</td>
<td>4.31%</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>651</td>
<td>3.03%</td>
</tr>
<tr>
<td>Before sending of formal notice (art. 228)</td>
<td>624</td>
<td>2.90%</td>
</tr>
<tr>
<td>Before sending of reasoned opinion (art. 228)</td>
<td>184</td>
<td>0.86%</td>
</tr>
<tr>
<td>Before referral to Court of Justice (art. 228)</td>
<td>117</td>
<td>0.54%</td>
</tr>
<tr>
<td>Before lodging the application before the Court (art. 228)</td>
<td>24</td>
<td>0.11%</td>
</tr>
<tr>
<td>Withdrawal (second referral)</td>
<td>10</td>
<td>0.05%</td>
</tr>
<tr>
<td>After judgment of Court of justice (art. 228)</td>
<td>6</td>
<td>0.03%</td>
</tr>
</tbody>
</table>

The situation is clearly positive as regards to the ability of the mix of cooperative and management instruments used by the European Commission to induce compliance. Out of 21,500 cases closed within a decade as many as 94% of the cases where resolved before lodging the application before the Court. Approximately 40% of the cases are resolved before the Commission sends a reasoned opinion, and another 12% before the Commission refers the case to the Court of Justice, which is where negotiations and agreements between the Commission and the states are most likely to be pursued to avoid costly litigation for both sides. The ECJ’s infringement judgments also fulfill the managerial function of reducing the legal uncertainty of EU rules, by clarifying the treaties and providing precedents for future disputes. The above table also illustrates that states are less inclined to defy the Commission when the threat of sanctions becomes more real. Even after the Court has passed judgment on a case, there is still room to
maneuver since the article 228 procedure for financial penalties has not started yet. As the Commission goes down the ladder of inducing compliance, from the more cooperative article 226 formal notices to the more threatening instrument of a second referral; a final 3% of the cases end before sending a formal notice under article 228.

Financial penalties as an instrument were clearly designed to induce compliance in the absence of a ‘police force’ to enforce Court decisions, and as the above discussion indicates, they are very successful in that respect. However, for these penalties to work, they must be sufficiently high to deter further non-compliance or repetition of the behavior in other areas and cases. They must also negate the possibility of a state benefiting from its own failure to conform to Court decisions. It is expected then that the Commission would make use of this new power with adequate thought and strictness. In fact, during the period 1997–2000 it proposed penalties in 21 cases with amounts ranging from 6,000 to 264,000 euro per day (Tallberg, 2002).

It is true, though, that even if the penalty is sufficiently high, states may still choose to defy the Commission. In the first ever fine imposed by the European Union on one of its members, Greece defied the penalty of 20,000 Euros per day for almost five months (and several letters from the Commission demanding payment. It was only after the Commission warned Greece that it would withhold money dues from Treaties if money was not received by the end of 2000 that Greece finally complied. This is clearly an extreme case, not at all representative of the success the management and enforcement mechanisms of the European Commission enjoy. Even so, compliance was achieved (in the form of fine payments), with an instrument instituted by the 1997 Treaty of Amsterdam (instituted with human rights and Eastern European enlargement in mind).

17 For failing to comply with a 1970s directive on waste dumping near Hania on the island of Crete, first ordered in a with an ECJ judgment handed down in 1992. Judgment was made on July 4th 2000, first payment came on December 22nd of the same year.
The aforementioned measure is a last resort ‘deterrence’ mechanism, used very few times with mixed success.\textsuperscript{18} However, the Commission has several other strategies that fall under the ‘cooperative’ theme for inducing compliance. For instance, the ‘LIFE+ Environment Policy and Governance’ instrument co-finances technological projects that offer significant environmental benefits, for example process or efficiency improvements. This part of LIFE+ also helps projects that improve the implementation of EU environmental legislation, that build the environmental policy knowledge base, and that develop environmental information sources through monitoring. Another strategy is the ‘LIFE+ Information and Communication’ instrument, which co-finances projects that spread information about environmental issues, such as climate change and conservation. This strand of LIFE+ can also support environmental awareness and training campaigns. Finally, the Environment DG provides operating grants to European environmental Non-Governmental Organizations (NGOs).\textsuperscript{19} This includes only non-profit making and independent environmental non-governmental organizations active at a European level (have activities and members in at least three EU Member States).

To summarize, the Commission has created a complex mix of enforcement and management mechanisms to induce compliance that practically forms a ladder of patrolling. From simple fire-alarm mechanisms through complaints (cooperative), to the more complex semi-cooperative mechanism of formal notice, to the more enforcement oriented mechanism of referral to the European Court of Justice under article 226, to the most extreme deterrence mechanism of financial penalties under article 228. This mix of soft and hard instruments covers

\textsuperscript{18} The Austrian Christian Democratic Party formed a coalition with the far-right Freedom party in the 1999 elections. To signal their displeasure, the other member states cited the Amsterdam treaty and unofficially imposed mild sanctions, but backed down when the Austrian government threatened to call a referendum on EU membership unless the sanctions were lifted.

\textsuperscript{19} The legal base for the program is the LIFE+ Regulation which provides for funding of “operational activities of NGOs that are primarily active in protecting and enhancing the environment at European level and involved in the development and implementation of Community policy and legislation.”
almost the whole gamut of patrolling (suggested by several theories on compliance), but of course non-compliance is still a possibility, and initial non-compliance a definite reality. An expensive, time consuming, and alienating reality that serves to take up most of what the Commission does as ‘guardian’ of the treaties, instead of more important functions like policy innovation.

3.3.3 The Basic Principles of EU Law and the National Courts

A decentralized system of compliance has developed alongside the centralized system described above. At its core, national courts serve as the agents of the European Court of Justice and individuals hit the ‘fire alarm’ by going either to national courts or the ECJ (through preliminary ruling requests). The origins of the system can be traced back to the establishment of two basic principles of EU law, direct effect and supremacy.

The notion that community law might have a direct effect in the legal orders of the member states is not present in the TEC, although regulations are directly applicable. Direct effect means that individuals can rely on community laws as such, without a requirement for national implementing legislation (only regarding Treaties). The development of direct effect began with the Van Gend en. Loos v. Netherlands (1963) case (a Dutch transport firm brought a complaint against Dutch customs for increasing the duty for a product imported from Germany, thereby infringing the TEC, which spoke of no new duties, or raising of duties.). The ECJ made clear the radical basis of the doctrine. It claimed that the community represented a new legal order, and that the states had limited sovereign rights by becoming members of the community. The article of the Treaty in question had direct effect because it contained a clear and unconditional prohibition, which did not require further intervention at the national or community levels. Community law therefore imposes obligations on individuals but is also intended to confer right
upon them. It allows individuals to take advantage of Community law regardless of whether national law exists or not.\textsuperscript{20}

Surprisingly the initial development of the principle was more or less uncontested by the member states. But the transformation of EU law that ensued the application of the principle was not as important as its extension to secondary legislation, which fundamentally altered the community policy process. The extension of direct effect to directives started by the Grad v. Finanzamt Traunstein (1970), when it ruled that a directive had direct effect if it contained a clear and unconditional obligation on a member state and had not been implemented by that state within the time prescribed by the directive. In the Van Duyn case (1974) the Court argued that a directive could produce direct effects, because it would be incompatible with the binding effect of the directive to argue that in principle they have no direct effects.

Furthermore, in Johnson v. RUC (1984) the ECJ declared that the right to a judicial remedy is a general principle of EC law. In Francovich and Bonifacy v. Italy (1991), the court held that in certain circumstances, individuals are entitled to sue governments for damages sustained as a result of the government’s failure to implement a directive within the prescribed period. In Haim (2000), the court extended the scope of Francovich type liability to public law bodies legally independent of the state.

The principle of direct effect would have had little impact if Community law did not supersede national law. This was about, which set of rules should be supreme if a directly effective community law contradicts provisions of a national law. Again the TEC was unclear on the issue, and the ECJ ruled over supremacy of community law in the Costa v. ENEL (1964) case. The Court pointed out that member states had definitely transferred sovereign right to the

\textsuperscript{20} Private citizens may not sue one another on the basis of an EU directive, as directives are addressed to the Member States.
Community and that Community law could not be overridden by domestic legal provisions without the legal basis of the Community itself being called into question. The ECJ expanded on the primacy of community law in Simmenthal v. Commission (1979) when it ruled that every national court must apply community law in its entirety and must accordingly set aside any provisions of national law which may conflict with it.

Direct effect and supremacy, thus, provide the framework for the decentralized system of compliance to work without EU involvement, but without the ability of the European Union to interact with national courts the system would not be fruitful. Requests for preliminary rulings from the European Court of Justice complete the system. Under article 234 of the TEC, if an individual argues before a national court that a national law or policy conflicts with EU law, and if that court is unable, or unwilling to resolve the dispute itself based on previous EU case law, that court may seek “authoritative guidance” from the ECJ by making a preliminary ruling request.

The parties involved, as well as EU institutions and national governments, may submit legal arguments to the ECJ, and based on the assessment of these arguments, relevant case law, and treaty provisions, the ECJ issues a ruling, which the national court then applies to the case in question. Requests for preliminary rulings came slowly at first, but accelerated in the 1970s and 1980s, and are about 250 a year nowadays (Dinan, 2005). The ECJ gives requests for preliminary rulings a higher priority that other cases because national courts must await a result before proceeding with the case in question. Under article 243 lower national courts may seek guidance, but the highest national courts must do so. The preliminary rulings procedure is of fundamental importance to the proper functioning of the legal and economic system of the EU, and effectively gives the ECJ the power to review national law (thereby turning it into a supreme court), while it
also sets up a system whereby the ECJ decides and the national courts enforce. More importantly, in Kobler (2003), the court ruled that individuals were entitled to compensation in cases where the highest national courts had not sought a preliminary ruling or had disregarded the Court’s interpretation in a preliminary ruling.

Taken together, all these instruments make for a formidable force for inducing compliance in a decentralized manner. Specifically, the system allows private individuals to sue their own governments for non-compliance, and provides for financial compensation when the government has failed to enforce community directives. This shifts the costs of litigation to the national level but also permits closer monitoring of non-compliance (since national level players know national issues better). Additionally, since national court rulings are not necessarily media events, the decision has less coverage than ECJ decisions and thus the climate of opposition and alienation between the Commission and member states is minimized, while the decision is more likely to be followed since it was made at the national level. Finally, requests for preliminary rulings serve a largely managerial function as they reduce ambiguity, one of the main sources of involuntary non-compliance (Tallberg, 2002).

3.3.4 The European Parliament

The European Parliament (EP) plays a complex role in the policy process but its impact is not as crucial as that of the other actors. Under Article 155 of the Treaty of Rome the Commission alone is empowered to set the agenda and propose legislation. However after the 1979 introduction of direct elections for the European Parliament, its members came to adopt procedures that would allow them to forward draft proposals for legislation to the Commission (Judge, 1992). Any member may draft a proposal, which is then referred to the appropriate committee for consideration; under “Rule 63 reports” the EP can bring up a new issue on the policy agenda for Commission Communication and encourage action from the Commission
The TEU made formal provision for the Parliament to invite the Commission to present a legislative proposal, thereby formalizing its ability for legislative initiative (Peterson and Stackleton, 2002, p. 99).

However, when a proposal comes under Article 130s the Parliament is least effective as its responsibilities conclude in basic consultation with the Commission. This is why the EP has strongly supported the Commission’s use of Article 100a as the legal base for the issuance of directives concerning the environment (internal market), which triggers the codecision procedure. Indeed from 1989 to 1992 out of 29 environmental directives 15 of them have been based on Article 100a (Judge, 1992). Additionally, as mentioned above, the European Parliament can initiate the infringement proceedings by questions and petitions. Parliamentary petitions are a traditional instrument of control. Any citizen of the EU, may petition the EP ‘Petitions Committee’ on a matter which comes within the Community’s field of activity and directly affects the citizen. Thus citizens can complain on both the Commission and the European Parliament.

3.3.5 The Council of Ministers

The Council of Ministers is the sole decision-making body of the EU when it comes to solely environmental matters (unconnected to the internal market). Although the Commission plays a big role in proposing legislation the Council of Ministers for the Environment are the ones who negotiate the final arrangements and vote on its transformation to law. Typically the Council of Ministers weakens the restrictions proposed by the Commission because a great deal of intergovernmental bargaining is needed to reach a compromise. The battle used to be decided between the six “green” members (Germany, Holland, Denmark, Austria, Sweden and Finland) otherwise called the “leaders” and the remaining members called the “laggards,” but the accession of ten new members in 2005 may serve to tip this balance. Germany is the odd one out.
from the environmental leaders as it implementation record proves the opposite, but then again this may just be the case we are looking for, as an environmentally oriented state that finds it hard to follow up on its own initiatives.

This “leader-laggard” dynamic of the EU politics, explains most of how an agenda reaches the hands of the Commission. Typically an environmentally progressive state such as Germany passes national legislation more stringent than that found in the EU generally, and the pressure for ‘Europeanization’ begins. Although members certainly pressure the Commission for environmental issues pertaining to their own domestic politics, it is the adoption of national legislation that triggers the Europeanization of domestic regulations (Sbragia, 1996).

This indirect pressure is based on the right given to them by Article 130s (the one not connected to the internal market), but ‘green’ members make the case for Europeanization due to inequalities between their firms and other countries’ firms. The possible restriction to trade brings the Community into the game by default as firms in ‘green’ countries, where a progressive environmental restriction has been approved are anxious to avoid being put at a comparative disadvantage with businesses elsewhere in the EU (Sbragia, 1996).

Nevertheless, the EU’s institutional process does not allow for one member or a “troika” for that matter to control the agenda. As soon as the piece of legislation reaches the EU bodies it becomes part of a complex framework of codecision (Article 100a, if a market claim was made) and transformation in to be acceptable to the majority of the EU states (whose Environment ministers will have to vote on it), and the desires of the EP (generally a pro-integration institution). Most of the time though the progressive piece becomes an EU directive, which means countries that even countries did not agree with it, they will eventually have to implement and enforce it.
3.3.6 The European Council and European Institutions

Even though the European Council has rarely preoccupied itself with environmental policy matters, its role in the policy process of the EU has become rather critical especially since the TEU. Its formal functions include that it “shall provide the Union with the necessary impetus for its development and shall define the general political guidelines thereof” (Hayes and Wallace, 1997, p. 160). It brings together heads of state or of government (see France) of the member states and the President of the Commission, while the head of state or of government that holds the Presidency of the Council will also hold the chairmanship of the European Council for its meetings.

The fact that might make the European Council a part of the EU hierarchy is that it gives political guidance (sets the agenda) to the Union on controversial matters. In a sense, since the European Council is a meeting place for the heads of state or of government (the political principals of the individual Ministers of the Council) it holds the Council liable for respecting its decisions (conclusions of the presidency); and since the president of the Commission is present the same effect is expected of the Commission. Strictly speaking, ‘conclusions of the presidency’ are not legally binding, “but in fact they constitute a form of soft law which the Commission and the Council have to take into account and respect” (Peterson and Stackleton, 2002, p. 30). In fact ‘presidency conclusions’ have rarely\(^2\) been without any real impact on the life of the Union.

3.4. The Compliance Gap

Even if the Commission were to initiate legislation on some area of policy (like the environment), there is no guarantee that it would pass “un-bruised” through the myriads of actors involved in the legislative process. This reality is made worse by the fact that as soon as

legislation leaves the hands of the legislators, it is in the hands of the member states to transpose it in a timely manner and proceed to its implementation and enforcement. The Commission has set up a series of ‘enforcement’ and ‘management’ techniques to induce and ensure compliance, yet non-compliance is possible and for some sectors even probable.

### 3.4.1 The Gap in the EU

The number of infringement proceedings against EU member states allegedly breaking the bloc’s environmental directives is continuing to rise despite the Commission’s efforts to improve implementation and enforcement of legislation. Because of its limited resources the Commission depends on external sources for information about domestic activity in the member states. “On-site visits and other ‘spot checks’ by Commission officials are of limited value; they are usually time-consuming, politically fraught, and can easily be blocked by member states that are under no legal obligation to cooperate” (Jordan, 1999).

The Commission’s reliance on external actors to hit the “fire-alarm” is abundantly represented in Table 3-2 below, which portrays the source for detection of cases from 1996 to 2007. This table clearly shows that the Commission relies on ‘fire-alarms’ more than ‘police-patrols’, reflecting of course its own resource limitations and abhorrence in antagonizing the states on its own initiative. The Commission’s reliance on external actors as a source for detection of non-compliance is exemplified by the fact that out of 29,045 total detected cases of non-compliance for 1996-2007, 47% came from complaints, while 38% came from non-communication, and only 14% were the result of the Commission’s own initiative. More importantly, taking 2001 as the year of reference, 111 of 272 cases initiated by the Commission itself in 2001 were related to the environmental sector (40.8%); it received 587 complaints out of 1300 total (41.3%), and had 113 non-communication cases (18.6%) out of 607 cases for all
sectors. These percentages illustrate that the Commission spends most of its time addressing issues that have to do with environmental non-compliance.

Table 3-2. Total number of newly detected infringement cases, by year of detection and by origin

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Complaints</th>
<th>Cases detected by the Commission</th>
<th>Non Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Total</td>
<td>(Of Which)</td>
</tr>
<tr>
<td></td>
<td>(Of Which)</td>
<td>Parliamentary Questions</td>
<td>Petitions</td>
</tr>
<tr>
<td>1996</td>
<td>2155</td>
<td>257</td>
<td>22</td>
</tr>
<tr>
<td>1997</td>
<td>1978</td>
<td>261</td>
<td>13</td>
</tr>
<tr>
<td>1998</td>
<td>2134</td>
<td>396</td>
<td>18</td>
</tr>
<tr>
<td>1999</td>
<td>2270</td>
<td>288</td>
<td>16</td>
</tr>
<tr>
<td>2000</td>
<td>2434</td>
<td>313</td>
<td>15</td>
</tr>
<tr>
<td>2001</td>
<td>2179</td>
<td>272</td>
<td>5</td>
</tr>
<tr>
<td>2002</td>
<td>2356</td>
<td>318</td>
<td>30</td>
</tr>
<tr>
<td>2003</td>
<td>2709</td>
<td>253</td>
<td>23</td>
</tr>
<tr>
<td>2004 (EU15)</td>
<td>2146</td>
<td>285</td>
<td>23</td>
</tr>
<tr>
<td>2004 (EU25)</td>
<td>2993</td>
<td>328</td>
<td>23</td>
</tr>
<tr>
<td>2005</td>
<td>2653</td>
<td>433</td>
<td>16</td>
</tr>
<tr>
<td>2006</td>
<td>2518</td>
<td>565</td>
<td>18</td>
</tr>
<tr>
<td>2007 (EU25)</td>
<td>2345</td>
<td>488</td>
<td>7</td>
</tr>
<tr>
<td>2007 (EU27)</td>
<td>2666</td>
<td>512</td>
<td>7</td>
</tr>
</tbody>
</table>


According to the Commission’s own classification there are five relative categories of non-compliance with EU law. Non-communication is the most prominent type of non-compliance with EU law. Directives are not directly applicable, as a result of which they have to be incorporated into national law. Member states are left the choice as to the form and methods of implementation. Generally each new directive sets a time limit (usually two to three years) for members to amend their law in line with the directive’s provisions. Member states must notify transpositional measures by this deadline. Non-compliance manifests itself in a total failure to issue

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the required national legislation (Borzel, 2001). The delays can sometimes be attributed to the institutional and administrative structures of the state, but also, in extremely technical fields, such as chemicals and biotechnology, states with limited resources experience problems (Annual Survey, 2001). \(^{24}\)

![Bar Chart showing Infringements for which proceedings have been commenced, by legal base, 1998-2007](chart.png)

As demonstrated by Figure 3-4, non-communication claims the lion’s share with 61% (in the 1998-2007 period), as the legal base for cases in which infringement proceedings have been initiated. Non-communication is easily detected, as it comes under the Commissions automatic reporting mechanisms where no flag need be raised by any Commission official or non-governmental actor to detect compliance. As such, one would expect that states would be more careful and non-compliance under this mechanism would be minimal, however this is definitely not the case. Additionally, non-communication as a source of detection of non-compliance for

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\(^{24}\) I have included in exact, the Commission’s comments and justifications as they will serve as a basis for comparison to what I find as the reasons for interstate variation and non-compliance.
the Commission is 38% compared to the 47% accounted for by complaints (from Table 3-2 above), and complaints are more likely to come later in the implementation process than at the stage of legal transposition. Yet, the Commission ends up opening many more infringement proceedings for non-communication rather than for any other type of non-compliance (where complaints are prominent). In fact, as demonstrated in Figure 3-5 for the 1997-2007 period, non-communication accounted for 61% of all infringement proceedings (followed by bad application at a distant 18%), while 66% of non-communication cases reach the letter of formal notice stage in infringement proceedings, as compared to 60% for bad application. Non-communication is, thus, followed to the letter by the European Commission and 8% of these cases reach the referral to the European Court of Justice stage, which is less of a percentage than the other sources of non-compliance, yet the sheer number of cases (920 cases) compared to the other sources of non-compliance is staggering (52% of all referrals). This of course means that valuable resources and time are spent disproportionately on non-communication cases, and any theoretical and empirical analysis of non-compliance should focus mainly on these cases, and explanations of this initial non-compliance (at the pre-implementation stage).

![Figure 3-5. Infringement proceedings by source of non-compliance and by stage reached, 1998-2007.](image-url)
As soon as a directive is transposed, the burden of implementation and enforcement falls on the individual Member States (and the Commission through complaints). By focusing on the politics of implementation, one misses the crucial importance of the compliance (transposition) stage pertaining to EU directives, as that is the stage where most of the “push and pull” happens between governments, domestic groups (opposition or not) and European principals (Commission, European Parliament). The cross sectional situation on infringements is portrayed below, where the theorized leader-laggard dynamic is exemplified.

Figure 3-6. Infringement cases by Member State, 1996-2007.

Another type of non-compliance is non-conformity. The transposition of Directives may be wrongful. Member states are not only required to adopt measures to implement directives, they have to ensure that these measures comply with Community law. Non-compliance takes the form of either incomplete or incorrect incorporation of Directives into national law. Parts of the obligations of the Directive are not enacted or national regulations deviate from European obligations (Borzel, 2001). Problems of non-conformity arise for a variety of reasons. First, the different levels of responsibility required to be allocated between different levels of government
within a member state. Second, difficulties may arise in amending national law because of the spill-over effect of environmental provisions on other areas of state activity (Annual Survey, 2001). Non-conformity is not a big problem for the EU, however, it is the type of non-compliance which leads to comparatively more cases reaching the Court (14% of non-conformity cases as compared to the Treaties, Regulations and Decisions that follows next with 12%).

Bad application is yet another form of non-compliance. Even if the legal implementation of a Directive is correct and complete, it still may not be practically applied. Non-compliance involves the active violation of taking conflicting national measures or the passive failure to invoke the obligations of the Directive. The latter also includes failures to effectively enforce Community Law, that is, take positive action against violators, both by national administration and judicial organs, as well as make adequate remedies available to the individual against infringements which impinge on their rights (Borzel, 2001). Bad application is the second largest type of non-compliance (after non-communication) on all counts and commands 20% of all referrals to the ECJ.

Two final two types of non-compliance are: Violations of Treaty Provisions, Regulations, and Decisions and non-compliance with ECJ judgments. Treaty Provisions, Regulations, and Decisions are directly applicable and, therefore, do not have to be incorporated into national law. Non-compliance takes the form of not enforcing or incorrectly applying and enforcing European obligations (Borzel, 2001). Under this type, member states find themselves entangled with the Commission for almost 13% of the Commission’s enforcement efforts (compared to the 61% of Commission efforts on non-communication). As for non-compliance with ECJ judgments, once the European Court of Justice finds a member state guilty of infringing Community Law, the member state is finally obliged to remedy the issue. Non-compliance under this type refers to the
failure of member states to execute Court judgments, which establishes a violation of Community Law (Borzel, 2001). However, a discussion on this type of infringement has preceded this discussion. What remains is a discussion on the temporal and cross-sectional levels of non-compliance and the sector where non-compliance seems to be worse.

3.4.2 The Gap in the States and the Environment

The Commission publishes regular reports on the implementation of EU law\textsuperscript{25} and keeps regular track of the states’ transposition records,\textsuperscript{26} as such the tools necessary for the ‘name and shame’ factor to induce compliance are more than adequate. However, as the above discussion clearly illustrates, non-compliance is a serious issue. The most important type of non-compliance (for this study) is non-communication, which represents 60\% of all infringement proceedings instigated by the European Commission. Figure 3-7 below tracks the evolution of the rate of directive transposition (the source of non-communication infringement proceedings) from 1998-2007.

![Average Compliance](image)

Figure 3-7. Average rate of directive transposition for the EU15, 1998-2007.

\textsuperscript{25} Available online at: \url{http://ec.europa.eu/community_law/infringements/infringements_annual_report_en.htm}.
\textsuperscript{26} Available online at: \url{http://ec.europa.eu/community_law/directives/directives_communication_en.htm}.
It becomes clear from this figure, that the rate of transposition is quite high for the period in question, yet one must not forget that there are an average of 2100 directives each year applicable in all sectors for this decade, and states complied with 1955 of them, which creates a backlog of 10-15 directives on average each year, that states have to implement on top of the approximately 200 a year average applicable directives. Taking into account that the EU produces about 100 directives each year, the 10-15 directive backlog is not negligible, and certainly, the eleven some thousand infringement proceedings commenced on non-communication cases are not negligible either (an average of 1,200 a year). Arguments, such about the increase in the number of directives applicable introducing a bias in the data, as states have to comply with more legal acts than in the past (Borzel, 2001) seem to not apply since compliance actually increased for 2003 (from the above Figure 3-7), while the number of applicable directives in that year rose almost by a thousand directives. This situation is accurately depicted by following Figure 3-8.

![Figure 3-8. Average number of applicable directives for the EU15, 1998-2007.](image)

Regardless of the fact that compliance has actually increased in years where the number of applicable directives also increased, the growth in the number of applicable directives is logically expected to strain the Commission’s enforcement and management mechanisms for inducing
compliance. The Commission’s own resource limitations is what created the need for a mix of management and enforcement practices. However, as applicable directives increase, the Commission will reach the ceiling of its capacity to follow up on infringements with the same fervor as in the past, and non-governmental actors will also find it increasingly difficult to follow every piece of legislation.

Thus, it is also logical to assume that the purported increase introduced on non-compliance by the increase in applicable directives will be offset by the limitations of the ‘detection’ and ‘follow-up’ mechanisms. It is true, that there is considerable variation in infringement proceedings between sectors of policy. According to the Commission the Environment sector is the one were member states have continuously been ‘misbehaving’ throughout the last two decades of policy. The following Figure 3-9 provides an accurate depiction of this fact.

![Figure 3-9. Stage of the infringement procedure reached for infringement cases being under examination, broken down by sector, 1998-2007.](image-url)
It is evident, from Figure 3-9, that the Commission spends a considerable amount of its time dealing with environmental infringements. In fact, 25% of all infringement proceedings, within the 1998-2007 time period, were related to environmental policy, with the internal market a close second (21%), and most other sectors recording much smaller rates. More importantly when comparing the two most ‘deviant’ sectors, another aspect of non-compliance comes to the fore. After issuing a letter of formal notice in the environment, 90% of the infringement cases will move on to the next round of reasoned opinions, while a staggering 25% of the cases will be referred to the European Court of Justice. Compared to the next worst sector as regards to infringement cases, environmental policy is clearly problematic for the Commission, as almost 7% of infringement cases ultimately reached the article 228 stage, compared to just 3% for internal market policy. The situation is presented in the Figure 3-10.

![Figure 3-10. Infringement proceedings after the Letter of Formal Notice; Environment, Internal Market, 1998-2007.](image)
While 7% Article 228 proceedings does not sound like an impressive figure, it becomes more impressive when one realizes that this represents more than 45% of all article 228 infringement proceedings for the 1998-2007 time period (a whopping 249 cases in all). It is evident, then, from the above discussion and illustrations, that the Commission spends a considerable amount of its time using its ‘enforcement’ and ‘management’ mechanisms to induce compliance in the environment policy sector. As Figure 3-11 demonstrates, transposition rates for the environment are not as bad as one may think, but the Commission uses most of its time enforcing this ‘non-communication’ type of infringements (61% of all infringement cases, followed by 18% by bad application). In fact, the 924 ECJ referrals on the environment sector (for the ten year period), constitute 52% of all referrals by source of non-compliance (non-communication, bad application, etc).

Therefore understanding the dynamics behind non-communication cases would go a long way towards decreasing the Commission’s administrative burden, while clarifying the reasons for non-compliance by the states. Bearing in mind these figures on infringement proceedings, and the above discussion on the importance of non-communication as the biggest source of non-compliance, is non-communication comparatively worse in the Environmental field than it is in other policy areas? To put things into perspective, out of a total of 1505 applicable directives for 2001, only 123 (8%) of them were related to the environment (compared to 121 for the ‘internal market’; 452 for ‘enterprise’). But even though the applicable directives were only 8% of all applicable ones, overall compliance of Member States reached 97.4% that year, while compliance in the environmental sector dropped to 92.4%. The situation in the environmental sector is depicted in the following figure.
As we can see, compliance with environmental directives demonstrates a peculiar trend in which, compliance deteriorated for the 2000-2002 years and then rapidly resumed its normal levels. One could argue that the final stages for the completion of the internal market project in the previous year finally hit home with compliance overload, since states surely would have developed a backlog on environmental compliance, trying to transpose directives in sectors perceived more important at the time (like the internal market). However a comparative look at compliance records between the two sectors indicates a similar trend for both.

Figure 3-12. Transposition rates in the Environment and Internal Market, EU15, 1998-2007.
However, if one notices the Energy and Transport sector, compliance there spiked almost 10% more than pre 2001 levels for the 2001-2002 period, possibly due to the ramping up of Commission and state activity in preparation for the Kyoto Protocol Emissions agreement ratification (with directives for greenhouse gases falling under this sector). Again, one should not be fooled by the relatively high levels of compliance (communication of measures implementing directives), as non-communication is the largest source of opened infringement proceedings and the environment claims the largest share of those (by 25%).

Non-compliance is comparatively worse in the environment sector, Figure 3-13 below demonstrates the temporal component of the problem and highlights the relative gap in environmental compliance as compared with rates of compliance with all other sectors of policy.

Figure 3-13. Average transposition rate, Environment, all other sectors, EU15
As the figure clearly illustrates compliance in the environment sector used to be much higher than all the other sectors in the early years of this study, but as compliance with other sectors began to increase (starting in 2001), compliance with the environment lagged behind, reaching its lowest rate of 90.4% in 2002. It is true, however, that compliance with other sectors dipped along with the environment in 2002 (contrary to its upward trend), but not to the lowest level it has been in the 1997-2007 decade. Regardless, of this environmental compliance is lower than compliance in other sectors for 2001-2002 by 4%, in stark contrast to what is happening in other years. The reasons for this dive in 2001-2002 in the environment sector are difficult to explain and pertain to a series of hypotheses offered by this study, certainly though, it can be argued that states were preoccupied with other sectors than the environment. However, a depiction of interstate differences is important to grasp the spatial character of the problem. Figure 3-14 below offers such a depiction.

Figure 3-14. Average Environment transposition rates, by Member State, 1998-2007.
In short, if we accept transposition data as valid indicators of member state non-compliance with EU environmental law, it is clear that interstate differences exist and in some cases are extreme. Clearly, there is a ‘laggard’ group of states with an average compliance rate between 92-95%. A difference of 3% between the ‘leader’ and ‘laggard’ groups might seem negligent, at first glance, but according to the above discussion on the share of the environment in opened infringements (at first place with 25%), and the share of non-communication cases in infringement proceeding (again at first place with 61%), there is a clear reason to worry. One of the most striking features of the above figure is the difference between the ‘leaders’ and ‘laggards’ on opened infringements and transpositions rates.

The United Kingdom, a state considered a ‘laggard’ in terms of transposition rates, is actually part of the ‘leader’ group in opened infringement proceedings with the fifth best place (less opened infringements). This oxymoron could be attributed to the Commission being wary of antagonizing bigger states, but that would not explain why France is second worse in opened infringement proceedings. More appropriately, a case can be made that the UK’s internal political conditions and the existence of multiple veto points for actors, could account for the delays in transposition of directives. As the issue gets politicized and settles to a winning coalition in the transposition stage, implementation goes more smoothly afterwards. It could also be that directives give little time for transposition, or that the UK is unusually averted to infringement proceedings, but these explanations seems less credible. Politics, is a feature of transposition and not of implementation, after law has been transposed into national legislation, political actors can do very little to resist its implementation and enforcement.

On the opposite side, there is a ‘leader’ group of states with an average compliance rate of over (or close) to 97%, mostly comprising of the 1995 enlargement member states (Austria,
Finland, and Sweden). Most studies dealing with environmental non-compliance either use data from before their accession or exclude them from the analysis (for a review of the literature, see Mastenbroek, 2005). This limits the possible inferences and introduces a bias in the data as it eliminates interstate variation, clearly, an important component of environmental policy. The exclusion of the ‘environmental leaders’ also creates a rift in the possible hypotheses as there is much to be said about the presence of these member states in European political institutions (like the European Parliament Environment Committee).

Based on the figures offered here, and on the fact that the Commission spends a considerable portion of its time dealing with non-compliance (disproportionate with the portion that environmental directives represent each year), it is easy to understand why previous research on EU compliance issues has focused so much on the environmental sector. The environmental sector is important, as it is the sector where non-compliance (uncharacteristically) occurs the most, but it is not the only sector with non-compliance, the internal market follows somewhat closely. Surely, failure in a ‘less salient’ sector, such as the environment, could decrease Member State belief in, and support of, ‘European solutions’ for more salient sectors, which is potentially of great importance in terms of the overall functioning of the EU and its significance in world politics, but failure in ‘high salience’ sectors, could be even worse for the future of the EU.

Previous researchers have met with considerable shortcomings as they tend to select ‘easy to measure’ variables and leave out possibly the most important ones (‘goodness-of-fit’ research), and by focusing on certain countries and disregarding major compliers and other sectors (‘domestic politics’ research). As such any model of non-compliance should not only be more theoretically integrative but also methodologically rigorous.
For these reasons this analysis will offer a theoretical model of compliance based on all three approaches to non-compliance (administrative, ‘goodness-of-fit,’ domestic politics), while using a mixed-method design (Mastenbroek, 2005) that obtains the benefits of all three approaches and adds control over the potentially important influence of domestic politics. The primary forum of analysis will be environmental policy, reflecting: its importance as a ‘less salient’ sector; the fact that the Commission spends a considerable portion of its non-compliance efforts on it; the fact that it is the sector with the poorest compliance record; and the fact that most previous research has focused on it. Yet, to avoid the pitfalls of previous research, the model offered here will need to be tested not only on the environmental sector, but also on all sectors (a task for future reference). A model stemming from environmental policy and tested on all sectors of policy will be able to ‘speak’ to previous research (illuminating its shortcomings), but it will also illuminate its own generalizability to explain non-compliance in the EU at large.

3.5 Conclusion

There have been many ups and downs in European environmental policy making. Through six Action Programs the EU has tried to influence the environmental policy plateau, sometimes successfully and sometimes failing to deliver what it promised. Parallel with the introduction of new Action Programs, and given the political climate of the times, the EU has introduced several different and complimentary types of governance. From the use of interventionist instruments in the first two Environmental Action Programs (EAPs), to the use of economic incentives in the next two and the advertised use of context-oriented instruments in the last two EAPs the EU has attempted to change the environmental governance field considerably. However, this change, as suggested earlier, has largely been rhetoric, with limited practical change in employed instruments (Holzinger, 2006).
In contrast, change did occur in the way the environment is administered in the EU, due largely to the end of the ‘permissive consensus’ utilized to expand EU competence in previously ‘national’ areas of policy. This was unequivocally taken away with the Danish ‘no’ vote to the Treaty of Maastricht. The ‘honey-moon’ years of central decision-making ended for the EU, and nowadays environmental protection happens at the national level. The role of the EU is to set minimum standards, thereby ensuring continuity, whereas the responsibility for achieving those standards remains in the hands of the states. This development, coupled with the limited resources of the Commission, has forced the Commission to expand its strategies for inducing compliance. The commission has moved from using ‘deterrence’ instruments to utilizing a mix of ‘deterrence’ coupled with ‘cooperation’ with the much needed non-governmental actors and their ability to hit the ‘fire alarm’ and the much needed cooperation of the states in co-enforcement, using both centralized and decentralized mechanisms, such as capacity building, and national courts.

Regardless of this change in strategy though, non-compliance with EU legislation still remains an issue. Directives are often not transposed on time, badly incorporated into national law, and poorly enforced. National courts are doing a bad job providing governments with clear objectives of law to reduce ambiguities, and non-governmental actors find it hard to get the right information needed to push governments to comply. Non-compliance is manifest in most areas of policy, while for some sectors like the internal market non-compliance has become an ongoing issue. For others, like the environment, non-compliance amounts to a crisis. Backlogs are getting big, and non-compliance is starting to ‘bite’ both states and the Commission, whose resources have reached their limits. Some types of non-compliance are easier to deal with than others though. Non-conformity and bad application pertain to the implementation side of the
policy process but their numbers are not alarming enough to warrant increased attention. In stark contrast, non-communication is alarmingly the highest source of infringement proceedings, straining the already limited enforcement resources of the Commission. More importantly, the transposition stage of the policy process is where all the ‘politics’ take place and should therefore be the focus of any non-compliance study.
4.1 Introduction

The nature of the European Union (EU) has been studied intensively in the past years, but there is no universal agreement as to what type of institution it most closely resembles. It is not quite a federation, not quite a confederation, and not quite an international organization. However, if the EU is to be analyzed, there is a distinct advantage in distinguishing between intergovernmental and intra-governmental features, especially since non-compliance may very well be rooted in the intergovernmental dynamic dynamics at play in the European Union. If the EU is understood as an international organization then International Relations theories may offer some initial insights on non-compliance.

On the one hand, if the EU is an international organization, realist and neo-realist explanations focus mainly on rational action and systemic influences that fail to look inside states. On the other hand, if the EU has more supranational elements than a simple international organization, then neo-institutionalist and ‘domestic politics’ explanations require an investigation of the effects of institutional structures and domestic politics. To proceed, therefore, it is necessary to identify the intergovernmental and supranational characteristics of the EU construct. In particular, it would be useful to determine to what extent the EU is the result of normal international relations and to what extent it should be understood as a new domestic polity. More importantly, though, the concept of compliance must not only be clearly differentiated from policy implementation, but also be clearly defined as differing concepts result in differing hypotheses as to the forces at play.

The notion of policy implementation is tied to what has been called the “textbook conception of the policy process” (Nakamura, 1987, p. 142). This conception assumes that the
policy cycle may be divided into several clearly distinguishable phases, ranging from problem
definition and agenda-setting to policy formulation, policy implementation, evaluation and
finally to policy termination or re-formulation. Policy implementation thus refers to “what
happens after a bill becomes a law” (Bardach, 1977) or, as one scholar has put it, the process of
“translating policy into action” (Barrett, 2004, p. 251).

A similar, but slightly different concept is that of “compliance.” It has been prominent in
international relations research among scholars studying the domestic fulfillment of international
agreements (for an overview, see Raustiala and Slaughter, 2002). Here, a prominent concept is
that ‘compliance can be said to occur when the actual behavior of a given subject conforms to
prescribed behavior, and non-compliance or violation occurs when actual behavior departs
significantly from prescribed behavior’ (Young, 1979, p. 104; Raustiala and Slaughter, 2001).
Thus, the compliance perspective also starts from a given norm and asks whether the addressees
of the norm actually conform to it. Hence, it focuses more on the process and less on the
outcome of implementation. Moreover, compliance can occur without implementation.
Conversely, implementation does not necessarily have to result in compliance but may be
incomplete or contrary to the prescribed goals (Raustiala 2000, pp. 391–399).

Following this understanding of compliance under the international relations context, non-
compliance within the EU can be understood in terms of intergovernmental dynamics. In this
case, insights may be drawn from the extensive International Relations literature on state
compliance with international agreements. Hence, a review of the prominent approaches in the
International Relations literature is necessary. Making sure to distinguish the various theories
according to the assumptions they make about the source of non-compliance and lack of
enforcement and the hypotheses those entail (free-ridership, wrong institutions, etc).
Theorists differ in their identification of the causes or reasons why states might choose to comply or not. Most theories or research programs in international relations apply systemic level analyses to understanding unit level behavior (Caporaso, 1992; Hansenclever et al., 1996; Krause and Williams, 1996). The most prominent contemporary efforts involve realist and neo-realist efforts that stress the systemic distribution of material capabilities, which provide the basis for interstate leverage, while neo-liberal institutionalists' focus on the formal organizational rules that guide strategic behavior.

International relations (IR) approaches are much the same in their essential theories of the state. Realists and Institutionalists regard states as unitary rational actors, whose behavior and choices may be understood in terms of the array of incentives and choices available to the states. Domestic politics is generally treated as a residual category for IR scholars, although there is growing recognition that domestic politics potentially plays an increasingly powerful role in shaping state choices in the international sphere (Katzenstein, 1978, Keohane and Milner, 1996; Evans et al., 1993). Even in the area of domestic politics, the state is generally treated as a unitary actor that is dealing with a pluralistic society. Variation in state choices, from the domestic perspective, lies largely with the ability of diffuse domestic interests to forge dominant coalitions with which to pressure the government.

### 4.2 Why do States Comply with International Commitments?

International Relations theories are primarily concerned with explaining state behavior and scholars have not given up on the goal of developing generalizable claims about the source of non-compliance with international commitments. It can be voluntary (cost-avoidance) or involuntary (lacking capacity) and the accompanying logic for influencing this behavior can be enforcement (for voluntary), or management (for involuntary). These two dominating
perspectives about source and solution are commonly referred to as the enforcement and the management approach (Chayes and Chayes, 1995; and Downs et al., 1996).

Under the enforcement approach states are conceived as rational actors that weigh the costs and benefits of alternative choices when making compliance decisions in cooperative situations. Enforcement approaches assume that states violate international norms and rules voluntarily because they are not willing to bear the costs of compliance (Borzel, 2002). States will always choose to non-comply when the benefits of shirking exceed the costs of detection. It becomes clear then that compliance problems, under this approach, are best remedied by increasing the likelihood and costs of detection through monitoring and the threat of sanctions (Tallberg, 2002).

For Neorealists the only way to alter the pay-off matrices and ensure compliance in the absence a credible contractual environment is through the use of a hegemonic state (Downs et al., 1996; Fearon, 1998). On the other hand, advocates of Neoliberal Institutionalism subscribe to the importance of international institutions as substitutes to the enforcement powers of hegemonic states. For them, international institutions can (and do) provide mechanisms for monitoring compliance and for coordinating sanctions against free-riders (Victor et al., 1998; Weitsmann and Schneider, 1997).

Compliance, under neorealism, may be a matter of state choice, “compliance, adherence, and cooperation all turn on the political calculation of member countries that it is best to comply with international commitments” (Gourevitch, 1996, pp. 363-4). The EU cannot rely on the legitimate monopoly of force to bring about compliance, unlike its member states. In some cases state adherence to international commitments will be relatively easy, especially when compliance follows a state’s best interests and little opposition makes itself an obstacle in the process. In most cases, however, the choice is potentially much more difficult. This is because compliance
entails committing scarce resources to ever expanding responsibilities, whereas the distribution
of those resources will certainly be highly political. Regardless of whether it is in a state’s best
interest to sign and comply with commitments, the politics of compliance will alter the
anticipated process and probability of success radically. If states do not anticipate resistance from
domestic social forces for failing to comply with an obligation, they may very well commit to
obligations they know they cannot possibly meet, or which are crafted so ambiguously that their
obligations are not universally interpreted in the same manner (Haas, 1998).

In reality, there are potentially several self-interested motivations behind the oxymoron of
signing onto EU commitments without any reasonable expectation of compliance. States may
recognize that they are unable to comply, and commit out of a hope that the EU will help them
comply at home, or they may want to signal their commitment in related areas of national
importance that where part of the deal, or to strengthen a leader's political potential for
implementing at home later, or because signing is part of a broader diplomatic culture associated
with the ‘West’ with which leaders wish to be associated (Haas, 1998).

Compliance, according to Haas (1998) is also a function of the capability to comply with
commitments regardless of initial purpose. This capability is related to the political and technical
factors associated with the decision to comply. More to the point, it is related to the effect of
domestic resistance and the degree of behavioral change expected by political actors. Some states
may lack the political will to comply; lacking the political wherewithal to induce behavioral
change on its citizenry. Social choice theorists and the new institutional economics would
suggest that self-regulation is less likely to yield compliance, because of the enormous potential
for self-interested shirking. On the other hand, pluralist views of state-society relations might
presume that obligations worked out through antagonistic state-society relations would be more
difficult to enforce than those worked out within the state (Haas, 1998). It stands to reason then
that states may find it easier to influence the behavior of the private sector than public activities.
But the opposite is also true, given the amount of political will needed to change the behavior of
domestic actors. It is true that most environment activities subject to EU legislation are
conducted by the private sector, although some of the regulated activities apply to both public
and private actors (such as air and water quality standards), hence one may find different states
behaving differently depending on what is harder to change; themselves or their citizenry.

Taking this line of reasoning ever further, it can be argued that compliance is also likely to
be affected by anticipated gains from dominant coalitions at home (Haas, 1998). One key
potential source of variation has to do with the issue being regulated and the dominant
coalitions/interests active in that issue area (Milner, 1988). It may make sense that the industrial
sector, with its political representation and concentrated influence on domestic politics, would
“encourage” political regimes against environmental legislation and compliance since they
would accrue additional costs from compliance. However, it may also be true that states with an
industry active in pollution control technologies would “encourage” further environmental
legislation and compliance, anticipating market opportunities. This intricacy would suggest a
differential commitment to, and therefore compliance with, environmental legislation depending
on the dominant coalitions at home. Several liberal theorists have chose to open the black box of
the state, and the effect of domestic actors, often in alliance with international non-governmental
organizations, has been proposed as significant (Keck and Sikkink, 1998; Risse, et al., 1999).

Finally, regardless of a state’s inability to change itself or its citizenry, and the effect of
domestic coalitions on policy, compliance problems may also be exacerbated by the lack of
capacity to keep commitments. The lack of competence to develop and enforce technical
regulations consistent with international commitments is prevalent in most developing countries (Haas, 1998), which of course may be attributed to the level of administrative development and capacity, as well as the mode of administration (enforcement or management), with less developed states having fewer resources readily available for enforcement.

This lack of capacity has also been called “involuntary defection” (Putnam, 1988; Chayes, Chayes, and Mitchell, 1998; Chayes and Chayes 1993), and falls under the management approach to compliance. It assumes that states are in principle willing to meet previously agreed upon international commitments but simply lack the wherewithal to do so (i.e. the material resources, technology, expertise, administrative manpower, financial means, etc.), or are simply confused about their required role due to the ambiguity of international rules. By consequence, non-compliance is best addressed through a problem-solving strategy of capacity building, rule interpretation, and transparency, rather than through coercive enforcement (Keohane, Haas, and Levy, 1993; Janicke, 1990).

As with the enforcement approach, international institutions are crucial for ensuring compliance under the management approach. But, as Young (1992, p.183) proclaims “the effectiveness of international institutions varies directly with the capacity of the governments of members to implement their provisions.” So, it makes sense that the role of institutions must be to provide financial and technical assistance for states with weak implementation capacities thereby helping to reduce the costs of compliance. As mentioned earlier, another form of involuntary compliance is ‘rule ambiguity’, where “more often than not there will be a considerable range within which parties may reasonably adopt differing positions as to the meaning of the relevant treaty language” (Chayes and Chayes, 1995, p. 11). Under the
management approach, the role of international institutions should be then to offer procedures that clarify obligations, such as rule interpretation, and transparency.

4.3 Realist Thought and Non-Compliance- Enforcement

An environmental crisis is different from other crises, because while it is all around us, many important aspects of it elude us. We do not necessarily receive reminders of the crisis in our everyday life, thus governments perceive or misperceive environmental problems not as urgent as a military or diplomatic crisis (Thomas, 1992). This has detrimental effects for the environment, as discovering the importance and severity of the problem constitutes half of its resolution. On top of this, IR theory in its realist form does more harm than good. Realist recommendations for self-help policies work against environmental well being. States are instructed to use whatever means possible to increase their advantage over others. This competition leads states to adopt short-term policies, which at best disregard environmental consequences and at worst use the environment as an expendable resource to be exploited.

This brings up the issue of collective action to ensure public goods. But in Europe the environment may or may not be perceived as a public good, depending on the state. For instance, some European states (Ireland, Spain, Greece, Portugal) find themselves in more of public goods situation as they exhibit less vulnerability to the detrimental effects of pollution due to their geography or ecosystem characteristics (wind patterns). Other states, in contrast find themselves in more of a Common Pool Resources (CPRs) problem (Sweden, Norway, Netherlands, Finland) as pollution, domestic and imported, threatens the very existence of their ecosystems (Connoly, 1999).

The difference between the alternate perception European states have on the issue can be delineated by explaining the difference between public goods and CPRs. Public goods, are both nonrival and nonexcludable, meaning that one state’s consumption of the good does not detract
from the benefit other states can obtain by using it, and once the good has been provided it is impossible to exclude anyone from its use. In contrast, Common Pool Resources, while being nonexcludable, are rivalrous in nature, in the sense that consumption by any actor reduces the amount of the good others have access to by the amount of that consumption (Barkin and Shambaugh, 1999).

Free-riding by non-affected or, even more importantly by affected states, becomes even more dangerous to the environment as they can not only shirk in the provision of the common pool resource, but also threaten to overconsume the CPR thus gaining concessions in the form of different standards. The second Sulfur Protocol provides evidence of this type of behavior, as Spain and the UK were allowed to make smaller cuts in the Sulfur dioxide emissions than most member states (Connolly, 1999). Free-riding by non-affected states, given their geographical position poses few ecological dangers for neighboring countries. However, free-riding from affected states (as was the UK in the Sulfur Protocol), may result in potentially serious environmental degradation.

Nevertheless, the reality of EU environmental legislation renders realist theory an unsatisfactory explanation of non-compliance. Namely, the leader-laggard dynamic that characterizes EU legislation turns realist theory of power on its head. Generally, small states whose geographic position and sensitive ecosystems make them victims of negative externalities from imported pollution by powerful polluting states have been able to influence and ultimately pass legislation that limits the powerful states’ ability to indulge in self-help policies. Therefore power in the realist sense has not helped those who posses it, except in rare occasions where concessions were given as a result of their threat to overconsume, as briefly mentioned above. The environmental leaders have been able to use instituted regimes to their advantage, at odds
with realist theory that notes the inadequacy of institutions to constrain powerful actors against their will.

Another tenet or extension of realist theory, the hegemonic stability theory,\textsuperscript{27} which extends realist propositions on conflict avoidance when a balance of power is not possible, seems at odds with European reality as well. While most neo-realists presume that states are loath to cooperate out of anticipation of free riding, the presumption is that all states would only comply if they were compelled. Realists suggest then that compliance will only occur if a dominant country- a hegemon- exercises some degree of pressure on a country to comply. This can be done either through rewards for compliance or threatened sanctions for violations. The suggestion seems to be that compliance will vary depending the existence of a hegemon and its ability to offer rewards or impose sanctions (Haas, 1998).

Hegemons, or even rational actors, according to this approach, provide public goods either benevolently (because they benefit disproportionately from the production of the good and are thus willing to absorb the costs of free-riders), or because they are able to use their power to coerce smaller states into paying for a part of the production (Connolly, 1999). In fact as Mancur Olson (1971) suggests, this is what rational actors do, or better yet, this is the only way rational actors should engage in collective action. In the European case, however, the distinction between perceptions of the environment as a public good and as a CPR works against the hegemonic solution. Hegemons are powerless to control outcomes in common pool resources situations, as one state cannot single-handedly produce clean air benefits for all.

Surely a supposed decrease in pollution can benefit all as they would import less pollution from the hegemon, but still the collective good of clean environment cannot be provided without

\textsuperscript{27} See Gilpin (1981), and Wohlfarth (1999).
the participation of all members. Then there is the problem of the existence of this “hegemon”.\textsuperscript{28} Unilateral efforts at enforcement are improbable as state economic power is in rough parity between France and Germany, there is no concentrated military dominance, and no country commands deference from the rest. On top of that, the EU is not an institution that commands sufficient resources or respect from member states to be able to unilaterally enforce compliance (Haas, 1998). And again, EU environmental legislation is often led by small comparatively powerless states that do not have the ability to coerce other states into paying for the production of a cleaner environment; rather they use established regimes to do so far disproportionately to their power resources (Connolly, 1999).

More pragmatically, it is also possible that the role of power in compliance may be directly related to the way in which the commitment was made. Moravcsik (1998) stresses the role of power in completing international agreements. However, if power was used to extract the agreement then power must be used to extract compliance. Self-interest calculations seem to work well when international agreements are being discussed, as un-interested states may choose to opt-out of several or all of the provisions included in the final draft of the agreement,\textsuperscript{29} and they may very well use their power to accomplish that exemption. However non-compliance, as defined before, refers to events of states choosing to not comply with obligations they have already committed to.

But this line of reasoning is not completely false. It may very well be that since more powerful states have an easier task in negotiations, their power may help them pursue agreements closer to their preferred outcome. Fearon (1998) argues that studies of compliance should begin with the negotiation of the agreement that is to be enforced, and that bargaining is a

\textsuperscript{28} See Keohane (1984) and Snidal (1985).
\textsuperscript{29} As happened with the UK and Denmark in the 1992 Treaty of Maastricht, and again in the Treaty of Lisbon.
shortcut to understanding implementation. When states have the power to bargain an agreement close to their interests and situations, then those states will have no problem implementing that agreement as it is closer to their self-interest.

This explanation resembles the ‘goodness of fit’ argument offered by EU studies literature. Heritier (1995) argued first that states try to minimize the costs of adaptation by Europeanizing their own policies. Several researchers took this hypothesis even further. Knill and Lenschow (1998) provide the notion of adaptation pressure, which is defined as the degree of institutional incompatibility between national administrative structures and practices, and European requirements,30 while still others make a distinction between institutional and policy misfit (Borzel and Risse, 2003; Green Cowles et al., 2001; Heritier et al., 2001) focusing on the content of policies rather than the institutional dimension. However, it may also be that bargaining power allows states to preempt this ‘goodness of fit’ by Europeanizing already ‘fitting’ policies. Conversely, powerless states may have a hard time bargaining for agreements close to their own interests and, as such, will not comply as well or as often. It should be evident then that both the number of votes in the Council of Ministers and the importance of countries matters in bargaining.

In line with this argument, it is easy to understand why directives adopted under the unanimity rule in the Council are transposed more swiftly than decisions under the qualified majority rule (Mbaye, 2001). This is because under unanimity rule, self-interested strategic member states can veto any proposal that does not satisfy their preferences. Under qualified majority voting, member states will not be able to veto a decision that goes against their preferences and administrative traditions. For this reason, member states outvoted in the Council will have an incentive to delay implementation (Falkner et al., 2004).

30 See also Duina 1997; Duina and Blithe 1999; Borzel 2000, 2003.
However, a similar explanation may also be the case. States with a lot of political clout (as denoted by the number of votes in the Council) may be less inclined to comply given their power status, not ‘out of spite’ for losing in the Council vote but because they simply do not feel compelled and it goes against their interests. It becomes evident here, that a hypothesis is needed to account for both lines of reasoning above especially since “power” can work in these two ways. On the one hand, power can bring ‘goodness of fit’ and thus easier compliance. But on the other hand, given the qualified majority rules in the Council, power may be used to shirk compliance. This is not to say that the below hypothesis is infallible; it does suggest though that if power cannot be used to attain ‘goodness of fit’ then it can be used to shirk compliance. Of course, this suggestion would go a long way in settling the ‘goodness of fit’ debate by pointing out that ‘fitness’ does not matter in determining compliance as much as the bargaining power needed to attain it. Thus, the following hypothesis is credible:

H1: Bargaining power in the Council of Ministers affects compliance.

While realism and neo-realism may account for some degree of compliance outside of Europe, within the EU compliance is much more likely to be a matter of the exercise of institutional channels of influence and of national conviction (Haas, 1998). The fact that small states can coerce powerful states to adopt unwanted legislation that abates environmental degradation using instituted regimes, points to the miraculous abilities that liberal institutionalists accord to institutions.

4.4 Neoliberal Institutionalism: Cooperation and Effectiveness- Management

Neoliberal institutionalism can be classified under the rubric of contractarian approaches to regime formation and effectiveness. Presented as the alternative to realist thought when it comes to explaining cooperation, it also goes even farther to suggest ways of assuring cooperation between rational unitary actors. Promoting liberal democracy and liberal economic ideals (free
trade) through institutions seems to be a good way to preserve peace, based on the assumption that democracies do not fight each other, or more generally that ideological, procedural, and cultural resemblance between states will negate the reasons to fight (O’Neal and Russett, 1999). In addition, promoting liberal economic ideals creates a system of interdependence of state economies that makes states more sensitive to each other’s needs and less likely to collide over interests. In essence, one state’s interests are intertwined with other states’ interests and selfish attempts to promote those interests are negated because they become ineffective, if not counter-productive (Keohane, 1998).

The argument made by neoliberal institutionalists about the environment is that it is an issue of interdependence (Keohane and Nye, 1977) that can be conceptualized as the management of cooperation in a system of sovereign states lacking the kind of central authorities necessary to ensure hegemonic coercion or inducement. The value of regimes is concentrated in their ability to reduce incentives to cheat, by reducing transaction costs and enhancing the value of reputation in the international system (Keohane and Nye, 1977). Regimes are also said to be able to create the conditions for orderly multilateral negotiations by increasing the symmetry of information between governments, thus facilitating trust and predictability. By facilitating communication and negotiation between states they also create interactions and interdependencies, effectively reducing the incentive of states to selfishly pursue their national interests for reasons of reputation and reciprocity (Keohane and Nye, 1977).

In essence, cooperation is promoted as states act to maximize their cooperative absolute gains rather than relative gains. The environment is a sector where degradation can be better abated through cooperation because it is a phenomenon that does not recognize state borders and actions in one state pose threats in others. The need to cooperate leads to the creation of
institutions defined as “persistent sets of rules that prescribe roles, constrain activity, and shape expectations” (Keohane et al., 1993). These institutions are said to be able to set agendas, coordinate policy and even more importantly generate or alter state behavior. Thus, they limit the ability and negate the reasons actors have to selfishly free-ride. Research on international institutions and their potential influence on national choice has identified three principal analytic functions performed by international institutions: enhancing the contractual environment within which state choices are made (including voting rules, suffrage provisions, number of parties, frequency of meetings, etc.), building state concern, and building national capacity (Keohane et al. 1993).

According to Keohane et al. (1993) governmental concern must be sufficiently high to prompt states to devote scarce resources to resolve the problem despite the opportunity cost this entails. Regimes can offer rewards or punishments contingent on state policy in order to increase governmental concern. They can also generate new information that alters perceptions of the consequences of state actions or of the ecological vulnerability of states. Finally they can increase concern by providing information to specific domestic actors that will in turn press for action. Information may affect governmental concern by publicizing state actions to potentially critical domestic (and foreign) audiences. It may also affect capacity by giving governments more and better information with which to act. This argument is partly in line with the EU studies literature on the effect of national actors in obstructing or facilitating compliance (Duina, 1997; Haverland, 2000; Mabye, 2001; Giuliani, 2003; Kaeding, 2006; Perkins and Neumayer, 2007; König and Luetgert 2008).

Starting with Markus Haverland (2000) the main argument is that the degree of compliance may be determined by the preferences of domestic coalitions, mediated by institutional structures
such as veto points. Several mediating explanations have been offered, expanding on Haverland’s argument, such as the level of corporatism (Lampinen and Uusikyla, 1998; Mbaye, 2001; Kaeding, 2006) or the level of pluralism (Konig and Luetgert, 2008), or finally, the level of partisan conflict and polarization within domestic veto players (Treib, 2003; Kaeding, 2006; Konig and Luetgert, 2008). However, the effect of the principal (EU through the Commission) in enhancing compliance by tending to the needs of these domestic forces or recognizing their effect and using it to ensure compliance has largely been neglected in the literature. As the preceding discussion suggests, regimes can increase governmental concern, and thus compliance, by doing exactly that (using domestic players).

Relatedly, even if the effect of EU enforcement mechanisms (infringement proceedings) has been well documented (Borzel, 2000, 2001), the effect of ‘management’ mechanisms has also been neglected by the literature. A hypothesis on the EU’s ability to enhance governmental concern (and thus compliance) by using management mechanisms to empower domestic actors has never been offered, and given the above discussion it is more than warranted. To be precise, this study argues that while the ability of domestic coalitions to use veto points to block compliance is well documented; the ability of the structure (EU) to use those same institutional channels to its advantage should be taken into account as it can mediate the power of these domestic coalitions and change their preferences to better match the compliance requirements of the EU. That is to say, veto points are not as important in determining compliance, as is the EU’s ability to affect actor preferences and even utilize the same institutional channels to ensure compliance by enhancing the power of actors or domestic coalitions who stand closer to its own preferences. This line of reasoning warrants the following hypothesis:

H2: Increasing governmental concern increases compliance.
When it comes to the European Union most of what Keohane et al (1993) suggest on affecting compliance by increasing governmental concern seems to be already in place. The EU is one of the world's strongest international institutions, particularly with the introduction of qualified majority voting under the Treaty of Maastricht of 1992. Few institutions outside the EU have been designed to be potentially so influential and it has proved that it values the effect of information by the creation and strengthening of NGOs using the Environment Directorate General’s program for providing operating grants to European Environmental Non-Governmental Organizations (ENGOs), which begun operations and funding of ENGOs since 1997. Additionally, through the use of such directives as the Access to Environmental Information directive, which was adopted in 1990, the Commission has sought to facilitate the formal role that domestic actors play in monitoring the implementation of legislation in its stead, and as outlined earlier most of what the Commission detects comes from the domestic actor formal complaint procedure.

However increasing concern will be fruitless if states fail to fulfill their obligations especially since public pressure may decrease if people believe that the issue has been addressed (DeSombre, 2002). Hence, a reasonable contractual environment must be in place, one that assures monitoring of each other’s behavior at moderate cost so that reciprocity can be followed. Under the principle of reciprocity, a state’s action confers the ability to other states to act in the same way. Based on this principle a state might refrain from a particular course of action, expecting that in the future other states will reciprocate (Krasner, 1983). Regimes according to Keohane et al (1993) can and do provide these contractual environments by generating

31 And its expansion/strengthening with the Amsterdam (1997 and Lisbon (2009) treaties.
32 The legal base for the program is the LIFE+ Regulation which provides for funding of “operational activities of NGOs that are primarily active in protecting and enhancing the environment at European level and involved in the development and implementation of Community policy and legislation.”
information about potential zones of agreement and by monitoring compliance which will assure states that cheating will be detected and punished. It seems logical then that a reasonable contractual environment would serve well in increasing compliance. Accordingly:

H3: Providing a reasonable contractual environment will increase compliance.

As with governmental concern, the EU studies literature is lacking a measure of how effective the enforcement mechanisms of the EU are in inducing compliance. A few theorists have considered the EU’s ability to provide for a reasonable contractual environment as an ‘enforcement’ mechanism to assure compliance (Haas, 1998; Tallberg, 2002), but it has never been quantitatively addressed. A few other researchers use infringement proceedings (the major enforcement mechanism of the EU) as a dependent variable to designate non-compliance (Mbaye, 2001; Perkins and Neumayer, 2007). This study argues that using an enforcement mechanism’s proceedings in measuring compliance not only represents a statistical impossibility but it also confounds the importance of those mechanisms in ensuring compliance. It could be that European Court of Justice (ECJ) cases induce compliance by showing member states that non-compliance will not go unpunished and thus reducing the risk of free-riding and shirking in implementation. Rather than using those cases as a measure of non-compliance (Mbaye, 2001), one should use them as an indicator of the power of EU mechanisms to induce compliance.

The EU has monitoring mechanisms in place, both bottom-up and top-down. The Commission has a twofold responsibility: first, monitor the legal transposition of directives, and second monitor their practical implementation. And while the first task does not seem all that difficult, the second one seems almost impossible. This is because the Commission is almost entirely dependent, upon Member States reporting back on what they are actually doing, upon costly and time-consuming consultancy reports, or on whatever national environmental groups
and citizens choose to submit through the formal complaints procedure (Jordan, 1999) as its ability and resources to perform on-site checks are extremely limited, and can easily be blocked by member states.

Yet, when the Commission is able to detect non-compliance, the ultimate sanction -referral to the ECJ- is a relatively effective instrument. The ECJ can rule that members are in breach of EU environmental law, and it has the power to enforce its decisions especially since the advent of article 228 fines (Jordan, 1999)\(^\text{33}\) thus rendering the Commission’s power to promote cooperation through punishment an effective mechanism of control. This reality seems to counterbalance the aforementioned weakness on monitoring effectiveness, and without the existence of the ECJ the potential of free-riding by member states would go unchecked.\(^\text{34}\)

Finally, states must possess the political and administrative capacity to make the domestic adjustments necessary to implement their commitments in the international arena. By political and administrative capacity Keohane et al (1993) refer not only to the state’s ability to make and enforce regulation, but also to the broader ability of actors within the society to participate in policy-making and implementation. Regimes can help in this respect by transferring information, skills, and expertise necessary for effective domestic programs and by building coalitions of support for environmental regulation, and aiding monetarily the process. It is therefore probable that increasing governmental capacity should have positive effects on compliance.

The EU does provide eligible member states with financial support from the Cohesion Fund. Only those member states with a per capita GNP of less than 90% of the EU average will be entitled to such support (Wilkinson, 1992). However there is no stipulation for states supported by the Cohesion fund in the implementation of environmental policy relating to

\(^{33}\) There are members that still have not complied to decisions dating back to 1990s, Greece being one of them.\(^{34}\) Chapter 3 of this study offered an extensive description of this enforcement power and its effectiveness.
compliance or compliance levels. Additionally, instead of transferring information and skills the Commission is more about checking the implementation of directives. And while a directive is binding as to the result to be achieved, it leaves it to the national authorities to choose the form and method of the implementation. This often leaves states muddling through the provisions of sometimes extremely technical directives. The opportunity to acquire technology, training, financing, and more general resource transfers may help with compliance. Conversely, the fear that such resources will be withheld as a result of non-compliance, such as occurs through conditionality, could also encourage states to comply.

Not unlike the previous hypotheses, the EU studies literature has focused on the effect of governmental capacity on compliance, but the ability of the EU to affect compliance by increasing this capacity has been neglected. One would think that since administrative capacity has so far been researched as a determinant of the ability to comply by various quantitative and qualitative studies (Mbaye, 2001; Mastenbroek, 2003; Sverdrup, 2004; Falker et al., 2005; Perkins and Neumayer, 2007), that the ability of the Commission to provide with such ‘management’ mechanisms would also have been addressed. Especially since capacity is, as theorized by the management camp, one of the major sources of involuntary non-compliance. The recognition of capacity problems by EU institutions involved in compliance is evident by the provision for structural funds to compensate for lack of resources under the Treaty of Maastricht (1992), which also instituted the article 228 procedure that provides for financial penalties for non-compliance with ECJ judgments (thus enhancing the contractual environment mentioned earlier). Hence, as neoliberal institutionalists propose increasing capacity should play a positive role toward compliance. Accordingly:

H4: Increasing governmental capacity will increase compliance.
Clearly, some degree of institutional design should improve the likelihood that each of the aforementioned factors could contribute to state decisions to comply. The central idea behind this approach is that institutions enhance cooperation by coordinating behavior around equilibrium points, raising the costs of defection, increasing transparency, lowering transaction costs, and increasing member state capacity (Keohane, 1984). However, even though neoliberal institutionalists postulate that regimes can increase cooperation through the three Cs (concern, contractual environment, capacity), a well established and authoritative institution such as the European Union (or the Commission for that matter) is not capable of doing so successfully or independently. Taking the suggestions of neoliberal institutionalists about increasing the ‘three Cs’ role of the regime can be productive; however there are good reasons to question this way of thinking. Relaxing the assumption of states as unitary actors allows a more detailed look on internal processes that influence compliance (i.e regime effectiveness).

4.5 Social Constructivism: a Normative Approach to Non-Compliance

It is true that both theories analyzed above treat preferences of states (and thus action) as given; as “readily deduced from objective conditions and material characteristics of the state” (Finnemore, 1996, p. 8) and fail to look inside the state for the influences that might account for the creation of those preferences. It can be said though that Neoliberal institutionalism, relaxes this assumption to explain why cooperation is maintained (Sterling-Folker, 2000). It actually stops keeping preferences constant and allows for institutions to play a major role through the ‘three Cs’ (Keohane et al., 1993) as outlined above. However, it considers the structure’s ability to influence the behavior of the agent, and even though it suggests various processes by which the state’s preferences can be changed internally (using local constituencies, increasing capacity etc.) it misses a very important point about the ability of the local elites to influence compliance as well.
Social constructivists have a different notion of the state. They assume that state preferences do not come from a rationalist calculation of interest. In fact, Constructivists assume that states are incapable of reaching the maximizing choice, and even worse, it is quite hard to clearly anticipate how national interest will be affected by a policy choice when this choice will have to become internalized into national law and coincide with other policy domains. Under this bounded rationality, states are expected to satisfice and rely on previously developed cognitive frames to attach interest into policies being internalized. Following processes of standard operating procedure, collective understandings, guided by norms, beliefs and ideas are become the source of state choices, as these norms, ideas and beliefs are the elements that account for interests (Beach, 2005; Faure and Lefevre, 2005). Norms also regulate behavior and specify appropriate behavior on related issues. In a sense norms (or structures) define who the actors are and how they will behave in certain circumstances (Jepperson et al., 1996, p. 54).

The principal mechanism by which such norms are developed and disseminated is by well-placed individuals with entrepreneurial skills, who can often turn their individual beliefs into broader, shared understandings (Checkel, 1998). Collectively called the ‘civil society’ (Cardenas, 2004; O’Neil et al., 2004) these networks of policy entrepreneurs are purportedly successful in turning individually held ideas into broader normative beliefs and domesticating norms of compliance, when so-called policy windows are open. When members of the epistemic community acquire influential positions in national administrations and international institutions like the Commission, given their authoritative status, they can induce compliance using the developed norm of compliance they bring to the table. An additional process of social learning and socialization serves to further norm creation and dissemination (Checkel, 1998), and thus
compliance happens almost automatically since legalized norms are internalized, and become institutionalized as the new way to achieve societal goals.

Even though this practice of compliance through ‘standard operating procedure’ can be affected by policy entrepreneurs, it can be argued that it is actually the public’s response and internalization of compliance norms that will drive compliance levels. The policy entrepreneurs can do so much to assist in the dissemination of transnational ideas and beliefs about the benefit of EU policy, publics have to come to terms with accepting this policy as legitimate and as the “law of the land” (Beach, 2005, p. 124) for compliance with EU policy to occur as a normative obligation (something that is not open to interpretation and debate). It becomes evident then that states with more pro-EU publics are expected to have an easier task in implementing EU policy since the public normatively accepts EU policy as legitimate. According to this line of reasoning, the following hypothesis is warranted:

H5: Compliance in states with favorable publics on EU environmental policy will be higher.

However, it can be also argued that these policy entrepreneurs might not be successful in all policy domains. After all, it would take a lot of entrepreneurship to create the required linkages between policy domains to achieve normative compliance in all sectors of policy. Consequently, decisions to comply in one area must not be confused as normative acceptance of compliance in all policy areas as there is a considerable amount of linkage required to disseminate normative compliance to other policy sectors, which have actors with different interests, ideas and beliefs (Haas, 1998). Several studies in the EU implementation literature (Lampinen and Uusikyla, 1998; Mbaye, 2001; Kaeding, 2006; Perkins and Neumayer, 2007) have used public approval for the EU (not always making a constructivist argument) as an
indication of the public’s acceptance of EU policy as legitimate. In this respect, this study is in line with previous research. However, a line must be drawn between policy domains to gain explanatory power, as what works in one area of policy may very well work in others, but it does not have to. As such, it is the public’s approval of EU environmental policy that this study focuses on and not approval of the EU at large in determining what affects compliance.

4.6 Conclusion

Non-compliance under the guidance of mainstream international relations theory can have two sources and two remedies. If one ascribes to the enforcement approach, then the source of non-compliance is self-interested voluntary choice. The best way to achieve compliance is by monitoring and sanctions, but in the absence of a hegemon or a true international monopoly of legitimate force, the coercive strategy of monitoring and sanctions is seldom available or effective. “Sanctioning authority is rarely granted by treaty, rarely used when granted, and likely to be ineffective when used” (Chayes and Chayes, 1995, pp. 32-33). If one ascribes to the management approach, then the source of non-compliance is largely involuntary (capacity and ambiguity issues), and the best remedy is capacity building and rule interpretation. In an influential contribution, Chayes and Chayes (1995, p. 22) emphasize that “if we are correct that the principal source of noncompliance is not willful disobedience but the lack of capability or clarity or priority, then coercive enforcement is as misguided as it is costly.”

It becomes evident then, that most of the potential causes of non-compliance have two lines of reasoning, ultimately painting a picture relatively duplicitous and complex. For this reason, it should be clear that theories explaining non-compliance must not be treated in a disjunctive way as the complexity and duplicity of an issue might be overlooked. When mainstream international relations theories are complemented with a focus on non-rational interest calculation and constructivist approaches are considered in a contingent manner they
help provide a better understanding of the interplay between domestic and international politics (Keohane and Milner, 1996; Evans et al., 1993; Gourevitch, 1986; Katzenstein, 1977; Risse-Kappen, 1995).

In this sense, when research seeks to understand a state’s choice to comply by focusing only on the effect of international/systemic pressures, it may miss the intricate interplay between systemic and domestic forces. A state may sign onto commitments only to realize that its capability to comply depends on its ability to change the behavior (preferences) of its citizenry using inducements provided by the system or by teaching compliance through the creation of consensual understandings of new interests and how those are to be achieved best through the EU. More importantly, it may also realize that the lack of support from below, or the lack of policy entrepreneurs working to embed and domesticate norms of compliance, will make it harder or even impossible for such inducements to work.
5.1 Introduction

Although the European Union is often viewed as a unique type of polity, giving rise to debates between neo-functionalists and realists, supranationalists and intergovernmentalists, there is no need for a sui generis theory to understand its particular nature. If we conceive the issue of non-compliance in the EU as an internal political conflict between a central authority and a set of semi-autonomous sub-units; then models of state implementation of federal policies drawn from the American context (in particular theories of regulatory federalism and bureaucratic control), may be particularly useful in explaining patterns of non-compliance in the EU context. To proceed, one must, therefore, identify the federalist characteristics (if any) of the EU construct, which can assist in determining whether such a comparison and extrapolation from the U.S. literature to the EU is possible and/or effective.

5.2 American Federalism and the EU, Comparable?

The United States have been used as a comparison point in many studies of federations, obviously because it is the first modern federation, the result of the failure of a confederal form, and the most enduring federation in the world (Bondari, 2003). American federalism is of particular interest for the EU because of its dual character with divided sovereignty, based on two independent levels of decision-making.

One cannot easily determine the similarities between the U.S. and EU of today, given the degree of internal and external differences. However, if the EU is compared to the path of U.S. Federal development the similarities become more obvious. According to Watts (1998, p.121), a “Federation refers to a specific species within the genus of federal political systems. It is a compound polity that combines a general government with constituent units, each possessing
powers delegated to it by the people through a constitution, each empowered to deal directly with the citizens in the exercise of a significant portion of its legislative, administrative, and taxing powers, and each directly elected by its citizens.” In contrast, “Confederations have generally been distinguished from federations as a species of federal system in which the institutions of shared rule are dependent on the constituent governments, being composed of delegates from the constituent governments and therefore having only an indirect electoral and fiscal base” (Watts, 1998, p.121).

It is also true that the distribution of constitutional powers between governments is a major feature of all federal systems. Federations can be thought of as being different than decentralized unitary systems since they constitutionally guarantee the autonomy of constituent governments in the responsibilities they perform. Thus it is preferable to “describe federations as noncentralized, on the grounds that decentralization implies a hierarchy with power flowing from the top or center, according to their will, or can conduct policies according to their own national interests within their states (Watts, 1998, p. 124).

The EU is certainly not a confederation, where member states can enter and leave on a whim. It has a legitimate power directly over its citizens and commands -especially since the Treaty of Lisbon- a considerable amount of original jurisdiction on policy-making not afforded to the states alone. However, there is a certain degree of flexibility, as far as the distribution of powers is concerned, which deviates from constitutionally defined powers for both levels of government. The EU is not an international organization either, as its members are intricately bound together on policy issues, under a system of credible threats of punishment for non-compliance, where European Court of Justice (ECJ) judgments may come with daily penalty payments. If the EU is an international organization, then why all the preoccupation with
democraticness and transparency (Majone, 1998; Chryssochoou, 2000; Moravscik, 2004; Follesdal and Hix, 2006).

So if the EU is not quite a federation, not quite a confederation, and not quite an international organization, then what is it? The EU has been studied intensively in the past years, but the increase in literature has not led to an agreement about the nature of the beast. Most see the EU as a unique type of entity. However, there is little consensus on which characteristic of the EU matters or is dominant, the federal or the confederal. The EU has been called an “incomplete federation” or an “overweening confederation” (Kincaid, 1999, p. 37). Confusing matters ever further, it has also been called a ‘confederal federation,’ which means a confederal order of government that operates in a federal mode within its spheres of competence (Kincaid, 1999). The EU is also analyzed as a ‘regulatory state with many faces’ (Knill and Lenschow, 2003). Some others have called it ‘quasi-federal’ or ‘decentralized unitary state,’ or a system of ‘confederal governance,’ or a ‘confederal consociation’ (Mckay, 2001; Abromeit, 1998; Bogdandy, 2001). Or finally, an ‘emerging federation,’ a quasi-federal polity with a system of governance based on constitution-like treaties (Borzel and Risse, 2000). Whatever it is, the EU certainly provides a test for the limits of distinction between confederal and federal systems of governance (Bondari, 2003).

The EU today has many features of a federation (even if there are conflicts on this definition), these are:³⁵

- The EU has at least two levels of government existing autonomously and having a direct effect on the people. At the same time there is not one supreme sovereign power, which governs the whole. Sovereignty is shared or divided between the different levels of government, rather

than exclusively located at one level (Bondari, 2003). The Treaty of the European Union (TEU) has formally accepted the principle of subsidiarity, which ultimately means that the members concede some policy areas as the exclusive competence of the EU especially when matters of efficiency arise and it is more sensible for the EU, rather than the member states to act.

-Judicial relations between Community law and national laws are comparable to what many federations experienced, most notably the USA. The conflicts between the EU and the member states are regulated by the European Court of Justice, which interprets the EU treaties, as well as any rules adopted under its authority, as the enforceable highest law of the land. Community law, not only has direct effect,\textsuperscript{36} where the ECJ claimed the community represented a new legal order, and that the states had limited sovereign rights by becoming members of the community, but also supremacy over national law,\textsuperscript{37} where the Court pointed out that member states had definitely transferred sovereign right to the Community and that Community law could not be overridden by domestic legal provisions without the legal basis of the Community itself being called into question.

-The gradual erosion of unanimity voting represents a movement away from a decision rule that is typical of confederations or supranational organizations. Qualified majority voting (QMV) in the Council of Ministers is the typical decision rule except for matters of defense, enlargement and taxation. Member states cannot always advance their will, but at the same time minority representation is guaranteed (Bondari, 2003).

-The EU has a directly elected Parliament (since 1979), which over the last decades has managed to significantly increase its role in the EU’s institutional procedures with full

\textsuperscript{36} Van Gend en Loos v. Netherlands (1963), Grad v. Finanzamt Traunstein (1970)
\textsuperscript{37} Costa v. ENEL (1964), Simmenthal v. Commission (1979)

- Existing federations are characterized by varying degrees of centralization. The EU displays a high degree of centralization in certain areas (such as central controls over fiscal matters, including VAT rates and controls over national borrowing) while it has only limited power in others (such as defense).

The issue of defense, however, coupled with the issue of centrally provided social insurance, makes the EU deviate from the traditional definition of a federal state, as both activities are provided at the national level in other federal systems. According to Florentia Bondari (2003) there are several other features of the EU that deviate from traditional definitions of a federation: member states hold the exclusive power to amend or change the constitutive treaties of the EU based on unanimity, and national ratification is required; the European Council, which has a very important agenda setting role, is confederal in nature and represents states; the distribution of powers among various levels of governance is negotiable and contested under the Treaties; taxing and spending power is controlled to a large degree by the states; the EU lacks an essential element of democratic control in that the EU’s executive (Commission) is not yet determined by the EU’s citizens, either directly, through the election of a president, or indirectly (Bondari, 2003).

However, the historical experience of other federations shows that these issues were prominent with them in their respective beginnings as well, and as such, should not be considered insurmountable or forbidding on the EU’s path to federalism. The more serious issue is what David Mckay (2001) calls the “stateness problem” pertaining to lack of allegiance to the

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38 The EU spends less than 2% of the GDP of the whole EU area, in contrast EU member states spend on average 55% of their GDP on public spending.
Union by its diverse population. A federation is based on a certain degree of balanced homogeneity (Bondari, 2003), where the population wants the union, but not the unity, and thus keeps its allegiance to the federal government without being too close to it (in which case the federation would lose its particularity and be considered a state). Conversely, when the population is too close to their individual national parts, the federation is in danger of dissolving (as happened with the USSR). To resolve the ‘stateness problem’ McKay (2001) employs a scheme of three (ultimately four) variables that should help delineate what constitutes this problem in the EU.

First, ‘the origins of the founding constitution.’ at their inception constitutions depict varying degrees of centralization, some of them even create distinctions between central and provincial responsibilities. The EU was largely established as an economic integration process rather than a response to defense problems, which meant that such distinctions were inappropriate. The Treaty of Maastricht (TEU) granted the EU most of its state-like characteristics, like the transfer of macroeconomic functions to the EU, the creation of a European citizenship, and the symbolic importance of the change in the name from EC to EU. However the TEU delineated the distinctiveness of the European experience, since, unlike other federations, policy typically precedes institution building in the EU. This fact means that the clear delineation of responsibilities between different levels of government is not one of the main features of EU treaties (its constitution).

Second, ‘how constitutions have been adapted over time to accommodate centralist and decentralist forces and the role of political parties in the process.’ Constitutions do not always accurately reflect the practice of federalism, thus McKay (2001) gives an essential role to political parties. Political parties are the main agents for articulating interests including those
based on provincial distinctiveness. The structure of the party system is often an effective measure of the strength of federalism. Decentralized parties reflect a decentralized polity in which state/regional loyalties are stronger than national loyalties. The main indicators of party centralization are whether the same parties operate at the national and state levels and the degree of party discipline applicable at the national level. In the EU no union-wide parties exist that are worthy of the name, thus contributing to a decentralized federalism. In addition, national political parties remain largely disassociated with European identity politics (Mckay, 2001).

Third, ‘the role of parties as legitimizing agents in achieving an acceptable balance between central and provincial power.’ Political parties are the main means whereby provincial grievances are aired but also whereby centralist and decentralist trends are legitimized. An increase in central activity into areas considered the domain of a state can reduce the legitimacy of the federal government and increase stateness problems. The aforementioned absence of genuinely European parties coupled with the absence of ‘European’ identification by its citizens, places limits on the legitimacy of the EU government. The main constraint on the ability of ethnically diverse states to centralize political authority is the strength of provincial/state loyalties in relation to national loyalties. Where provincial loyalty is strong relative to the center stateness problems again emerge (Mckay, 2001).

Fourth, ‘the Fiscal Dimension.’ Distributional issues are often at the heart of conflicts between central and state governments, and of those none is more important than fiscal relations. The advent of the EMU in the EU facilitates centralization of macroeconomic policy, and has increased the power of the EU over national/state control of monetary policy. However the EMU redistribution may not be able to broker asymmetry in economic performance between members
and thus potential stateness problems might arise since states have to abide with strict standards of debt, borrowing, and taxation (Mckay, 2001).

The increasing policy responsibilities of the EU have given new breath to the ‘democratic deficit’ literature because there is an insufficient sense of European identity to legitimize the moral authority and the scope of new EU responsibilities. The aforementioned show that to avoid stateness problems, institutional arrangements should accommodate not only the prevailing pattern of complex self-identification but also the balance between regional and national identification.

All in all, the European Union remains a sui generis39 polity. Many have challenged the use of this term, because it limits the use of comparison (Abromeit, 1998; Weiler, 1999; Newman, 1997). To say that something is unique, is to suggest that it cannot be compared with anything else, and theories used in other contexts will not apply to it. Also, it is true that the EU is in a state of constant change, which makes it harder for theorists to build generalizable theories for policy phenomena (or for the character of the EU at large). The 2009 Treaty of Lisbon has radically, once more, changed the institutional character, the voting mechanisms in a variety of policy areas, and the principle of subsidiarity, which defines what the EU can and cannot do.

If the EU is to be analyzed, it must first be must be understood on its own terms. The member states do not have internal autonomy in all areas, but at the same time there is a certain degree of flexibility in the distribution of powers. On the one hand, the EU is not an intergovernmental organization as there exist an assortment of supranational institutions, which have the power of ‘co-deciding’ with the governments of the member states in an increasing number of competencies. On the other hand, it is not a federal state either, because it has not

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39 Tsoukalis considers the term “an admission of defeat regarding the taxonomical standards of profession, or even as a sign of agnosticism” (Tsoukalis in Weiler, 1999: 131). For Hay the “sui generic” approach is “an unsatisfying shrug” (Hay in Weiler, 1999: 132).
submitted to constitutional law nor do its institutions constitute a strong center with “supreme
powers,” as the federal authorities in a federation (Sbragia, 1993). States continue to play an
important role in decision-making. Therefore the EU does not qualify as a federal state or as an
intergovernmental organization, and many scholars have come to the conclusion that it is a
hybrid of intergovernmental relations and domestic polity. This makes it necessary for one to
compare the processes, dynamics, and locus of power within individual areas of policy, to
determine whether a comparison is possible between the EU and U.S. This is offered in the
following section.

5.3 U.S. Regulatory Federalism and the EU

Turning then to the ‘domestic polity’ side it is true that the U.S. and the EU have had
different experiences in developing institutional arrangements for environmental policy. In the
U.S the federal government’s role in the 1960’s was limited to management of public lands while
water and air pollution were considered local issues (Jeppesen, 2002). This changed in the 1970s
as increasing public concern about the environment led to the creation of the Environmental
Protection Agency (EPA) together with amendments to the Clean Air and Water acts. The EPA
was created by executive reorganization under an order that unified 15 different programs into
one single jurisdiction. The EPA grew as an organization of substantial authority and
independence, regulating through its 10 regional offices (Wood, 1988). During the Reagan
administration, though, the EPA’s responsibilities and budget were severely challenged in
response to the deregulation wave. However, the EPA managed to overcome these difficulties
and now has the sole responsibility to enforce and/or oversee the implementation of federal
regulation in the U.S.A.

Contrary to the U.S., the EU institutional arrangements have evolved mainly through
treaties. There was no formal-legal base for environmental regulation addressed in the founding
Treaty of Rome, nevertheless a considerable amount of legislation found its way to the states (Sbragia, 1996). The Single European Act (SEA) of 1987 was the first to formally address the issue and assign responsibility for environmental policy to the European Commission. The legal basis was further strengthened by the Treaty of the European Union (TEU) in Maastricht, 1992, and the Amsterdam Treaty in 1997 (Jeppesen, 2002).

The last two treaties changed the environmental policy horizon radically. The SEA introduced qualified majority voting (as opposed to unanimity, with veto powers) and increased the role of the European Parliament, which now participates in the co-operation procedure for Environmental legislation linked to trade and economic issues (Article 100a) and has some veto powers. Regulations directed towards the protection of the environment, but unconnected to the single market, still require unanimity from the Council of Ministers (Article 130s), but allow for stricter national standards in countries (such as Germany and the Netherlands). The EU has thus preempted substantial policy making powers from the states.

Even though the two systems originated in quite different circumstances, substantial similarities exist. The main similarity is that central government and member states share responsibility in the environmental policy field. The U.S. uses a technique called partial preemption, under which the federal government allows states to assume primacy in the implementation of programs under the condition that state programs will be approved by the central government and will abide by minimum standards and goals set by the federal government and it’s EPA. The EPA’s role is to enforce federal statutes within the states that elect not to apply for primacy, and monitor the enforcement in states that have assumed primacy. If a state is found not to be in compliance with minimum standards and procedures, the EPA can revoke its grant of primacy (Grotty, 1987).
This mechanism relieves the federal government from the responsibility of providing financial and staff resources to enforce federal statutes, while ensuring that minimum standards are met by the states. Of course financial incentives in the form of grants-in-aid are used to induce state governments to assume primacy, but as Grotty (1987) observes, the federal government has actually reduced the amount of federal funds it gives to the states for pollution control, hence the level of federal government intrusion has lessened.

This preemption of state authority is found with little to no differences in the EU case also. According to the principle of “subsidiarity” the community shall take action relating to the environment up to the extent that objectives can be attained better at Community level than at the level of individual member states (Jepessen, 2002). This principle included in the SEA and reinforced in the TEU has been the basis for environmental policy making at the EU level. It basically has to do with the ‘economies of scale’ in EU legislation and its comparative efficiencies. However, the body responsible for proposing such legislation, the Commission, does it in the form of directives. And while a directive is binding as to the result to be achieved, it leaves it to the national authorities to choose the form and method, and the implementation, which subjects the Commission to a role of monitoring rather than enforcing.

The two procedures, primacy and directives, are thus rather similar, but there is one basic difference. In the U.S. system the state has the ability to opt out of the implementation and enforcement of regulations, while European member states must implement and enforce or else.41

40 The initial legal stance of a directive was a letter that provides a general direction toward a common goal, which had no legal binding for the member states. The European Court of Justice, changed this by recognizing the ‘supremacy’ and ‘direct effect’ doctrines of EU legislation not included in the Treaty of Rome.
41 For an extensive discussion on enforcement mechanisms of the EU, please refer to section 3.3 of chapter 3 in this study.
5.3.1 Centralized Federalism- Principals and Agents

Administrative theories are primarily concerned with explaining administrative behavior whether it comes from agencies as a whole or their agents. On the level of state intervention two contrasting all-encompassing images of public bureaucracy are often distinguished: “one image focuses on central controls over agency structure, tasks and emphasizes the importance of elected officials in determining bureaucratic behavior, while the other image focuses on the nature of the policy task and the organizational characteristics of the bureaucracy” (Scholz and Wei, 1986, p. 1249). Both images are rooted in the classical distinction between centralized and decentralized forms of regulatory federalism and their respective competences, and although both can contribute to our understanding of member state compliance, it can be argued (as happened with International Relations theories) that none of them is able to provide us with a full set of hypotheses regarding the phenomenon of non-compliance with EU environmental directives.

When regulation is centralized the focus is on uniform measures, which must be satisfied in all locations, using a great deal of top-down influence and ‘deterrence’. When regulation is decentralized the focus is on local choice and ‘cooperation’ leading to non-uniform implementation and enforcement of regulations. According to William Gormley (1998) a ‘deterrence’ model seeks to punish regulated firms that violate rules, while a ‘cooperative’ model seeks to persuade them to improve their performance. All models trying to explain difference in compliance come from one of these theoretical approaches to environmental regulation. Of course, there are ‘mixed approach’ models that incorporate all considerations into one full model (see most notably Thompson and Scicchitano, 1985; Scholz and Wei, 1986; Hedge, Scicchitano, and Metz, 1991; and Wood, 1992).

An approach consistent with the centralized federalism view is the principal-agent model proposed by John Chubb (1985). According to this model federal structures are a two-tiered
principal-agent hierarchy. Within the top tier are elected officials (principals) that exercise power to influence their agents (federal bureaucracy), and in the second tier the federal bureaucracy becomes the principal and tries to influence the behavior of subnational bureaucracies (agents).

The ability of the principal-agent model to explain intergovernmental relations lies on two premises that have to be proven. Hedge, Scicchitano and Metz (1991) require that an analysis must first demonstrate federal regulators are responsive to federal political principals, and second that federal regulators are able in turn to condition behavior at state agencies. In the European context, when speaking of a federal bureaucracy we mainly refer to the European Commission. However, in the context of state agencies the plot thickens. One has to distinguish between state agencies and state governments. This is mainly because for a principal-agent model to work the second relationship has to be at least viable.

The first problem with this, when juxtaposed to the EU case, is that the Commission does not make a distinction between state agency (ministry) and the state when it brings infringement proceedings (punishment) upon it. The proceedings are against the state and not against its environment ministry. This poses the question of accountability and control for the agency responsible for such infringements. In a way the state agency in charge for the environment is never responsible in the eyes of the Commission, or the Treaties’ for that matter. ‘Passing the buck’ is frequently exercised in domestic politics when it comes to such situations, when the ministry blames the parliament for late decisions or bad laws, and the parliament blames the ministry for bad implementation, whichever is the case. An additional difficulty is introduced, especially in parliamentary democracies, when the head of the Ministry for the Environment is almost always a member of the governing body of the parliament. Domestic politics may in this
sense ‘infringe’ on the Commission’s ability to locate the perpetrator of the infringement and much more hold him/her/it accountable.

The second issue pertains to the abilities of the European Commission to condition the behavior of state agencies (by monitoring and enforcement). The Commission has a twofold responsibility regarding two non-compliance gaps. First, monitor the legal transposition of directives, and second monitor their practical implementation. And while the first task does not seem all that difficult because states are supposed to report back to the Commission on transposition measures and the Commission can refer them to the European Court of Justice for non-communication or bad application, the second one seems almost impossible. This is because the Commission is almost entirely dependent, upon Member states reporting back on what they are actually doing, or upon costly and time-consuming consultancy reports, or on whatever national environmental groups and citizens choose to submit through the formal complaints procedure (Jordan, 1999).42

Since the Commission is unable to control state agencies, task oriented models of regulatory enforcement (Gormley, 1998) and models of mixed adaptation (Scholz and Wei, 1986; Hedge, Scicchitano and Metz, 1991; Wood, 1992; Hedge and Scicchitano, 1994) are correct to assume that the presence of active environmental groups increases monitoring and enforcement even through ‘fire-alarm’ mechanisms such as complaints, much more so in the EU than in the U.S. As illustrated in Chapter 3, the percent of infringements opened that were initiated by complaints was 47% during the 1996-2007 period. This reality verifies the ability of groups to induce enforcement through the formal EU complaint procedure, but it also limits the explanatory power of principal-agent models of compliance since the Commission requires the presence and activity of citizen groups for its monitoring and enforcement mechanisms to work.

42 For a discussion on the monitoring mechanisms of the EU, please refer to sections 3.3.1 and 3.4.1 of Chapter 3.
This argument is partly in line with the EU studies literature on the effect of national actors in obstructing or facilitating compliance (Duina, 1997; Haverland, 2000; Mabye, 2001; Giuliani, 2003; Kaeding, 2006; Perkins and Neumayer, 2007; König and Luetgert, 2008). However, this literature focuses mainly on the ability of citizen groups to use institutional veto points (Haverland, 2000), or other mediating explanations, such as the level of corporatism (Lampinen and Uusikyla, 1998; Mbaye, 2001; Kaeding, 2006) or the level of pluralism (König and Luetgert, 2008), or finally, the level of partisan conflict and polarization within domestic veto players (Treib, 2003; Kaeding, 2006; König and Luetgert, 2008) to affect compliance at the domestic level. The ability and possibility of citizen groups circumventing national politics and using the Commission’s formal monitoring mechanisms to hit the ‘fire-alarm’ has been neglected by the literature. It stands to reason, that mediating factors that involve citizen groups are not as important in inducing compliance as the ability of those groups to utilize top-level monitoring and enforcement mechanisms to induce compliance. Thus, a first hypothesis is warranted:

H1: States with more active citizen (environmental) groups will comply more.

A second difficulty for the principal-agent model regarding the EU case comes also from the issue of monitoring and enforcement. McCubbins et al. (1987) suggest that by themselves, rewards and punishments do not deal directly with the problem of asymmetric information. If non-compliance is the case, they suggest that principals invest resources in monitoring, and since monitoring is costly and sometimes ineffective on its own they supplement their suggestion by investing in procedural requirements.

The suggestion of procedural requirements has its own problems in the EU context. The main tool of environmental policy in the EU is the directive. Directives, are binding as to the objective to be achieved but leave it to the states to decide regarding how to achieve the required
outcome. EU law is thus deliberately flexible to allow for adjustment to national circumstances. This is contrary to a hierarchical model’s ‘command and control’ procedure. Not surprisingly member states almost always prefer directives to other forms of regulation and almost always pressure the Commission for this form of regulation. In this sense, again mixed adaptation models, which incorporate both top-down and bottom-up influence to compliance, are correct in predicting that the federal agency is subject to bottom-up influences, and pressures for individual adjustments.

That being said, this study now turns to the higher tier of the principal-agent pyramid. Admittedly there isn’t much to be said about the influence and control elected officials are able to exercise on the Commission as it is almost minimal on environmental directives because it depends on whether the Commission is going to issue legislation pertaining to Article 100a (on internal markets) for which the codecision procedure is activated, or Article 130s for which the consultation procedure is followed.43 Given this reality, it is not surprising that the Commission has tried, in the later years, to use Article 100a as the legal base for the issuance of directives concerning the environment. The fact that the European Parliament (EP) has strongly supported this attempt, which triggers the codecision procedure, means that the Commission is becoming more responsive to the needs of its political principal, even if this happens for its own considerations (i.e more integration). Additionally, the EP has only recently been able to attract more power, namely it’s Environmental Committee and ‘ask’ for more inclusion in the policy process (Rule 63 reports), and can invite the Commission to present a legislative proposal, but its monitoring capabilities do not exist in the sense the principal-agent model would suggest.

43 For a discussion on the effect of political principals on the Commission, please refer to section 3.3 of chapter 3 in this study.
The existence of parliamentary petitions and questions in the pre-legal/administrative stage of the infringement proceedings might be considered and additional power, but these have radically decreased in later years.\textsuperscript{44} Therefore we would expect state committee membership and ideology to play some role in increasing enforcement but only through stricter scrutiny of Commission action and certainly to a lesser degree than that encountered in the U.S. literature. It is not far-fetched, however, to argue that members of the EP would use whatever clout they have at their disposal to attain favorable regulatory outcomes back home. There is some evidence to suggest that agencies do, in fact, respond to member pressures\textsuperscript{45} in the U.S. regulatory enforcement literature, and the EU studies literature has, indeed, considered the possibility that ‘goodness of fit’ can be induced using EU institutions to minimize the costs of adaptation by Europeanizing policies closer to pre-existing state policies and administrative styles.\textsuperscript{46}

However, the effect of environmental leaders (countries that push for legislation) through the European Parliament has largely been neglected in the literature. It is reasonable to assume that environmental ‘leaders’ with membership in the EP Environment Committee should be able to promote their agenda down to the Commission and comply more with directives since they were the ones pushing for them. It is true, though, that the existence of differential decision making procedures (as mentioned earlier), might serve to decrease the usefulness in membership to the EP Environment Committee as a tool to control the Commissions product (directives), and how close those products will be to the desired ones. Nevertheless, membership in the EP’s Environment Committee should have a positive effect on compliance back home, even if that

\textsuperscript{44} From Table 3-2 in section 3.4.1 of Chapter 3 in this study, Parliamentary Questions/Petitions as a source for detection of non-compliance is negligent and constitutes a mere 1% of all detected cases.

\textsuperscript{45} Scholz and Wei (1986), for example, discover that states with liberal congressional delegations received higher rates of OSHA enforcement during the early 1980s. Hedge and Jallow (1990) find that states with membership on the House Interior Committee were somewhat more likely to receive higher levels of regulatory resources and enforcement during the Carter years.

effect pertains to the ‘shame’ factor of being in the committee and not complying with legislation the committee was involved in. Accordingly:

H2: ‘Leader’ states with membership in the relevant (Environment) Committee of the EP will comply more.

Finally, the effect of the President of the Council of Ministers should be considered when assessing top-down influences but only through its chairmanship of the European Council. Presidency of the Council of Ministers bestows agenda setting capabilities to its presiding member state. A clear example of this remains the 1988 adoption of the directive dealing with the issue of acid rain, which was initially proposed in Germany’s 1983 presidency and was adopted in 1988 again under German presidency (the President of the Council has the ability to set the agenda). However this is less effective today as with 27 member states in the EU, each serves in the presidency just once every thirteen and a half years. Therefore ‘presidency’ should not be considered in assessing top-down influence as the U.S. literature would suggest.

In a sense, the states are the real principal of the Commission, which means that the Council of Ministers should be able to monitor and affect the behavior of the Commission (as the representatives of individual member states). However this can only be done in the realm of the European Council, where heads of state or of government (the principals of the Council of Ministers), the Commission president, the foreign ministers of the member states, and the president of the Council have an informal, yet considerable ability to ‘stack the deck’ for the Commission. As we have seen though ‘presidency conclusions’ can, and have been circumvented, which points to a possible, yet serious gap in the ability of the principals to influence the behavior of the agent.
However, a discussion on cooperative and deterrence models should not end here; further elaboration is needed to determine which of the two the EU currently uses under the assumptions of Scholz (1991). His study on regulatory enforcement and administrative effectiveness makes the case for using the model of cooperation, but cautions us regarding the “perverse” behavior of policy supporters, who in the end oppose effective administration. Using a game theoretical framework, and obviously having already calculated the equilibriums in another study he sketches a prisoner’s dilemma between the Agency’s enforcement choices and the Firm’s respective compliance choices, as shown in Figure 5-1 below.

<table>
<thead>
<tr>
<th>Firm’s Choice</th>
<th>Agency’s Choice</th>
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<tr>
<td></td>
<td>Flexible Enforcement (a1)</td>
</tr>
<tr>
<td>Flexible Compliance (b1)</td>
<td>3,3 Voluntary compliance equilibrium</td>
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<tr>
<td>Minimal Compliance (b2)</td>
<td>5,0 Capture</td>
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Figure 5-1. Prisoner’s dilemma of agency and firm choices

Based on this illustration, the apparent choice of social importance is the top left cell of the voluntary compliance equilibrium where both actors get the greatest rewards. A related problem (to the aforementioned) regarding the implementation and especially the enforcement of EU directives by the Commission is that the process seems to be reactive rather than proactive (fire-alarm vs. police-patrol). Generally each new directive sets a time limit, usually two to three years, for members to amend their law in line with the directive’s provisions. Member states must notify transpositional measures by this deadline. So the Commission, according to Scholz (1991), uses the flexible enforcement strategy as its initial response. However Scholz cautions against the possibility of agency capture; member states already know the Commission’s choice,
which is flexible enforcement, thus they would be better off in the short run making the minimal compliance choice. Hence the process is driven to the least socially desirable result of ‘capture’.

As already noted, the Commission waits until the end of the two-year period to pursue enforcement and punishment. After the end of the time limit the game moves on gradually to the ‘deterrence equilibrium’ (assuming the member state has not yet complied with the directive) as the Commission initiates infringement proceedings. After the soft type of infringement proceedings (letters of formal notice, and reasoned opinions) have ended and the member state (ridiculously) still has not complied, the Commission moves itself to the ‘harassment’ level as it refers the case to the ECJ. Thus in all cases the Commission’s behavior induces the socially undesirable outcome. Only if we assume that states act in good faith, and choose the flexible compliance position from the beginning, is the socially desirable result achieved. However, this is not likely to happen for all states. The data suggest that member states will minimally comply and only begin moving up the ladder of compliance when threatened by infringement proceedings. The case in point being that the unique “Nash Equilibrium” of the game is the ‘deterrence model’ (2, 2) which constitutes the best response of each player to the other player’s strategies. The fact remains, however, that due to this flawed process the environment is not as protected as it should be according to adopted EU law.

It is clear then, that the principal-agent model offers a limited understanding of interstate differences in EU enforcement and compliance. However, its contribution remains warranted in a regulatory enforcement model as it helps us understand some of the top-down components of federal bureaucracies’ behavior. It is true, however, that the extremes of the two views, top-down

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47 If player A (agency) plays strategy a1, the best response from player B (states) is b2. If player A plays a2 then player B’s best strategy is again b2. Thus strategy b2 is the dominant response for player B (states). Following a similar analysis for player A we can see that there is a unique Nash equilibrium of the game, which is (2,2). However the social optimum is (3,3).
and bottom-up, can be reconciled under a principal-agent framework if more emphasis is given to the agent side of relations (Wood, 1988).

5.3.2 Bottom-Up Approaches

Up until the 1980s most research on political-bureaucratic relations focused on the image of bureaucratic imperviousness to control. Bureaucrats have more knowledge, experience, intergovernmental ties, and time than political principals (Heclo, 1977); they have a monopoly over information about agency resources and act to maximize budgets (Niskanen, 1971; 1975); discretion provides agencies with the opportunity to alter original policy prescriptions during the implementation stage (Aberbach and Rockman, 1976; Downs, 1967; Rourke, 1984;). As Wood and Waterman (1991) suggest, two factors assisted in a fundamental change in our understanding of this relationship: an economic theory of political-bureaucratic relations, and empirical support for that theory. This theory saw central political institutions (Congress, President, Courts) as molding the preferences of public bureaucracies, which are situated lower in the hierarchy, using various political tools of control. Most notably, ‘fire alarm’ oversight and the use of the Administrative Procedures Act\(^48\) (McCubbins and Schwartz, 1984; McCubbins, Noll, and Weingast, 1989).

However, the aforementioned image of the bureaucracy as a mindless tool in the hands of elected officials does not take into account, or at least understates the importance of, several “internal” factors that might affect bureaucratic behavior such as professional norms, agency socialization and historical legacy (Golden, 2000). Another criticism of the way we understand tools of political control is made by Hedge and Scicchitano (1994). They suggest that the

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\(^48\) Enacted in 1946, this act affords the following protections to private parties being regulated: Publication of all agency rules and procedures in the Federal Register. Proposed changes in substantive rules must also be published in the Federal Register, while an opportunity for response by interested parties must be granted, and such responses are to be taken into account by the agency. Adjudicatory procedures within the agency must include the opportunity for aggrieved parties to be heard. Finally, a right to judicial review is required for a person suffering legal wrong or adversely affected by agency actions.
intergovernmental setting in which regulation takes place may also play a role in determining the extent of bureaucratic control. “Control is less likely to occur when the forces of federalism are strong; in a federal system bureaucratic agents are pulled in multiple directions by a multitude of political principals, who in turn experience their own pressures and competing role expectations” (Hedge et al., 1990, p. 1075). Similarly, success of political control depends on the degree of coincidence of national and sub-national preferences (Hedge and Scicchitano, 1994).

As Gormley (1998) found, the enforcement styles of inspectors depend on whether a regulatory agency deals with issues that are low in salience and low in complexity or not. Low salience and complexity creates an environment in which agencies may not be quite as responsive to their principals, and may lack a strong element of professionalism. These agencies may also be more dependent on the preferences and inclinations of individuals (called “task-oriented” agencies). In contrast, agencies charged with highly salient issues receive the lion's share of attention from politicians, judges, and journalists (called “crisis-oriented” agencies, Gormley, 1998).

It is true that environmental regulatory agencies, for the most part, exemplify the characteristics of task-oriented agencies given the salience of the environmental issue. However, even though the environment has become a fairly salient issue in our society, environmental regulation is generally low in salience in some European countries. To some extent, this reflects the fact that environmental implementation and enforcement is handled by the states themselves rather than by a more conspicuous federal agency such as the Commission. As seen below, the environment has become salient in some states, while normally it is low in salience when compared with different areas of policy.
Governmental policy, has always been, and will always be, a function of crisis (Kingdon, 1995, p. 95). In practical terms, it can be argued that compliance will be quicker in states where the environment is more salient (and elevated to crisis-oriented agency status), since agencies will be inundated with “interested” political forces (public and private). Also, in some cases, public and private officials may actively exert pressures on state agency behavior by working through the state’s representative institutions, the courts, or by directly influencing senior agency officials. In contrast, where the environment is less salient it will lead to less compliance due to fewer political interventions, which lead to more a more relaxed (task-oriented) style by agencies.

The salience of an issue in domestic politics has largely been neglected in the EU studies literature, with a few notable exceptions (Knill and Lenschow, 1998; Versluis, 2003). Knill and Lenschow (1998), treat salience as a secondary casual factor to the constraints created by the institutional framework in which the policy will take place. In short, it is argued that policy salience will be an insufficient explanation of what drives compliance, as the institutional framework (goodness of fit between European requirements and regulatory styles) will define
whether salience will be effective or not. However, only three of their eight cases confirmed their hypothesis and as an afterthought they suggest that in situations where the level of institutional embeddedness suggests the more ambiguous picture of moderate adaptation pressure, the explanatory value of the policy context becomes important (Knill and Lenschow, 1998, p. 611). Since salience was expected to be high, Germany’s troubles with the Drinking Water and Environmental Impact Assessment (EIA) directives could only be attributed to institutional embeddedness. However, from Figure 5-2 above, the salience the environment in Germany is not as high as purported in their study, which of course may have led to the wrong conclusion as to what matters in non-compliance. The quantification of salience proves beneficial in this way, and in fact, salience has never before been quantitatively addressed in the literature.

It is, then, sensible to argue that policy salience is not a mediating factor or a secondary casual factor to the constraints created by the institutional framework in which the policy will take place. According to the preceding discussion, in cases where the environment is elevated to a crisis status by ‘interested’ political forces (public and private) then agencies will be pressured to treat the environmental issue at hand as a crisis and thus with an added degree of professionalism, thereby increasing compliance. A similar argument is made by Versluis (2003), where issue salience is showed be related to the existence of “change agents” which pressure to initiate change. However, this study argues that, the salience of an issue in private actors will create the need for attention to agency workings from politicians, judges, and journalists, which of course in turn pressure agencies to be more efficient and effective with legislation, regardless of the existence of change agents.

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49 Embeddedness is defined as the extent to which national institutions are deeply and/or widely institutionalized. i.e. the extent to which administrative arrangements are ideologically rooted in paradigms (Hall 1993).

50 Moderate adaptation pressure refers to cases where EU legislation is interpreted as demanding changes ‘within the core’ of national administrative traditions but does not challenge core factors themselves.
To be precise, ‘change agents’ pressuring for legislation can use the salience of the issue as a tool, but the two (salience, and change agents) are not mutually exclusive in the sense that salience will not work without the change agents. This study has already addressed the existence of ‘change’ agents, what remains is to hypothesize on the purported relationship between salience and the political principals of agencies, as the salience of an issue will motivate politicians to actively pressure agencies from the top. In this case, it makes sense that the existence of green parties in legislatures will have a positive effect on compliance, since this existence gives salience an added strength and creates a direct link with institutional players. It is also true though, that green parties may not necessarily possess the strength to affect legislation, but their existence should matter nonetheless because they represent a voice in national legislatures and given legislative competition and the salience of the issue, it might be wise for ruling coalitions to ‘go with the flow’ rather than disregard the issue and risk losing more votes to those green parties. Two hypotheses can be formulated in this case:

H3: The greater the salience of an issue in domestic politics the greater the compliance.

H4: As the proportion of special interest political party (green party) membership in the national legislature increases, so will the rate of compliance.

It is also true, that although EU legislators are not formally accountable to state officials, the decisions of EU officials are likely to reflect the state’s political climates. More to the point, much of the argument for the upstream pressure of green members, besides the need for regulation (Scholz and Wei, 1986) due to environmental degradation, relies on their attempt to protect national regulated industry from the pitfalls of stricter regulation. It is a fact that when ‘green members’ adopt stricter policies that those mandated by EU legislation in their attempt to protect their environment, they impose costs on their industry which now becomes less

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51 With hypothesis 1 in this chapter, on the existence of active environmental groups.
competitive than other less regulated industries in other countries. It follows that the industry in that state will pressure its government for Europeanization of the new standards. However, industry clout (Hedge et al., 1990, Hedge and Scicchitano, 1994) may work in another direction as well. Powerful economic interests may press for less legislation and enforcement especially in countries where industry is advanced and comprises of a big portion of that state’s Gross Domestic Product (GDP).

States where the environmental problem is severe (largely due to industry emissions) should normally be expected to work harder in pollution abatement and implementation of directives and invest more resources. However, it is true that if the environmental problem is big, then the resources need to alleviate it will also be considerable (Zito, 2000). This makes it necessary for states with a big pollution issue to invest more resources than other states, but it does not necessarily mean that states with a greater need for regulation (more pollution) will automatically invest more resources.

On one hand, a state’s commitment to environmental regulation should have a positive effect on compliance as investment in implementation and pollution abatement will rise. In this sense, environmental expenditures not only show the level of commitment but also the capacity of the state to implement such legislation. But on the other hand, any such response from states will have a negative effect on industry. It is, thus, also expected that the industry will push for less legislation or for more non-compliance with EU directives. Even though state regulatory agencies can never completely eliminate political opposition, they can attempt to minimize political costs by shirking implementation when faced with business opposition. As such, states with a greater need for regulation may actually comply less with environmental directives, not necessarily because of the need for larger investments, but because the industry in heavily
polluted and manufacturing intensive states will mobilize against environmental regulation. These lines of reasoning suggest the following hypotheses:

H5: States with a greater overall commitment to environmental regulation will comply more.

H6: States where industry clout is great will comply less.

H7: The greater the need for regulation (severity of the problem) the lower the compliance with environmental directives.

The importance of business opposition in using their strong and well organized lobby groups to undermine effective implementation is well documented in the EU studies literature and elsewhere (Grant et al., 2000; Weinthal and Parag, 2003; Perkins and Neumayer, 2007). In fact several studies have some predictor regarding the issue of imposing adjustment costs on domestic stakeholders, and the effect this will have on implementation (Underdal, 1998; Tallberg, 2002; Beach, 2005). However, manufacturers, or industry at large, may not always be opposed to environmental policies (Wurzel, 2002). Industry may actually be favorable to environmental legislation especially in ‘green’ countries, and push for Europeanization of state environmental regulations to level the playing field with competition in other states. In many ways this is the other side of the same coin in regards to industry clout. As argued earlier, when industry is against environmental regulation (because of the additional cost), they will use their considerable clout with state government to undermine implementation. Whereas, when industry is favorable to environmental regulation, they will use their clout to increase compliance. Even though the effect of business opposition has been measured both qualitatively and quantitatively in other studies, the effect of industry support for environmental regulation on compliance has never been addressed before. Accordingly, the following hypothesis is offered:
H8: States with favorable business climates will comply more.

Additional pressures toward non-compliance are likely to emerge from within regulatory agencies. Although regulations may be written at the EU level, it is the state agencies that are responsible for implementing regulation, and each of them has its own staffing levels, budgets, and, frequently, unique outlooks on regulation (Hedge, 1993). It is the street-level bureaucrat (in this case state agencies) who carries out the actual physical task of an organization’s objectives, and many times (Lipsky, 1976), street-level bureaucrats enjoy considerable discretion and autonomy in carrying out their responsibilities (as the earlier example of inspector styles illustrates).

Given this reality, there is some reason to believe that political actors may not always work to block legislation from being implemented or delay the process of implementation. Whether they are powerful actors, or non-governmental organizations, or simply the industry, they may use “bottom-up” mechanisms to indirectly influence agency decision making including such tools as budgets, personnel decisions, and agency structure (see Stewart et al., 1982; Weingast and Moran, 1983; Moe 1985; McCubbins, Noll, and Weingast, 1989). Hence, in extension of the previous hypotheses, it can be argued that ‘interested’ political forces will use their influence to decrease the number agency ability to introduce and implement new regulations. It can also be argued though, that states favorable to environmental legislation will invest more in governmental agencies (again depending on the state climate toward the environment). The following hypothesis is evident:

H9: Increases in the staffing levels of the State agency will be associated with higher levels of compliance.
The above hypothesis, of course, has to do with state capacity to implement legislation. If agencies charged with this implementation suffer from limited resources then non-compliance might actually be unavoidable and involuntary. The management school in international relations and public administration literature emphasizes that non-compliance is related to the administrative capacity and efficiency of the state (Chayes and Chayes, 1995). State agencies may be constrained in implementing EU law by a lack of governmental resources (Lampinen and Uusikyla, 1998), and by structural inefficiencies in the bureaucracy (Ciavarini Azzi, 2000; Dimitrakopoulos, 2001). Verification of this in the EU literature is somewhat mixed.\textsuperscript{52} Pridham (1994, p. 99) argues that 'the southern countries (Spain, Greece, and Italy) do have particular problems of administrative procedure and competence' while Borzel (2000) finds no ‘southern’ problem. Mbaye (2001) finds that bureaucratic efficiency decreases non-compliance (also Haverland and Romeijn, 2007), while Perkins and Neumayer (2007) find that efficiency has an insignificant positive effect on non-compliance. Administrative efficiency is notoriously difficult to measure\textsuperscript{53} and the conflicting results in the literature might be due to poor indicators. However, there may be another explanation. As argued above, this study expects that when industry is favorable to environmental legislation then compliance will increase. Additionally, when industry has clout in domestic politics, compliance will decrease. This, of course, points to the existence of a cozy relationship between industry and the state.

The EU studies literature has addressed this ‘coziness’ under the heading of such mediating variables as veto points (Haverland, 2000), arguing that government must satisfy many coalition partners and other actors who shape both the quality and speed of implementation.

\textsuperscript{52} See also, Coyle (1994) who argues that Ireland's administrative capacity governs its ability to implement policy. Weale et al. (1996), argue that institutional design matters.

\textsuperscript{53} For a discussion of the difficulties and the inadequacy of most bureaucratic quality indicators, see Van De Walle (2005).
(regardless of ‘goodness of fit’). After being almost universally regarded as invalid (Ferner and Hyman, 1998) in the early 1990s, corporatism is also back in the limelight (Lampinen and Uusikyla, 1998; Mbaye, 2001; Kaeding, 2006). As the argument goes, a high level of corporatism is expected to have an adverse effect on veto players and thus result in increased compliance (Lampinen and Uusikyla, 1998). A close and cooperative arrangement between the state and interest groups will increase compliance while an increased interest group involvement (level of pluralism) will lead to non-compliance (Konig and Luetgert, 2008). Finally, the level of partisan conflict and polarization within domestic veto players (Treib, 2003; Kaeding, 2006; Konig and Luetgert, 2008) are also hypothesized to affect compliance at the domestic level.

However, empirical investigation of the effect of veto points remains in its infancy, while also riddled with mixed results. Some find the existence of veto players a good explanation of non-compliance (Kaeding, 2006; Perkins and Neumayer, 2007) while others find an insignificant negative relationship between veto players and non-compliance (i.e., the existence of veto players increases compliance, Mbaye, 2001). Corporatism is found to be insignificant, while also shown to have a negative effect on compliance (contrary to the hypothesized relationship, Mbaye, 2001) or with a positive effect on compliance (Kaeding, 2006). Pluralism and partisan conflict is shown to increase non-compliance (Konig and Luetgert, 2008), while Kaeding (2006) finds a positive yet insignificant relationship.

All these conflicting results should make it abundantly clear that we are either measuring the right things with the wrong indicators or that simply we need a better explanation of actor involvement. As argued earlier, this study expects to find a ‘cozy’ relationship between industry and the state. When industry is powerful then we should expect to see increased levels of non-compliance. Bureaucratic efficiency should play a role in this, but not in the way hypothesized in

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54 For a discussion on quantitative measures of corporatism refer to Kenworthy (2000).
other studies. If a bureaucracy is focused on private sector development then we should expect that it will be efficient in implementing regulation that promotes and permits private sector development. If the bureaucracy is focused on environmental protection then it will be efficient in promoting environmental protection. It is, then, necessary to establish who it is exactly that creates this focus on the bureaucracy. We should expect to find agencies susceptible to both politician and industry involvement, but these actors will be successful in pushing the agency only if they are able to change the focus of that agency to match their preferences.

To be concise, bureaucratic efficiency does not matter as much as whether that efficiency is focused toward environmental legislation or private sector development, which invariably helps industry. In this way, public and private actors may find it beneficial to change the efficiency focus of the bureaucracy to match their needs but this will depend on the receptivity of the bureaucracy to behavioral modification (Wood, 1988). It is true that some states (especially the poor ones) are more focused on private sector development rather than environmental protection (similarly to the above hypothesis on overall commitment), hence their bureaucracies will be efficient in promoting private sector development rather than environmental protection. Even if these two goals are not necessarily mutually exclusive, the presence of a strong industry with a strong lobby, will keep the focus of bureaucratic efficiency closer to its own preferences. This means that if the bureaucracy is efficient in making regulation that helps industry then we should expect non-compliance to increase.

Related to this argument is, of course, the presence of corruption in the public sector and in the administration (Heidenheimer et al., 1989; Mauro, 1995). Corruption has been found to have a significant negative effect on compliance (Mbaye, 2001; Kaeding, 2006) in systems where side-payments and patronage positions are the norm, tasks are accomplished only when
bureaucrats have a personal incentive to get things done (Mbaye, 2001). It follows, coupled with the above argument on the power of street level bureaucrats, that if implementation does not produce personal incentives for bureaucrats, then non-compliance is possible. Conversely, if non-compliance produces a side-payment to bureaucrats from a much powerful and wealthy industry sector then we should expect non-compliance to be increased in states with corrupt administrations. Two final hypotheses are thus warranted:

H11: States with a cozy regulatory efficiency will comply less.

H12: States with corrupt administrations will comply less.

The literature of regulatory federalism presents an array of hypotheses to better understand the determinants of regulatory enforcement and state behavior. It follows from the above analysis though that we should expect EU Member State compliance to reflect domestic politics, more so than it does in the U.S. literature.

5.4 Conclusion

This chapter offers an integrative approach that aims to capture both external and internal influences on bureaucratic behavior, which determine the level of compliance with EU environmental directives. The presence of active environmental groups utilizing the monitoring mechanisms of the Commission, and membership in the European Parliament’s Environment Committee should play a significant ‘top-down’ role to affect compliance. Yet, this study argues that several ‘bottom-up’ influences (salience, commitment, business climate, industry clout, severity of the problem) should offer a better explanation of non-compliance due to the role of domestic forces. While, also, internal agency characteristics and the influence of domestic political forces on these characteristics should prove powerful explanations of non-compliance. However, this is not to say we should treat the ‘top-down’ versus ‘bottom-up’ dichotomy in a disjunctive way. To disregard the ‘top-down’ influences completely when arguing for the power
of ‘bottom-up’ influences would be a fallacy as they measure different aspects of non-compliant behavior, and therefore the complexity and duplicity of an issue might be overlooked. Hence, these approaches should be seen as potentially complimentary, and even if an approach proves to be statistically insignificant in a quantitative analysis, this only adds to the explanatory power of a different approach that proved significant.

As Hedge and Johnson (2002) suggest, congressional-bureaucratic relations are conditioned by presidential politics and the struggle between them. Others have suggested that the ability of elected principals to shape outputs depends not only on the effective application of the tools of control, but also on the resources and receptivity of the bureaucracy to behavioral modification (Wood, 1988, citing the case of the EPA in the Reagan era). Still others seem to suggest that the relationship between principals and agents is not as one-sided as we thought and the behavior of political principals can be influenced by administrative agencies (Krause, 1999). All of the claims and counter-claims seem to paint a discouraging picture for the understanding of the issue. When we focus on one tool of control, or on one agency, or on one political principal it is obvious that we are missing the “drama of national politics” as Hedge and Johnson (2002) call it, instead we should entertain approaches that look at the effects of the political context on both political control and its tools, making sure that we look at both micro (internal) and macro (external) influences to bureaucratic behavior.
6.1 Introduction

The most influential simplification of the policy process is the “stages model” as conceived by Harold Lasswell (1956). It divides the policy process into a series of stages – problem identification, policy formulation, adoption, implementation, evaluation, and termination. However, three critical stages can be identified through which all policies must pass sooner or later: policy formulation, policy adoption, and policy implementation (Hayes, 1992). While the EU has created a dense mass of institutions and decision-making procedures for the first two stages, policy implementation (especially in the later years), remains largely in the hands of the states. This is the longest and most arduous part of the policy-making process, especially in the EU because of its institutional character. The Commission is in charge of implementation, but this is accomplished through secondary implementing legislation (directives), but also through constant and vigilant monitoring. All EU policies must be implemented at the national level, generally through national implementing legislation (occasionally at the sub-national level). As a result the Commission can only assist and monitor national actors to try and insure that they follow through on their responsibilities (in a timely manner).

This delegation of broad implementation powers to the states is one of the most important characteristics of contemporary EU government. However, delegation through directives only defines goals to be achieved, and leaves it up to the states’ discretion to choose their own mechanisms and measures to achieve those goals within specified periods of time. This is called the transposition stage and its completion is crucial to the process as incorrect transposition may lead to bad application and non-conformity with EU law. Discretion, however, is not limited to transposing legislation but also applies to application and enforcement. This constitutes a
problem as bureaucratic discretion in implementing policy threatens the idea of the rule of law, that governmental actions be clear and specific and applied by officials in a non-discretionary manner (Bryner, 1987). Critical then, to policy success is the commitment of the states to the objectives of a particular policy, and success is defined as correspondence between goals defined at the top and actions taken in the field.

In Chapters 4 and 5 theories of international relations and regulatory federalism were introduced, respectively, to explain the issue of member-state non-compliance with environmental directives of the European Union. As a result, several hypotheses were developed to explain non-compliance of EU member states. The purpose of this chapter is to parameterize these hypotheses by developing quantitative measures consistent with each hypothesis and, subsequently, to empirically evaluate the effect of these measures on non-compliance utilizing annual data for 15 member states during 1998-2007. I start with the operationalization of compliance as the dependent variable.

6.2 Operationalization of Compliance

It is important to clarify the concept of “compliance” as it is often misconstrued with policy implementation effectiveness. This misinterpretation leads to different variables and different data becoming important (like open infringements), which this study feels miss the importance of the transposition stage of EU directives (for an overview, see Treib, 2006). Compliance refers to “a state of conformity or identity between an actor’s behavior and a specified rule” (Raustiala and Slaughter, 2002, p. 539). Compliance starts from a given norm and asks whether Member States conform. It is possible for someone to comply with the demands of a directive (transpose), without applying it (Treib, 2006), as well as the opposite. As such, to ‘comply’ means something more than mere ‘correctness’ in application enforcement. To ‘comply’ entails conformity, which includes both the politics of compliance and the processes
leading to norm-conformity. Thus, to comply means an actual change in behavior (Haas, 1998), in-line with Commission mandates. It is the argument of this study that, non-communication of measures implementing directives, best exemplifies such lack of norm conformity because the ‘ease of detection’ is not enough to discourage non-compliance (non-communication).

Furthermore, this study is concerned with the processes and politics involved in transposing a directive rather than the ex post facto attempts at application and enforcement. Application and enforcement relates to what happens after a bill becomes a law (Treib, 2006) and the question of ‘correctness’ entails whether the prescribed goals were achieved, which is conceptually different from compliance. In the EU case, as soon as a directive is transposed the burden of application and enforcement falls on the individual Member States’ administrative apparatuses and Courts (as well as the Commission through complaints). By focusing on the politics of application and enforcement, one misses the crucial importance of the compliance (transposition) stage pertaining to EU directives. This is critical as that is the stage at where most of the “push and pull” happens between governments, domestic groups and European principals (Commission). The transposition stage is when states are more likely to shirk on their job, given the inability of the principal to monitor compliance without someone hitting the ‘fire alarm’ and it is the stage where policy drift is more likely since detection of this drift will happen some years after the policy’s transposition in the ‘non-conformity’ and ‘bad-application’ types of EU law infringement. More importantly, the transposition stage is the one during which states pick instruments to implement the directive, through a process closely resembling policy formulation (even if the goal is handed down by EU directives), which entails participation and politics. The amount of political participation states should allow in the policy process has always been a fundamental problem.
Participation is a key component of the policy formulation process as it may increase the likelihood of application or sustainability of a new policy. To the extent that groups feel “allowed” and can gain capacity for managing resources or new tasks and processes, there is an increased likelihood and sustainability of the intended policy. Furthermore, greater participation assures greater responsiveness to the needs of the proposed beneficiaries, resulting in a better fit between needs and policy solutions, leading to increased service-user satisfaction (Brinkerhoff and Crosby 2002). Transposition then, is one of the most important stages of policy implementation as it may very well determine the success or failure of the policy. Figure 6-1, below, shows the stages of the policy process, the actors involved, and the levels of participation as they exist in the EU policy process.

<table>
<thead>
<tr>
<th>EU</th>
<th>Member States</th>
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<tbody>
<tr>
<td>Policy formulation and adoption</td>
<td>Transposition - Policy formulation</td>
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<td></td>
<td>Application</td>
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<tr>
<td>-Commission</td>
<td>-Administration -Commission (Citizen Complaints)</td>
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<tr>
<td>-European Parliament</td>
<td></td>
</tr>
<tr>
<td>-Interest groups</td>
<td>-Administration -Courts</td>
</tr>
</tbody>
</table>

**Openness of Policy Debate**

Figure 6-1. The policy process in the EU: the actors and openness.

However, transposition is not only important because it is the locus of politics in the implementation stage. As revealed in Chapter 3, while transposition (non-communication) is the easiest infringement to detect (by the Commission), oddly enough it is the largest source of infringement proceedings in the EU. Non-communication claims the lion’s share with 61% (in the 1998-2007 period), as the legal base for cases in which infringement proceedings have been commenced. Additionally, 66% of non-communication cases reach the letter of formal notice.
stage in infringement proceedings, as compared to 60% for bad application, while 8% of these cases reach the referral to the European Court of Justice stage, which is less of a percentage than the other sources of non-compliance, yet the total number of cases (920 cases) compared to the other sources of non-compliance accounts for 52% of all referrals. More specifically, the environment comes first in opened infringements (in 25% of all cases), and its share of non-communication cases in infringement proceedings reaches again the first place with 61%. Figure 6-2 below summarizes these statistics.

![Figure 6-2](image)

Figure 6-2. Total infringement proceedings by source of detection and the Environment sector, EU15, 1998-2007.

More to the point, if we accept transposition data as valid indicators of member state non-compliance with EU environmental law, one of the most striking features in transposition is the difference between the ‘leaders’ and ‘laggards’ on opened infringements and transpositions rates. The United Kingdom, a state considered a ‘laggard’ under transposition rates, is actually
part of the ‘leader’ group in opened infringement proceedings with the fifth best place (fewer opened infringements). As argued earlier, this oddity could be attributed to the Commission being wary of antagonizing bigger states, but that would not explain why France is second worse in opened infringement proceedings. Instead, a case could be made that the openness of the UK system to pressure groups accounts for the delays in transposition of directives. As the directive reaches the transposition stage it becomes part of the politics of transposition that delay transposition but assist in better application since the issue was settled earlier (accounting for the relatively small number of opened infringements). Politics, is a feature of transposition and not of application, after law has been transposed into national legislation, political actors can do very little to resist its implementation and enforcement by a state dedicated to apply and pushed by the Commission with various enforcement and management mechanisms.

Additionally, in reference to the ‘leader’ group of states with an average transposition rate of over to 97%, most studies dealing with environmental non-compliance either use data from before the 1995 accession or exclude Austria, Finland, and Sweden from the analysis (for a review of the literature, see Mastenbroek, 2005). This limits the possible inferences and introduces a bias in the data as it eliminates interstate variation. The exclusion of the ‘environmental leaders’ also creates a gap in the possible hypotheses as there is much to be said about the presence of these member states in European political institutions (like the European Parliament Environment Committee). Any study wishing to include these countries, though, must take into account the “newcomer” effect, whereby the Commission grants a period of grace to newly accessed countries for approximately 2 years (Svedrup, 2004; Perkins and Neumayer, 2007). Thus, any study should begin from 1998 onwards. But what are other biases posed in the literature.
6.3 Data Selection: Infringements as Biased Indicators of Compliance

A first type of data used in non-compliance research is infringement proceedings typically found in the Annual Reports on Monitoring the Application of Community Law.\(^55\) Normally, these reports contain information on the source of non-compliance and the resulting steps in enforcement (formal notices, reasoned opinions and article 226,228 ECJ referrals\(^56\)). As Hartlapp and Falkner (2009) suggest the strongest point of these data is the depiction of the interplay between the Commission and the states as the infringement proceedings progress. However, there are several documented limitations of infringements as indicators of compliance.

First, there is simply no way to know whether the Commission, for whatever reason (resources, strategic-ness), responds to all infringements with the same fervor. Put differently, the Commission’s unwillingness or inability to monitor and enforce all infringements of EU law introduces a bias in the dependent variable, and this type of research looks only at the ‘tip of the iceberg’ of non-compliance (Hartlapp and Falkner, 2009, p. 292). When comparing the Commission’s reaction to non communication and incorrect transposition (bad application, non-conformity), Hartlapp and Falkner (2009, pp. 295-96) find that infringement procedures were initiated in 95% of their cases (40 out of 42) of non-communication, while incorrect transposition resulted in infringement proceedings in 51% of cases (22 out of 43). These findings are similar to the ones offered by this study, and highlight the fact that the Commission ‘enforces’ non-communication more vigorously than other sources of non-compliance. More importantly though, Hartlapp and Falkner (2009) find that infringement procedures were initiated in only 60% of the cases found to be in breach of EU law in their study, re-affirming the argument that infringement proceedings do not capture the actual level of non-compliance.


\(^{56}\) See Mendarinou, 1996; Mbaye, 2001; Bursens, 2002, Koutalakis, 2002; Trubek, 2002; Borzel, 2003; Sverdrup, 2004; Beach, 2005; Panke, 2006; Perkins and Neumayer, 2007.
This phenomenon may of course be attributed to the shortcomings of the Commission and the enforcement mechanisms of the EU. It is a fact that the Commission has limited resources and even more limited ability to monitor and enforce non-compliance in the member states during the application phase. As such it depends largely on whatever the states report back on transposition through established reporting mechanisms, which should account for the disproportionate follow-up on non-communications (since detection is easier). Infringement can be established with a simple yes or no, while assessing the correctness of notified measures requires more resources from the Commission and, is thus, more difficult. Still, states fail to report measures, knowing that the Commission will easily detect and disproportionately follow-up with enforcement. This exemplifies the element of compliance that is most important for this study, the lack of conformity with EU norms.

The Commission also depends on citizens, interest groups, and companies to use the complaint procedure to ring the ‘fire-alarm’ in cases of bad application and non-conformity. In fact, out of 29,045 total detected cases of non-compliance for 1996-2007, 47% of them came from complaints, while 38% came from non-communication, and only 14% were a result of the Commission’s own initiative. Complaints, the biggest source for detecting infringements, are highly biased and therefore lead to highly unbalanced opening of infringement proceedings. Also, they are more likely to come in the post-transposition stages (after non-communication), and as such, they likely skew the true infringements numbers in member states.

The distribution of total complaints, as shown in Figure 6-3, seems to verify theories pertaining to degrees of societal activism (Eder and Kousis 2001), and that southern societies display a certain degree of distrust of their state institutions and therefore resort to the EU for assistance (Pridham and Cini, 1994). However, if one refers to the following Figure 6-4, the
situation changes radically. Northern states (Ireland, Luxembourg) seem to complain more, and in fact three of the best performers of the EU (Finland, Denmark, Austria have higher complaints per capita than the worst performers (Italy, France, Spain). The assumption is only verified in the case of Greece, which seems to be the only exception.

Figure 6-3. Total number of complaints by Member State, 1998-2007.

Figure 6-4. Total number of complaints per capita, 1998-2007.

Nevertheless, complaints, the major way the Commission detects bad application and non-conformity does not seem to coincide with neither transposition nor infringement records. More to the point, complaints unusually influence Commission follow-up on infringements, as such infringements are a biased toll with which to measure non-compliance.
Further complicating the reliability of infringements as a measure of compliance is the odd practice by the Commission to change counting rules, eliminate categories altogether for years and then bring them back in its reports. For instance, complaints were reported from 1982-1991, then lumped into a category that doesn’t signify whether it is a complaint or not from 1992-1997, and then in 1998 complaints reappear as a category with the addition of own investigations and non-communication (Borzel, 2001). This makes the use of pre-1998 data highly unreliable, especially for infringement data. For example infringements by state and sector were only reported for 1988-1992, while since then infringements have been reported per member state or per sector, making cross country comparisons in the same sector of policy practically impossible.57

6.4 The Dependent Variable: Transposition

These issues with incomplete and inconsistent data are not unique to infringements though, transpositions suffer the same problems, though not to the same extent. The Annual Reports on Monitoring the Application of Community Law provide a separate type of data reporting on progress in notification of measures implementing directives (transposition).58 The data is consistent when it comes to years 2002-2009 with only a few changes needed as the Commission switched the columns to rows from 2002-2004. The situation worsens when it comes to 2001 and earlier as the Commission added more details in the environmental sub-sectors and introduced new sectors in 2001 such as Fisheries and Trade (which do not exist in 2002-2009, at least not in the way reported in 2001). Fisheries and Trade dare also absent prior to 2000, while the remaining data and subsectors remain the same as in 2001.

57 Requests for original datasets to extract per state and per sector data to both the Commission Secretariat and Environment DG remain unanswered for 6 months now and counting.
58 Since 2000 the same data are reported six times a year on the Secretariat-General’s website: http://ec.europa.eu/community_law/directives/archmme_en.htm.
More importantly, as Hartlapp and Falkner (2009) argue, there are several issues with using transposition data as an indicator of compliance. First, the date of notification may differ from the date of actual transposition. This should not be an alarming issue as states may complement their early transposition with additional measures. Some researchers have even attempted to complement notification data with national legislative sources (see Mastenbroek, 2003; Kaeding, 2006), however utilizing an understanding of compliance as conformity as in by this study makes this unnecessary, as a state’s notification of implementing measures is enough to designate compliance.

A more important but equally less problematic issue with transpositions as indicators of compliance is that the data do not contain an official statement differentiating between ‘timely’ and ‘correct’ transposition (Hartlapp and Falkner, 2009). The issue here is that data do not provide any information on whether the timely notification of measures implementing a directive, are the correct measures. To worry about correctness though is to introduce the same selection bias to the data as occurs when relying on the Commission’s data on infringement proceedings, as explained earlier. Verification of the correctness of measures lays in the hands of the Commission, and given its limited expertise and resources the Commission may not pursue this goal to the fullest, same as with infringements. In fact, Hartlapp and Falkner (2009, p. 295) find that the Commission answered incorrect transposition by initiating an infringement proceeding just half of the time (51% in the cases of their study).

Keeping in mind these limitations, this study does not attempt to answer questions of correctness. Yet, as argued earlier and in other parts of this study, transposition timeliness depends heavily on the individual characteristics of each member state and the politics involved in transposing EU legislation to national law. The transposition stage is where the states are more
likely to shirk and policy drifts occur, while it is also the easiest type of infringement to detect by
the Commission and the type of infringement the Commission is almost certain to react to with
infringement proceedings. Oddly enough, this reality should be enough to deter states from non-
notification and in fact it should lead states to always notify measures implementing directives
even if they are the incorrect ones.\textsuperscript{59} However, this ‘moral hazard’ does not explain why states
choose to disregard expected detection and why they do so at an average of 61\% for the 1998-
2007 time period (as per the percent of infringement proceedings initiated for non-
communication).

It seems more likely that states are wary of ‘lying’ in their reports, even if the probability
of being caught is less than the probability of facing the sharp end of the Commission’s ‘stick’
for non-communication. This alludes to the influence of voluntary and involuntary mechanisms
behind the decision to not transpose a directive on time (in defiance of certain detection);
something in line with compliance as ‘conformity’ and should indicate that transposition rates
are an adequate indicator of non-compliance regardless of the correctness of the measures. More
to the point, it is the argument of this study that since correctness comes after the bill becomes
law (or not), focusing on correctness as compliance misses the importance of politics, which
largely take place in the transposition stage. Hence, taking a positivist legalistic approach
(Konig, 2008), is appropriate to answer whether the state completed the task assigned to it by the
Commission or not.

The Annual Reports on Monitoring the Application of Community Law where used to
count the number of directives for which member states did not notify the Commission with
implementing measures. Cases were counted for the environment sector for 15 Member States

\textsuperscript{59} To notify measures that do not even exist in national law is impossible as member states are required to provide
standardized sheets with a paragraph of enacted national legislation corresponding to a directive’s provisions.
(MS) from 1998 until 2007. Even though the Commission has changed the way they report transposition data throughout the years (especially for years 1998-2000), it is possible to extract the data in a manner that makes all tables consistent. The issues and changes made can be found in appendix A, while the following section provides a discussion of the measures used in this study.

6.5 Operationalization of Independent Variables: International Relations

Bargaining power (H1) in the Council of Ministers is simply the votes of the member states in the Council of Ministers for the 1998-2007 period. This varies across states but is almost time invariant with a common change across member states in year 2001 that coincides with the change in the allocation of the votes in the Council of Ministers in preparation for the 2004 Central and Eastern European enlargement.

The indicator for the EU’s ability to raise governmental concern (H2) by providing information and assistance to domestic actors (which will in-turn press for action), will be measured using the Environment Directorate General program for providing operating grants to European environmental Non-Governmental Organizations (NGOs). The list of funded NGOs is available for 1998-2007 and includes only non-profit and independent environmental non-governmental organizations. These NGOs must be active at a European level to receive funding (have activities and members in at least three EU member states). This also makes the data an ideal candidate for establishing not only NGOs presence in the member states, but also whether they are active in coordinating and channeling the views of national organizations and citizens as input to the decision making process, and raising awareness while educating the citizens and

60 The legal base for the program is the LIFE+ Regulation which provides for funding of “operational activities of NGOs that are primarily active in protecting and enhancing the environment at European level and involved in the development and implementation of Community policy and legislation.”

governments about the environment. The list of funded NGOs includes, of course, several umbrella NGOs based in Brussels and active in most EU member states. Counting these NGOs as only active in Brussels would miss their ‘governmental concern’ effect on the respective governments of their members. Additionally, Belgium would represent almost all the funded NGOs from the EU (as most are based there), skewing Belgium’s ‘governmental concern’ effect and under-representing the other Member States. As such, extracting the funding data per Member State and year, required extensive archival research to make sure that all national sub-organizations are accounted for. This included visiting funded NGO member lists for each of the years in this study and manually identifying each of the national members of these supranational NGOs. For instance, in 2007 there were 30 such NGOs funded by this program, comprising of 763 national NGO members.

The indicator for whether the EU system of enforcement can be considered (by the member states) to provide for a reasonable contractual environment (H3, where non-compliance will be detected and followed-up by EU institutions) will be measured by European Court of Justice case filing at t-1. The assumption being that Member States with a Court case filed in the previous year will be less inclined to non-comply with directives in the following year. In this case, I count the number of cases filed with Court against a member state only on environmental directives. Cases were counted by country and by year of filing, rather than by year of judgment. Because this study is concerned with the effect of an opened case to next year’s compliance the filing date is important as it is closer (time-wise) to the conditions that created the non-transposition.\(^\text{62}\) However, there is no such list of cases compiled or available for 1998-2007, so the data was extracted by searching the online case-law database of the ECJ.\(^\text{63}\) Specific attention

\(^{62}\) Mbaye (2001) uses the filling date as well.  
was paid to both the filing and judgment date (and data was extracted and compiled for both), as well as the number of environmental directives included in each judgment.64

To measure the EU’s ability increase ‘governmental capacity’ (H4, by transferring information/skills and aiding monetarily in the process), annual LIFE+ project funding is used for 1998-2007. The LIFE program is the EU’s financial instrument supporting environmental and nature conservation projects throughout the EU and is comprised of three components (only two of which are of specific interest for this study). The ‘LIFE+ Environment Policy and Governance’ component co-finances technological projects that offer significant environmental benefits, for example process or efficiency improvements. This part of LIFE+ also helps projects that improve the implementation of EU environmental legislation, that build the environmental policy knowledge base, and that develop environmental information sources through monitoring. The ‘LIFE+ Information and Communication’ program co-finances projects that spread information about environmental issues, such as climate change and conservation. This strand of LIFE+ can also support environmental awareness and training campaigns. As such, the LIFE+ project is a direct measure of the EU’s ability (or lack thereof) to increase governmental capacity by transferring information and skills, while aiding monetarily in the implementation of EU legislation. Unfortunately, the data is not readily available at the LIFE+ project database for all Member States per year in a tabular format. Hence, the data was extracted per member state in the predefined period (1998-2007)65 for both LIFE+ components and represents the count of LIFE+ projects in the member states.

64 It frequently happened that the ECJ delivered a judgment on several directives with one case against a member state.
Finally, the indicator for whether member state publics are favorable toward EU environmental policy-making (H5, as opposed to just by their own government) is measured using the European Commission’s “Standard Eurobarometer” survey\textsuperscript{66} for the 15 member states examined by this study, from 1998 until 2007. The survey instrument used to get at favorable to EU environmental policy publics is QA20a for 2007 (see Appendix B), which reads out a list of 21 policy areas (from crime to housing to protecting the environment) to the 1000 per state respondents and asks (for each of the areas), if people think that decisions should be made by their own government, or made jointly within the European Union? The procedures and issues with data extraction are also discussed in Appendix B. All the raw datasets and survey instruments are available through the Inter-University Consortium for Political Science Research (ICPSR).\textsuperscript{67}

\textbf{6.6 Operationalization of Independent Variables: Regulatory Federalism}

The existence of active environmental groups in the member states (H6), must not only include the number of groups in each state for the 1998-2007 period, but it must also indicate whether those groups are truly active in the domestic arena. One could use environmental groups registered with the Commission as a source but that does not mean they are necessarily active in national politics. Another source could be the funded NGOs under the Commission’s LIFE+ program but except for the issues of multi-colinearity with H2 above, it still does not ensure those groups are active in national politics as per definition they must have activities and members in at least three member states. Thus, the best way to measure this variable is the use of complaints to the Commission for the environment sector (by state) for the 1998-2007 period.

\textsuperscript{66} Each survey consists in approximately 1000 face-to-face interviews per Member State (except Germany: 1500, Luxembourg: 600, United Kingdom 1300 including 300 in Northern Ireland). Conducted between 2 and 5 times per year, with reports published twice yearly. Available at: \url{http://ec.europa.eu/public_opinion/standard_en.htm}.

\textsuperscript{67} Available online at: \url{http://www.icpsr.umich.edu/cocoon/ICPSR/STUDY/23368.xml}. 

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Even though the indicator is somewhat crude and there is no way to control for complaints coming from other sources, it is reasonable to assume that active Environmental NGOs will use this venue more than other pressure groups (businesses and private citizens).

Membership in the European Parliament’s Environment, Public Health, and Food Safety committee (H7) is measured using the ENVI committee member’s register for 1997-2008. However, there is no one register or member’s list for the ENVI committee for these years. As such multiple sources and methods were used. The members for the 6th parliamentary term (2004-2009) are readily available through the European Parliament (EP). The members for the 5th parliamentary terms where located in the ENVI’s activity report for 1999-2004. Locating the ENVI committee members for the 4th parliamentary term proved more difficult due to the unavailability of such a list. To this end, extensive research was conducted in the archives of the European Parliament. This included looking up all 729 Members of the European Parliament (MEP) listed for the 4th parliamentary term, and verifying ENVI committee membership. Of course, specific attention was paid to dates of membership as this study requires only those MEPS that served on the ENVI committee for 1998-2007. However, the European Parliament does not have the same number of MEPS for the three parliamentary terms in this study due to consecutive new member state accessions and Treaty revisions. Additionally, the available seats on the ENVI committee are limited. As such any new member states will affect not only the number of MEPS, but also the composition of the ENVI committee (as with the 2004 Central and Eastern European enlargement). For these reasons the number of ENVI committee members per

member state was expressed as the ratio of ENVI members over the number of total MEPs for each Member State, per year.

The indicator for salience (H8) is measured using the European Commission’s “Standard Eurobarometer” survey\(^\text{72}\) for the 15 member states, examined by this study, from 1998 until 2007. The survey instrument used to measure salience is QA6a for 2007 (see Appendix B), which reads out a list of 14 policy areas (from crime to housing to the environment) to the 1000 per state respondents and asks them to choose two of the most important issues facing their country. The procedures and issues with data extraction are also discussed in Appendix B. All the raw datasets and survey instruments are available through the Inter-University Consortium for Political Science Research (ICPSR).\(^\text{73}\)

The indicator for existence of special interest political parties (H9) in Member states is the number of seats won by “Green” parties in Member State parliaments for 1998-2007.\(^\text{74}\) However, several of the states in this study had elections in 2007 (while the aforementioned data are up to 2006). As such, an additional source was consulted for green party seats in national parliaments\(^\text{75}\) for 2007 (the last year of this study). The seats won were expressed as the number of seats over the total number of seats available in each state parliament because of the difference in the number of seats between member state parliaments (and in some cases the difference in total seats per national election). A final issue occurred with some of the Scandinavian leftist/green coalition parties (especially for Denmark). Denmark has had one MEP associate with the “Greens” of the European Parliament for 1998-2007, and Danish left/green national

\(^{72}\) Each survey consists in approximately 1000 face-to-face interviews per Member State (except Germany: 1500, Luxembourg: 600, United Kingdom 1300 including 300 in Northern Ireland). Conducted between 2 and 5 times per year, with reports published twice yearly. Available at: Hhttp://ec.europa.eu/public_opinion/standard_en.htm.

\(^{73}\) Available online at: Hhttp://www.icpsr.umich.edu/cocoon/ICPSR/study/23368.xml.

\(^{74}\) Available online at: Hhttp://www.europeangreens.org/cms/default/dok/167/167260.national_election_results_since_1979@en.htm

\(^{75}\) Available online at: Hhttp://psephos.adam-carr.net/
parties share the same ideals as European Greens. Nonetheless, the “greens” of Denmark (De Gronne) failed to gain representation in the Danish Folketing for the years of this study; as such no “green” party was calculated for Denmark (as individual influence and seats could not be determined).

The indicator for member state overall commitment to the environment (H10) will be measured with Organization for Economic Co-Operation and Development (OECD) data on government expenditure by function. The amount of government expenditures for environmental protection is available for 1998 to 2007, and the data available is in millions of Euro for all countries but Denmark, Sweden, and the UK, for which the amounts reported are in national currencies (of course these were standardized into Euros).

The indicator for industry clout (H11) is measured with Organization for Economic Co-Operation and Development (OECD) data on industry (including energy) employment as a percent of total employment for each state for 1998-2007. The indicator for a member state’s need for regulation (H12) is measured by the Greenhouse gas emissions for each state for the 1998-2007 period. These are data on greenhouse gas emissions, sent by countries to the United Nations Framework Convention on Climate Change (UNFCCC) and the EU Greenhouse Gas Monitoring Mechanism.

To gauge whether the industry in each member state is environmentally conscious and collaborates with government authorities in environmental protection (H13), EMAS (Eco-Management and Audit Scheme) data is used, which measures the number of organizations with

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78 Data available online at: Hhttp://stats.oecd.org/Index.aspx?DataSetCode=SNA_TABLE3 . The data was standardized for U.S. S, constant prices, constant PPPs, OECD base year.
a registered environmental management system. The data is readily available on the Eurostat website for the 1998-2007 period. The EMAS is a voluntarily environmental management system implemented by companies and other organizations from all sectors of economic activity including local authorities, to evaluate, report on, and improve their environmental performance. However, powerful economic interests may press for less legislation and enforcement especially in countries where industry is advanced and comprises of a big portion of that state’s GDP.

Staffing levels (H14) are an important indicator of a government’s capacity to transpose legislation. The indicator for staffing levels (H14) is measured with OECD data on total compensation of environmental employees paid by the government and these amounts are available for 1998 to 2007.

To measure the existence of a cozy regulatory efficiency (H15) in policy making the World Bank’s “World Governance Indicators” database is used. This indicator is defined as measuring perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. The data is available from 1996-2008 but not available for 1999, so a linear interpolation of the values for that year was necessary. For a robustness check, data from the International Country Risk Guide on “Bureaucratic Quality” where also extracted and compiled for the 1998-2007 period.

Finally, the existence of corruption (H16) should have a negative effect on compliance. In some cases, corruption is the ‘ugly face’ of bureaucratic discretion as discretion leaves bureaucrats with ample time for bribes. The EU system of implementation is considerably decentralized and discretion (as to implementing measures) is the modus operandi for national

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81 ibid


83 Available online at: [http://www.prisgroup.com](http://www.prisgroup.com) through LexisNexis
bureaucracies. The indicator for corruption will be the Transparency International’s “Corruption Perception Index” for the 1998-2007 period\(^{84}\) (a higher level indicates a less corrupt state). For a robustness check, data was also extracted and compiled on the “control of corruption” from the World Bank’s “World Governance Indicators.” This indicator is defined as measuring perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.\(^{85}\)

### 6.7 Econometric Models

The choice of estimation method is dictated by the nature of the measure used for non-compliance \((y\), the dependent variable in the empirical model\), which is the number of directives for which a state has not notified the EU Commission with measures implementing them during each year in the study period. That is, non-compliance is a count variable that takes on non-negative and discrete values and with possible zero outcomes for at least some members of the population (if the state has complied with all directives). This property of the non-compliance measure implies that a linear regression model \((E(y \mid x) = x\beta)\), where \(E(y \mid x)\) denotes non-compliance in the population conditional on the vector of the independent variables, \(x\), and \(\beta\) is the vector of regression coefficients) using the ordinary least squares (OLS) estimator is not well-suited, since it is possible to obtain negative predicted values for non-compliance. That is, since non-compliance is strictly positive \((y \geq 0)\) the predicted value of non-compliance in the population, \(E(y \mid x)\), should be nonnegative for all \(x\). However, if \(\hat{\beta}\) is the OLS estimated vector of regression coefficients, there will usually be values of \(x\) such that \(x\hat{\beta} < 0\), implying that the predicted value of \(y\) is negative.

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\(^{84}\) Available online at: http://www.transparency.org/policy_research/surveys_indices/cpi

\(^{85}\) Available online at http://info.worldbank.org/governance/wgi/index.asp
Hence with count data, $E(y|\mathbf{x})$ should be modeled by choosing functional forms that ensure its positivity for any value of $\mathbf{x}$ (Wooldridge, 2001). The most popular functional form is obtained by assuming that the dependent variable follows a Poisson distribution. However, the Poisson distributional assumption imposes the restriction that the conditional variance and mean of the dependent variable are equal, which is more than often violated in empirical applications. As Cameron and Trivedi (2005) demonstrate, violation of this assumption leads to overestimating the statistical significance of the explanatory variables in the Poisson regression. To handle this problem several techniques have been developed to obtain correct standard errors under Poisson regression for overdispersed (variance of dependent is higher than its mean) or underdispersed data (Cameron and Trivedi, 1998, pp. 70-76) but negative binomial regression has become a standard method to deal with such kind of data (Hilbe, 2008). In this chapter, both Poisson and negative binomial models will be employed to model non-compliance in the EU, while testing for the Poisson distributional assumption.

Another distinguishable characteristic of the employed dataset is its time-series and cross-sectional dimension since this study observes 15 countries annually from 1998 to 2007. Therefore, panel data techniques should be employed in addition to accounting for the count nature of the dependent variable. These techniques allow taking advantage the cross-sectional information reflected in the differences between countries and the time-series information reflected in the changes within countries over time. Further, it is possible to control for omitted variables that differ between countries but are constant over time and for omitted variables that vary over time but are constant between countries.

However, one should keep in mind a critical distinction between two types of “panel” data, which has both theoretical and practical implication for research. The first type of these is Time
Series Cross Sectional (TSCS), otherwise known as macro-panels (Baltagi, 2008). This type of data usually involves a moderate size of \( N \) countries or units, which is fixed and not a sample of the population of countries or units, usually observed annually for a long period of time. In this sense, when someone wants to update the panel, countries are kept fixed and only years are resampled, as inferences of interest are conditional on the observed countries and one has to deal with cross-country dependence (Freedman and Peters, 1984). In contrast, Panel data (otherwise known as micro-panels), involve repeated cross-section data collected over a short period of time \( T \) for a large number of \( N \) units or countries sampled out of the total population (in some random sampling scheme), hence there is likely no issue of cross-units dependence. This is because the units or individuals in micro-panels are of no real interest as all inferences are made about the underlying sampled population of units (Beck, 2001).

The theoretical difference between TSCS and micro-panels emanates from the different econometric care they require. Asymptotics for TSCS data are in \( T \) (\( T \to \infty \) and \( N \) is fixed), which means that the number of units or countries is fixed and an asymptotic argument should be based on the time dimension. However, in some cases asymptotics can be also for large \( N \) and \( T \) (Baltagi, 2008). In contrast, all asymptotics in micro-panels are in \( N \) (\( N \to \infty \) and \( T \) is fixed) as sample sizes can be thought of as getting larger and larger (Beck, 2001). Also, with a long time-series for TSCS there is a danger of encountering issues of nonstationarity, like unit roots, structural breaks and cointegration, whereas, given that \( T \) is short for each country, micro-panels are safe from these issues (Baltagi, 2008).

As a general warning, hereafter, when this study uses “panel” it will refer to TSCS data as micro-panels and TSCS are both types of panel data. The remainder of this chapter is organized as follows: Section 2 reviews and operationalizes the hypotheses developed in Chapters 4 and 5.
In addition descriptive statistics of the developed measures are presented in this section. A review and empirical estimation of panel Poisson and negative binomial estimators is provided in Sections 3 and 4, respectively, while in Section 5 the best model that explains non-compliance is presented. Conclusions are drawn in the last section.

6.7.1 Panel Poisson Regression Model

The Poisson distribution is often used in estimating the number of occurrences of an event over a specified interval of time or space. For the number of occurrences of an event to be described as a Poisson-distributed random variable two properties must be satisfied: (1) the probability of an occurrence is the same for any two intervals of equal length and (2) the occurrence or nonoccurrence in any interval is independent of the occurrence or nonoccurrence in any other interval of time or space. The basic Poisson probability specification is (Hausman et al., 1984)

\[
f(y_{it} | \mathbf{x}_{it}) = \frac{e^{-\lambda_{it}} \lambda_{it}^{y_{it}}}{y_{it}!} . \tag{1}
\]

In this study, \( y_{it} \) denotes the number of directives a country \( i \) \( (i = 1, \ldots, N) \) did not comply with (non-compliance) in time \( t \) \( (t = 1, \ldots, T) \), \( \mathbf{x}_{it} \) is a \( k \)-dimensional vector of linearly independent variables, \( \mathbf{x}_{it} = [x_{1it}, \ldots, x_{kit}] \), that are thought to determine \( y_{it} \), \( f(y_{it} | \mathbf{x}_{it}) \) is the probability of \( y_{it} \) occurrences of non-compliance for country \( i \) at time \( t \) conditional on the vector of independent variables, and \( \lambda_{it} \) denotes the intensity or rate parameter for country \( i \) at time \( t \). The first two moments of the Poisson distribution are given by (Hausman et al., 1984):

Mean: \( E(y_{it} | \mathbf{x}_{it}) = \lambda_{it} \), \tag{2}

Variance: \( V(y_{it} | \mathbf{x}_{it}) = \lambda_{it} \). \tag{3}
This shows the equidispersion property of the Poisson distribution, namely the conditional mean is equal to the conditional variance of the distribution. As previously mentioned, in many empirical applications it is very common to find that the variance is greater than the mean, implying overdispersion in the data (see Cameron and Trivedi, 1998, pp. 97-106 for other sources of overdispersion). Hence, a test of overdispersion must be employed whenever the Poisson regression model is used and if overdispersed cluster-robust standard errors or alternative estimators such as the negative binomial regression model should be employed.

Further, by definition of the Poisson distribution it is assumed that all observations occur randomly and independently over time. The time independence property constitutes both an advantage and a disadvantage in empirical applications of micro-panels. As an advantage, if the counting process is Poisson over time $t = 1, ..., T$ with parameter $\lambda_i$, then the aggregate data over the specified period are also Poisson distributed with parameter $\lambda_i = \sum_{t=1}^{T} \lambda_{it}$ (Hausman et al., 1984), which permits development of the conditional maximum likelihood estimation method. On the other hand, the time dependence assumption is often violated in empirical applications due to serial correlation of residuals in econometric specifications. This creates the need to test for and correct if necessary for serial correlation or obtain robust standard errors.

For the parameterization of the intensity parameter $\lambda_{it}$ and to ensure that $\lambda_{it} = E(y_{it} \mid \mathbf{x}_{it}) > 0$ (since the dependent variable in our model is non-negative), the standard assumption in the literature is to use the exponential mean parameterization

$$\lambda_{it} = E(y_{it} \mid \mathbf{x}_{it}) = \exp(\mathbf{x}_{it}'\beta), \quad (4)$$

where $\mathbf{x}_{it}$, as above, is a $(1 \times k)$-dimensional vector of linearly independent variables and $\beta$ is a $(k \times 1)$ parameter vector. Equations (1) and (4) jointly define the Poisson regression
model. Note that since \( E(y_{it} \mid x_{it}) = V(y_{it} \mid x_{it}) = \exp(x_{it} \beta) \) the Poisson regression is intrinsically heteroscedastic, implying the need again to obtain robust standard errors in the estimation procedure. In what follows, several panel data estimators along with their properties for the panel Poisson regression model are presented.

6.7.2 Pooled or Population-Averaged Poisson Regression Model

The pooled Poisson estimator assumes that \( y_{it} \) is Poisson distributed with a mean given by equation (4), \( E(y_{it} \mid x_{it}) = \exp(x_{it} \beta) \), and that the observations \( y_{it} \mid x_{it} \) are independently distributed. Consequently, cross-section observations can be stacked over time and the model can be estimated using cross-sectional estimation methods. Substituting equation (4) in equation (1), the pooled Poisson regression model becomes

\[
f(y_{it} \mid x_{it}) = \frac{\exp(-\exp(x_{it} \beta)) \exp(\exp(y_{it} x_{it} \beta))}{y_{it}!},
\]

where it is implied that

\[
\ln \lambda_{it} = \ln[E(y_{it} \mid x_{it})] = \ln(e^{x_{it} \beta}) = \beta_0 + \beta_1 x_{1it} + \ldots + \beta_k x_{kit}.
\]

According to Hausman et al. (1984), the log likelihood for this Poisson specification for a sample of \( N \) countries over \( T \) time periods is given by

\[
L(\beta) = \sum_{i=1}^{N} \sum_{t=1}^{T} [y_{it}! - e^{x_{it} \beta} + y_{it} x_{it} \beta],
\]

Maximizing this likelihood function with respect to \( \beta \), we obtain the gradient (first-order conditions) and the Hessian (second-order conditions), respectively

\[
\frac{\partial L}{\partial \beta} = \sum_{i=1}^{N} \sum_{t=1}^{T} [x_{it}' (y_{it} - e^{x_{it} \beta})] = 0
\]

\[
H = \frac{\partial^2 L}{\partial \beta \partial \beta'} = \sum_{i=1}^{N} \sum_{t=1}^{T} [-x_{it}' x_{it} e^{x_{it} \beta}]',
\]
The second order conditions for a maximum at $\hat{\beta}$ (vector of estimated regression coefficients) are satisfied since the Hessian matrix $H$ is negative definite implying that the log-likelihood is globally concave. To obtain the optimal parameter estimates ($\hat{\beta}$) from the first-order condition in equation (8) an iterative algorithm must be used since the first-order condition is nonlinear in $\beta$. Hence, for the estimation of the pooled Poisson estimator the Newton-Raphson method is selected. This iteration algorithm starts with an arbitrary starting value for the vector $\hat{\beta}$ (e.g., values from an ordinary least squares estimation) and new estimates are obtained in each iteration $j = 1, \ldots, M$ from $\hat{\beta}_{j+1} = \hat{\beta}_j - [H(\hat{\beta}_j)]^{-1} g(\hat{\beta}_j)$, where $g()$ denotes the gradient in equation (8). This iteration procedure stops and the optimal parameter estimates $\hat{\beta}$ are obtained when a convergence criterion is met, e.g., $\hat{\beta}_{j+1} - \hat{\beta}_j \leq 0.0001$. Trivedi and Munkin (2009) suggest obtaining a panel-robust or cluster-robust with clustering on the country $i$ estimator of the covariance matrix. This corrects standard errors for any dependence over time within each country and for overdispersion.

A variation of this pooled Poisson estimator is the population-averaged Poisson estimator or Generalized Estimating Equations (GEE) estimator, which relaxes the assumption of independence of $y_{it}$ to allow explicitly for correlation $r_{i,t,s} = \text{Cor}[(y_{it} - e^{x_i'\beta})(y_{is} - e^{x_s'\beta})]$ among the observations and for different models of the underlying correlation such as autoregressive processes. This estimator is based on the Generalized Method of Moments (GMM) procedure (see Cameron and Trivedi, 2005, Chapter 23.2 for a more general treatment) and consistency of this estimator (as the pooled estimator) requires that the specification in equation (4) is correct. As the pooled estimator, it does not require for the data to be Poisson distributed but in that case

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86 A detailed description is provided in Cameron and Trivedi (2005), Chapter 24.5.
robust standard errors should be obtained. Both the pooled Poisson model based on the maximum likelihood method and the population-averaged model (GMM method) will be estimated and comparison of the estimates will be presented.

The pooled or population-averaged Poisson model presented in equations (5) and (6) makes the implicit assumption that the effects on non-compliance are homogeneous across countries and over time since all countries have the same intercept and slopes over the entire period. That is, within- and between-countries effects are equal. While this is a very restrictive assumption it can be tested empirically and is the most commonly-used approach for TSCS data in the political science literature because of its simplicity (Wilson and Butler, 2007). Although unobserved heterogeneity cannot be accounted for explicitly in the model and it might induce an omitted variable bias (Hsiao, 2003), the error terms of the regression can be corrected for this unaccounted heterogeneity using panel-corrected standard errors (Beck and Katz, 1995) or cluster-robust standard errors with clustering on the countries as mentioned above. One way to explicitly account for heterogeneity across countries or through time is to use a variable intercepts model that is presented in the next section.

6.7.3 Fixed Effects Poisson Regression Model

Fixed effects regression model allows controlling for omitted variables that differ between countries but are constant over time or variables that cannot be observed across countries (e.g., culture) by including country-specific dummies in the regression model. As a side effect in this case, fixed-effects models cannot be used to investigate time-invariant causes of the dependent variable. That is, independent variables that are time-invariant cannot be included in the model.\footnote{An exception is the fixed-effects negative binomial model developed by Hausman et al., (1984) in which the model can contain an overall constant and time-invariant independent variables (Greene, 2007).}
It also allows controlling for unobservable variables that change over time but not across
countries (e.g., EU regulations, treaties, etc.) by including time-specific dummies.  

To introduce heterogeneity across countries and time in the Poisson model, I consider the
following parameterization of the conditional mean presented in equation (6), which is an
extension of the parameterization used by Hausman et al. (1984) and Cameron and Trivedi
(1998, p. 279) to allow for time fixed-effects (two-way fixed effects error component model):

\[
E[y_{it} \mid x_{it}, \alpha_i, \gamma_t] = \lambda_{it} \\
= \alpha_i \gamma_t e^{x_{it} \beta}, \quad i = 1, \ldots, N, \quad t = 1, \ldots, T
\]

or equivalently,

\[
\ln(\lambda_{it}) = \ln(E[y_{it} \mid x_{it}, \alpha_i, \gamma_t]) = \delta_i + \mu_t + x_{it} \beta,
\]

where \( \delta_i = \ln(\alpha_i) \) denotes all the unobserved, omitted variables from equation (5) which are
specific to each country and are time invariant, \( \mu_t = \ln(\gamma_t) \) denotes all unobserved omitted
variables from equation (5) that are common to all countries but change over time (country-invariant variables). That is, country-invariant variables are the same for all cross-sectional units
at a given point in time but vary through time. It is this ability to control for all time-invariant
variables or country-invariant variables whose omission could bias the estimates in a typical
cross-section or time-series study that reveals the advantages of a panel. That is, the fixed-effects
model removes the effect of those time-invariant characteristics from the predictor variables (if
using only country-specific dummy variables) or of those country-invariant characteristics (when using
only time-specific dummy variables) so that the net effect of the independent variables can be assessed.

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88 It should be noted that a fixed-effects model in the literature is usually meant to include only country-specific
dummy variables. If in addition, time-specific dummies are included then the fixed-effects model is termed as a two-
way error component model.
Given the way this study treats the unobservable country-specific effect $\delta_i$ and the unobservable time-specific effect $\mu_t$, it then differentiates between fixed-effects and random-effects models. Focusing on the unobservable country-specific effect, if we treat $\delta_i$ as fixed parameters to be estimated, e.g., as coefficients of country-specific dummies in the sample, then the fixed-effects approach should be followed. In this case, an overall intercept from $x_\mu$ is excluded. Instead, if we assume that $\delta_i$ are random variables that are drawn from a distribution we have a random-effects model and an intercept is included in $x_\mu$. One important assumption of the fixed-effects model with country-specific dummies is that the data must be independent over countries for a given year. If that is the case then random-effects models which are considered in the next section might be more appropriate. The same arguments are true for the time fixed effects $\mu_t$.

Focusing on the fixed-effects model and given the small $N$ and $T$ in this study, the fixed-effects Poisson model is easily estimated (Cameron and Trivedi, 1998, pg. 280-286 and 291) by maximum likelihood or the method of moments. That is, the exponential mean specification can be re-written (10) as:

$$\ln(\lambda_{it}) = \sum_{j=1}^{N} \delta_j d_{j it} + \sum_{s=1}^{T} \mu_s D_{ist} + \beta_1 x_{i st} + ... + \beta_k x_{kit}, \quad (11)$$

Where $d_{j it}$ is a country-specific dummy variable equal to one if the $it$ th observation is for country $j$ and zero otherwise, and $D_{ist}$ is a time-specific dummy variable equal to one if the $it$ observation is for time $s$ and zero otherwise. Therefore, I can regress $y_{it}$ on $d_{1 it}, d_{2 it}, ..., d_{N it}$, $D_{1 it}, D_{2 it}, ..., D_{(T-1) it}$, and $x_{it}$, where I have dropped one time-dummy to avoid the dummy variable trap. The model in (11) can be simplified by considering only country-specific effects or
time-specific effects, which results in increased degrees of freedom. Whether country-specific
dummies or time-specific dummies should be used is not only an empirical question (can be
addressed by a joint test of the coefficients of each set of dummies) but also depends on the
nature of independent variables included in the model and the theoretical questions addressed in
each study.

Considering equation (11) with only country-specific effects, the country-specific
dummies capture all of the between-countries variation in the data and so the effects of the
independent variables $x_{it}$ capture solely within-country effects on the dependent variable (non-
compliance). This implies that any time-invariant independent variables (variables that differ
only across countries and not across time) are not identified and therefore between-countries
hypotheses cannot be tested. This problem is cited by Mbaye (2001) in choosing a model without
country-specific effects. Specifically, it is argued that cross-sectional variables test theory and if
proper theory is examined, then cross-country variance is taken into account by these cross-
sectional variables rather than the country-specific dummies. Though, a lagged dependent is
appended in the model that captures cross-country heterogeneity. Further, including country-
specific dummies has the effect of slowly-changing over time independent variables being
insignificant (Beck, 2001).

This study has several variables that are slowly-changing over time (e.g., measure for
environmental committee membership) or are purely cross-sectional (e.g., measure for
centralization). As Greene (2007) demonstrates, an estimator that allows including time-invariant
independent variables is the negative binomial fixed-effects developed by Hausman et al. (1984)

89 In this case and for TSCS data in a linear specification (not the Poisson model considered here), as Bartels (2008)
mentions, the effects of the independent variables are interpreted as: for a given country as the independent variable
varies across time by one unit, then the dependent variable changes by $\beta$ units (increases by $\beta$ if $\beta$ is positive
and decreases by $\beta$ if negative).
and is presented in a subsequent section. In this estimator, the fixed effects enter the model through the variance of the random variable (non-compliance) rather than the conditional mean function as in equation (11). This has the implication that time invariant variables can coexist with the country-specific fixed effects. However, Greene (2007) argues that the negative binomial fixed-effects of Hausman et al. (1984) is consistent in the context of a model with a heterogeneous variance but cannot conclude whether it is a consistent estimator of a model that contains a heterogeneous mean.

In the context of the present study is of particular importance to control for the effect of omitted and/or unobservable variables that capture general developments common to all member states but changing over time. Such developments include annual increases in the number of environment directives and other regulations, both of which might plausibly impact member state compliance (Borzel, 2001; and Neyer, 2004). They also include changes in the commission’s willingness to pursue infringement proceedings against member states (Hattan, 2003), developments in the European legal regime for enforcing and sanctioning noncompliance (Alter, 2000), and institutional developments such as treaty revisions and enlargement. As long as these developments affect all member states approximately equally, they can be captured with year-specific time dummies, without the need to model each factor independently. Therefore, in all empirical models that will be considered in this study a set of time-specific dummies will always be included.

**6.7.4 Random Effects Poisson Regression Model**

Random effects models allow controlling for unobserved omitted variables that are (1) constant over time but vary between countries, and/or (2) fixed between countries but vary over time. Unlike the fixed effects model, the variation across countries is assumed to be random and uncorrelated with the independent variables included in the model. An advantage of random
effects is that time-invariant variables can be included as predictors, allowing to test the effects of between-countries variables, whereas in the fixed effects model are absorbed by the country-specific dummies. The parameterization of the conditional mean presented in equation (6) for the random effects model is similar to that of the fixed-effects model:

\[
E[y_{it} | x_{it}, \alpha_i, \gamma_t] = \lambda_{it} \\
= \alpha_i e^{x_{it}\beta}, \quad i=1,...,N, \quad t=1,...,T
\]

or equivalently,

\[
\ln(\lambda_{it}) = \ln(E[y_{it} | x_{it}, \alpha_i]) = \delta_i + x_{it}\beta,
\]

where \( y_{it} \) are identically and independently distributed (iid) and Poisson distributed; \( \alpha_i \) are iid Gamma distributed with scale and shape parameters \( \theta \) (i.e., \( \alpha_i \sim \Gamma(\theta, \theta) \)) so that

\[
E(\alpha_i) = 1 \text{ and } V(\alpha_i) = 1/\theta.
\]

The joint probability density for the Poisson random effects model with gamma-distributed random effects is then given by (Cameron and Trivedi, 1998, p. 288):

\[
f(y_{i1},...,y_{iT} | \alpha_i, x_{it}) = \prod_t \frac{\lambda_{it}^{y_{it}}}{y_{it}!} \times \left( \frac{\theta}{\sum_t \lambda_{it} + \theta} \right)^{\theta} \times \left( \sum_t \lambda_{it} \right)^{-\theta} \times \frac{\left( \sum_t y_{it} + \theta \right)^{-\theta}}{\Gamma(\theta)},
\]

Where it is assumed that the random effects term \( \alpha_i \) is not correlated with the independent variables. For this distribution, the conditional mean is \( E(y_{it}) = \lambda_{it} \) and the variance is

\[
V(y_{it}) = \lambda_{it} + (\lambda_{it}^2 / \theta)
\]

which accounts for potential overdispersion in the data of the NB2 form since the variance is quadratic in the mean (Cameron and Trivedi, 1998, p. 63). This formulation also provides a testable hypothesis of the random effects versus the pooled Poisson model. Specifically, if the parameter \( 1/\theta \) is equal to zero, then the conditional mean \( E(y_{it}) = \lambda_{it} \) is equal to the conditional variance \( V(y_{it}) = \lambda_{it} \) and so the pooled Poisson model is appropriate.
In another formulation the random effects \( \delta_i \) \( (\alpha_i = e^{\delta_i}) \) can follow a normal distribution \( N(0, \sigma^2_{\delta}) \). The joint probability density is then given by:

\[
f(y_{i1}, \ldots, y_{iT} | x_i) = \int_{-\infty}^{\infty} \frac{e^{-\delta^2 / 2\sigma^2_{\delta}}}{\sigma_{\delta} \sqrt{2\pi}} \left[ \prod_{t} F(y_{it}, x_{it} \beta + \delta_i) \right] d\delta_i
\] (15)

Both equations (14) and (15) can be estimated using the method of maximum likelihood in any standard software package.

Baltagi (2008, p. 17) and Hsiao (2003, pp. 41-43) argue that it is more appropriate to use a fixed-effects model instead of a random effects model when inferences are to be drawn upon the observed units (countries in this study) that are fixed and we are not interested in extending inference to a larger population of similar countries. In contrast, the random effects model is an appropriate specification if \( N \) units or countries are randomly drawn from a large population of units or countries (\( N \) is large relative to \( T \)) and inference pertains to the population from which sample was randomly drawn. Although, in this study, the member states represent the population for the period of study, inferences can be drawn for a larger population. To assess the appropriateness of the random effects model in comparison to the fixed effects model a Hausman test should be performed (Cameron and Trivedi, 1998, p. 293).

### 6.7.5 Negative Binomial Regression Models

The negative binomial distribution is used to handle the overdispersion problem apparent in many empirical applications under the Poisson regression model. Following Hausman et al. (1984) the assumption is that non-compliance \( y_{it} \) follows a Poisson distribution with an intensity parameter \( \gamma_{it} \), where the Poisson parameter \( \gamma_{it} \) follows a gamma distribution with parameters
(\lambda_i, \theta) and specify \lambda_i = e^{x_i \delta} with \theta common both across firms and over time.\footnote{Note, that our specification differs from that of Hausman et al. (1984) since our parameter \theta is the inverse of their parameter \theta = \delta.} Then, the negative binomial distribution of \(y_{it}\) with parameters \(\lambda_i\) and \(\theta\) is given by

\[
f(y_{it} \mid x_{it}) = \frac{\Gamma(\lambda_i + y_{it})}{\Gamma(\lambda_i)\Gamma(y_{it} + 1)} \left( \frac{1}{1 + \theta} \right)^{\lambda_i} \left( \frac{\theta}{1 + \theta} \right)^{y_{it}}.
\]  

(16)

The first two moments of the negative binomial distribution are given by

Mean: \(E(y_{it} \mid x_{it}) = \lambda_i \theta\), \hspace{1cm} (17)

Variance: \(V(y_{it} \mid x_{it}) = \lambda_i \theta(1 + \theta)\). \hspace{1cm} (18)

Since \(\theta > 0\) the variance of the negative binomial always exceeds its means, thus allowing for overdispersion. The overdispersion vanishes if \(\theta \to 0\) and the negative binomial distribution converges to the Poisson distribution (in the limit) with parameter \(\lambda_i\) (Winkelmann, 1997) allowing to test for overdispersion.

The model in equation (16) presents the pooled or population-averaged negative binomial regression models and standard maximum likelihood methods (Cameron and Trivedi, 1998) can be used to estimate them. To allow for fixed and random effects, the negative binomial regression in equation (16) can be modified as follows:

\[
f(y_{it} \mid x_{it}) = \frac{\Gamma(\lambda_i + y_{it})}{\Gamma(\lambda_i)\Gamma(y_{it} + 1)} \left( \frac{1}{1 + \theta_i} \right)^{\lambda_i} \left( \frac{\theta}{1 + \theta_i} \right)^{y_{it}}.
\]  

(19)

where the dispersion parameter \(\theta_i\) accounts for country-specific effects in the fixed-effects model and for both country-specific and time-specific effects in the random effects model. Looking at within-countries effects only, the specification in equation (19) yields a negative binomial for the \(i\)th country with dispersion (variance divided by the mean) equal to \(1 + \theta_i\). That
is, we have constant dispersion within each country. For a random effects model, $\theta_i$ is allowed to vary randomly across countries by assuming that $1/(1+\theta_i)$ follows a beta distribution with parameters $(r, s)$ (Hausman et al., 1984) resulting in the following joint probability of the counts for the $i$th country

$$f(y_{it} | x_{it}) = \frac{\Gamma(r)\Gamma(s + \sum_{t=1}^{T} \lambda_{it})\Gamma(s + \sum_{t=1}^{T} y_{it})}{\Gamma(r)\Gamma(s + \sum_{t=1}^{T} \lambda_{it} + \sum_{t=1}^{T} y_{it}) \prod_{t=1}^{T} \Gamma(\lambda_{it} + y_{it}) \Gamma(y_{it} + 1)}.$$

(20)

For the fixed-effects with country-specific effects overdispersion model, the joint probability of the counts for each country is conditioned on the sum of the counts from the country, that is the observed $\sum_{t=1}^{T} y_{it}$. This yields:

$$f(y_{it} | x_{it}, \sum_{t=1}^{T} y_{it}) = \frac{\Gamma(\sum_{t=1}^{T} \lambda_{it})\Gamma(\sum_{t=1}^{T} y_{it} + 1)}{\Gamma(\sum_{t=1}^{T} \lambda_{it} + \sum_{t=1}^{T} y_{it}) \prod_{t=1}^{T} \Gamma(\lambda_{it} + y_{it}) \Gamma(y_{it} + 1)}.$$

(21)

To consider a fixed-effects with time-specific effects overdispersion model, the joint probability in equation (21) should be conditioned on the sum of counts across countries for each year, $\sum_{i=1}^{N} y_{it}$, while one can estimate a two-way fixed effects model by including time dummies in the vector of independent variables $x_{it}$, and then estimate the model in equation (21) as shown in Cameron and Trivedi (1998, p. 291).

The attractiveness of the above fixed-effects negative binomial model, where the variance of the distribution is a multiple of its mean (NB1 form), relies on the fact that time invariant variables can be estimated along with the country-specific fixed effects. Although the most common estimator is of the NB2 form, where the variance is quadratic in the mean (Cameron and Trivedi, 1998, p. 63), given that a considerable number of predictors in this study are time-invariant or slowly changing over time, the estimator in equation (21) might provide a feasible
alternative to NB2 in which time-invariant variables are not identified. However, consistency of
the NB1 estimator is ambiguous when heterogeneity in the mean of the distribution (and not in
the variance) is present (Greene, 2007, section 4.1).

6.8 Data Description

For the period 1998 to 2007 data were obtained for the fifteen member states (EU15)
resulting in 150 observations. Tables 6-1 and 6-2 present the descriptive summary statistics for
the collected dataset for each member state that conform to the operationalization of hypotheses
provided in Sections 6.5 and 6.6 of this chapter. The dependent variable (non-compliance) is
moderately overdispersed because the sample variance of $4.48^2 = 20.07$ (over time and across
countries) is over three times the sample mean of 5.63. This makes it very likely that default
standard errors for both cross-section and panel Poisson estimators will understate the true
standard errors. Therefore, it is imperative that robust standard errors are obtained.

Analyzing the results in Table 6-2 most predictors of non-compliance exhibit significant
overall variance across countries and over time. This is evident by the large standard deviation
and range (defined as the maximum minus the minimum value) of each variable. In terms of the
shape of the distribution of each variable, several variables can be approximated by a normal
distribution that has a skewness of zero and a kurtosis of three. However, most variables appear
to be mildly positively skewed since their measure of skewness is greater than zero. Of particular
importance though is each predictor’s variance between-countries (e.g., across countries) and
within countries (over time). Specifically, depending on whether a predictor is time-invariant or
not will affect the choice of the panel estimators.

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91 Usually a value of three is subtracted from the fourth moment of the normal distribution to result in a kurtosis of
zero. This convention is not followed in this study.
As expected the measure for bargaining power (CoMV) is almost time-invariant (Table 6-2) during the period of study with a common change across members states in year 2001 that coincides with the change in the allocation of the votes in the Council of Ministers. Similarly, the measure for ENVI membership (ENVI) is slowly changing over time with a common change across member states in year 2004 that coincides with the accession of 10 more countries in the EU. An exception is Luxembourg where membership in ENVI did not change for the period of study. In addition, the measures for governmental capacity (LIFE) and favorable industry climate (EMAS) were time-invariant for Luxembourg, which is justified by the small size of the country. Further, several other variables are slowly changing over time for most or all of the member states, such as the measures of contractual environment (ECJt−1), governmental capacity (LIFE), Green party membership (Green), overall commitment (EnvExp), industry clout (IndEmpl), need for regulation (Emission), corruption (Corr), and cozy regulatory efficiency (RegQual). Such enlargement and voting-system events that have common repercussions across member states, as well as changes in the legal regime for enforcing and penalizing non-compliance, justify the use of time-specific fixed effects models in the empirical specification.
<table>
<thead>
<tr>
<th>Symbol</th>
<th>Hypothesis</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoMV</td>
<td>H1</td>
<td>Council of Minister Votes (annual count)</td>
</tr>
<tr>
<td>NGOfun</td>
<td>H2</td>
<td>EU funding to Environmental NGOs per state</td>
</tr>
<tr>
<td>ECJ_{t-1}</td>
<td>H3</td>
<td>European Court of Justice case filings at t-1</td>
</tr>
<tr>
<td>LIFE</td>
<td>H4</td>
<td>EU project funding through LIFE+</td>
</tr>
<tr>
<td>EUact</td>
<td>H5</td>
<td>Standard Eurobarometer survey: should decisions be made by government, or jointly within the European Union</td>
</tr>
<tr>
<td>Complaints</td>
<td>H6</td>
<td>Complaints to the Commission for the environment sector</td>
</tr>
<tr>
<td>ENVI</td>
<td>H7</td>
<td>Ratio of ENVI members over the number of total MEPs for each state,</td>
</tr>
<tr>
<td>Salience</td>
<td>H8</td>
<td>Standard Eurobarometer survey: two of the most important issues</td>
</tr>
<tr>
<td>Green</td>
<td>H9</td>
<td>Number of seats over the total number of seats available in each state</td>
</tr>
<tr>
<td>EnvExp</td>
<td>H10</td>
<td>Government expenditure by function (Environment)</td>
</tr>
<tr>
<td>EMAS</td>
<td>H11</td>
<td>Number of EMAS organizations per population (in 1,000 persons)</td>
</tr>
<tr>
<td>IndEmpl</td>
<td>H12</td>
<td>Industry (including energy) employment as a percent of total employment</td>
</tr>
<tr>
<td>Emission</td>
<td>H13</td>
<td>Greenhouse gas emissions (UNFCCC)</td>
</tr>
<tr>
<td>Compen</td>
<td>H14</td>
<td>Total compensation of environment employees paid by the government</td>
</tr>
<tr>
<td>Corr</td>
<td>H15</td>
<td>Transparency International’s “Corruption Perception Index”</td>
</tr>
<tr>
<td>RegQual</td>
<td>H16</td>
<td>World Governance Indicators: regulatory quality</td>
</tr>
</tbody>
</table>
Table 6-2. Descriptive summary statistics of the predictors of non-compliance

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Min</th>
<th>Max</th>
<th>Skewness</th>
<th>Kyrtosis</th>
<th>Time-Invariant</th>
<th>Country-Invariant</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoMV</td>
<td>12.80</td>
<td>9.23</td>
<td>2.00</td>
<td>29.00</td>
<td>0.92</td>
<td>2.31</td>
<td>*1</td>
<td></td>
</tr>
<tr>
<td>NGOfun</td>
<td>45.93</td>
<td>30.52</td>
<td>7.00</td>
<td>157.00</td>
<td>1.19</td>
<td>4.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECJ_{t-1}</td>
<td>1.34</td>
<td>1.91</td>
<td>0.00</td>
<td>10.00</td>
<td>1.89</td>
<td>6.73</td>
<td>*2</td>
<td></td>
</tr>
<tr>
<td>LIFE</td>
<td>5.86</td>
<td>5.79</td>
<td>0.00</td>
<td>28.00</td>
<td>1.43</td>
<td>5.17</td>
<td>**3</td>
<td>**4</td>
</tr>
<tr>
<td>EUact</td>
<td>60.72</td>
<td>10.63</td>
<td>37.00</td>
<td>87.70</td>
<td>0.07</td>
<td>2.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complaints</td>
<td>75.98</td>
<td>58.13</td>
<td>4.00</td>
<td>289.00</td>
<td>1.19</td>
<td>3.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENVI</td>
<td>10.84</td>
<td>6.57</td>
<td>0.00</td>
<td>27.27</td>
<td>0.61</td>
<td>2.99</td>
<td>*5</td>
<td></td>
</tr>
<tr>
<td>Salience</td>
<td>6.12</td>
<td>5.24</td>
<td>0.00</td>
<td>29.71</td>
<td>1.71</td>
<td>6.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>3.89</td>
<td>3.47</td>
<td>0.00</td>
<td>13.60</td>
<td>0.72</td>
<td>2.65</td>
<td>*6</td>
<td></td>
</tr>
<tr>
<td>EnvExp</td>
<td>1.47</td>
<td>0.59</td>
<td>0.26</td>
<td>3.27</td>
<td>0.53</td>
<td>3.35</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>EMAS</td>
<td>0.008</td>
<td>0.01</td>
<td>0.00</td>
<td>0.045</td>
<td>1.41</td>
<td>4.00</td>
<td>*7</td>
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</tr>
<tr>
<td>IndEmpl</td>
<td>17.21</td>
<td>3.10</td>
<td>11.17</td>
<td>24.10</td>
<td>-0.03</td>
<td>2.18</td>
<td>*8</td>
<td></td>
</tr>
<tr>
<td>Emission</td>
<td>8.07</td>
<td>8.33</td>
<td>0.26</td>
<td>30.74</td>
<td>1.21</td>
<td>3.41</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Compen</td>
<td>1.57</td>
<td>1.49</td>
<td>0.27</td>
<td>6.97</td>
<td>2.78</td>
<td>10.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corr</td>
<td>7.63</td>
<td>1.56</td>
<td>4.20</td>
<td>10.00</td>
<td>-0.54</td>
<td>2.41</td>
<td>*</td>
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</tr>
<tr>
<td>RegQual</td>
<td>1.45</td>
<td>0.35</td>
<td>0.71</td>
<td>2.01</td>
<td>-0.35</td>
<td>1.90</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Time-Invariant: * almost time-invariant within each country, ** time-invariant.
Country-Invariant: ** country-invariant.

2 Slowly changing for Denmark, Finland, Netherlands, and Sweden.
3 Time-invariant for Luxembourg.
5 Slowly changing for all countries; time-invariant for Luxembourg.
6 Time-invariant for Greece and United Kingdom and slowly-changing for all countries over time.
7 Time-invariant for Luxembourg and Ireland.
8 Slowly-changing over time for all countries and decreasing monotonically over time.
To further analyze the time-invariance properties of the independent predictors, the variation of each predictor was decomposed into between-country and within-country variation and the results are presented in Table 6-3. Specifically, the between-country standard deviation for a specific variable was calculated as the standard deviation of the means for each country. That is, the mean of a variable $X$ for country $i$ was first calculated ($\bar{X}_i$) and then the standard deviation of the means was obtained. Within-country variation for a specific variable $X$ was measured as the standard deviation of the deviation from respective country’s average. In other words, the deviation of each observation for country $i$ from its over-time mean was first calculated ($X_{it} - \bar{X}_i$) and then the standard deviation of all resulting observations was obtained.

For most of the predictors, presented in Table 6-3, most of the variation is between-variation rather than within-variation. For instance, the within variation of the measure for need for regulation ($Emission$) is 0.37 while its between-variation is 8.59. Therefore, it is expected that country-specific fixed-effects estimators will not be very efficient because they rely on within variation and they might exacerbate problems of measurement error, especially for the predictors with small within variation (close to being time-invariant). Also, the country-specific fixed effects parameter estimates may differ considerably from the other estimators (e.g., pooled, time-specific, etc.) depending on the differences of within- and between-variation.

One predictor that deserves special attention is the measure for industry clout ($IndEmpl$). In theory, we should expect that as industry employment increases the effect on non-compliance should increase at an increasing rate signifying the importance of the industry sector in the total economy and therefore on policy formulation (transposition). However, this effect should reach a plateau wherein after industry employment reaches a certain point, any additional industry employment (clout) and its influence on non-compliance should level off due to elevated
sanctioning by the Commission. Conversely, non-compliance reaches its maximum level at a certain corresponding level of industry clout. To test this theory, a quadratic term of industry employment ($IndEmplSq$) will be added in the empirical specification. If the theory is valid then the coefficient of $IndEmpl$ is expected to be positive, while the effect of the quadratic $IndEmpl$ is expected to be negative. Ancillary evidence of this effect is provided in Figure 6-5, which presents the industry employment along with noncompliance during the period of study. In particular, industry employment in almost every country falls during the period of this study and this event coincides with a decrease in non-compliance, especially in the period 2003-2007.

Figure 6-5. Trends in non-compliance and Industry Employment by country during 1998-2007.
Table 6-3. Overall, between, and within variation of the predictors of non-compliance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Variation</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Min</th>
<th>Max</th>
<th>Observations</th>
</tr>
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<tbody>
<tr>
<td>CoMV</td>
<td>overall</td>
<td>12.80</td>
<td>9.23</td>
<td>2.00</td>
<td>29.00</td>
<td>NT =150</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>7.66</td>
<td>3.40</td>
<td>23.30</td>
<td>N = 15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>5.49</td>
<td>-0.50</td>
<td>18.50</td>
<td>T = 10</td>
<td></td>
</tr>
<tr>
<td>NGOfun</td>
<td>overall</td>
<td>45.93</td>
<td>30.52</td>
<td>7.00</td>
<td>157.00</td>
<td>NT =150</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>27.20</td>
<td>9.40</td>
<td>108.60</td>
<td>N = 15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>15.36</td>
<td>4.63</td>
<td>99.63</td>
<td>T = 10</td>
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</tr>
<tr>
<td>ECJ_{t-1}</td>
<td>overall</td>
<td>1.34</td>
<td>1.91</td>
<td>0.00</td>
<td>10.00</td>
<td>NT =150</td>
</tr>
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<td></td>
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<td>0.10</td>
<td>2.60</td>
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<tr>
<td></td>
<td>within</td>
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<td>-1.26</td>
<td>8.84</td>
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<td>LIFE</td>
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<td>5.79</td>
<td>0.00</td>
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</tr>
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<td></td>
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</tr>
<tr>
<td></td>
<td>within</td>
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<td>18.96</td>
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<td></td>
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<td>EUact</td>
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<td>10.63</td>
<td>37.00</td>
<td>87.75</td>
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<td></td>
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<tr>
<td></td>
<td>within</td>
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<td>86.91</td>
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<td></td>
</tr>
<tr>
<td>Complaints</td>
<td>overall</td>
<td>75.98</td>
<td>58.13</td>
<td>4.00</td>
<td>289.00</td>
<td>NT =150</td>
</tr>
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<td>172.90</td>
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<tr>
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<td>Max</td>
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<td>0.01</td>
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<td>1.04</td>
<td>2.26</td>
<td>10</td>
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<td>10.00</td>
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<td>8.49</td>
<td>10</td>
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<td>0.35</td>
<td>0.72</td>
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<td>between</td>
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<td>0.87</td>
<td>1.85</td>
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<td>within</td>
<td>0.10</td>
<td>1.11</td>
<td>1.65</td>
<td>10</td>
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### 6.9 Model Selection

In this section, a comparison between the different estimators developed in the previous sections is presented to determine the estimator that best fits the data and explains noncompliance across member states of the EU. In particular, the empirical specifications and results are first presented for the pooled and population-averaged Poisson models which serve as the benchmark in the comparison across estimators. Consequently, results from the application of panel Poisson estimators, such as time-specific and country-specific fixed effects and random effects models, are presented. Several statistical tests are then employed to select the best model for this study. Starting with the empirical specification of the pooled and population-averaged...
Poisson model and following the analysis in the previous section, the conditional mean of the Poisson distribution in equation (6) is specified as:

\[
\ln(\lambda_{it}) = \alpha + \beta_1 \text{CoMV}_{it} + \beta_2 \text{NGOfun}_{it} + \beta_3 \text{ECJ}_{it-1} + \beta_4 \text{LIFE}_{it} + \beta_5 \text{EUact}_{it} + \beta_6 \text{Complaints}_{it} + \beta_7 \text{ENVI}_{it} + \beta_8 \text{Salience}_{it} + \beta_9 \text{Green}_{it} + \beta_{10} \text{EnvExp}_{it} + \beta_{11} \text{EMAS}_{it} + \beta_{12} \text{IndEmp}_{it} + \beta_{13} \text{IndEmp}_{it}^2 + \beta_{14} \text{Emission}_{it} + \beta_{15} \text{Compen}_{it} + \beta_{16} \text{Corr}_{it} + \beta_{17} \text{RegQual}_{it}
\]

(22)

Maximum likelihood estimation of the pooled Poisson model in equation (22) is performed in STATA. To account for potential overdispersion and autocorrelation, cluster-robust standard errors are obtained with clustering on the countries. Further, to allow for a particular form of autocorrelation, the population-averaged model is estimated using the Generalized Estimating Equations (GEE) estimator. Specifically, it is assumed that the error terms in equation (22) follow an autoregressive process of order one, AR(1) since \(\text{ECJ}\) has a lag of one period.

Table 6-4 presents the results for both the pooled and population-averaged Poisson models. Both estimators provide similar results for the predictors with the magnitude and statistical significance of the estimated coefficients being similar between the two models. One difference is that the coefficient of \(\text{IndEmp}_{it}^2\) becomes significant in the population-averaged model. To assess the Poisson probability distribution assumption for the dataset a goodness of fit \(\chi^2\) test was performed for the pooled model. The hypothesis that the data are Poisson distributed is rejected at any significance level (\(\chi^2 = 224.5, p\text{-value} = 0.00\)). However, the Poisson estimator requires only that equation (22) is correctly specified to be consistent, yet it does not require that the data are actually Poisson distributed. It is essential though that robust standard errors are obtained if the data are not Poisson distributed (Cameron and Trivedi, 2009, p. 620).
Table 6-4. Estimates of Pooled and Panel Poisson regression models

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pooled Model</th>
<th>PA with AR(1)</th>
<th>Fixed Effects</th>
<th>Random Effects</th>
</tr>
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<tbody>
<tr>
<td>Bargaining power</td>
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<td></td>
<td></td>
<td></td>
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<td>(CoMV )</td>
<td>0.036***</td>
<td>0.039***</td>
<td>0.023**</td>
<td>0.061***</td>
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<td></td>
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<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Governmental concern</td>
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<td>-0.027***</td>
<td>-0.012***</td>
<td>-0.029***</td>
</tr>
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<td>(NGOfun)</td>
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<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
</tr>
<tr>
<td>Contractual environment</td>
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<td>0.057**</td>
<td>0.039**</td>
<td>0.047***</td>
</tr>
<tr>
<td>(ECJ_{t-1})</td>
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<td>(0.02)</td>
<td>(0.02)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Governmental capacity</td>
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<td>0.003</td>
<td>0.003</td>
<td>0.011**</td>
</tr>
<tr>
<td>(LIFE)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.00)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Approval of EU action</td>
<td>-0.025***</td>
<td>-0.022***</td>
<td>-0.018***</td>
<td>-0.020***</td>
</tr>
<tr>
<td>(EUact)</td>
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<td>(0.00)</td>
<td>(0.01)</td>
<td>(0.00)</td>
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<td>(Complaints)</td>
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<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
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</tr>
<tr>
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<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.02)</td>
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<tr>
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<td>(Green)</td>
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<td>(0.03)</td>
<td>(0.01)</td>
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<td>Overall commitment</td>
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<td>(0.17)</td>
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<td>Favorable industry climate</td>
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<td>-23.72***</td>
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<td>-38.59**</td>
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<td>(8.06)</td>
<td>(4.74)</td>
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<td>-0.009**</td>
<td>-0.006</td>
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<tr>
<td>(IndEmplSq)</td>
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<td>(0.00)</td>
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<td>0.071***</td>
<td>0.046***</td>
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<td>(0.02)</td>
<td>(0.01)</td>
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<td>Staffing levels</td>
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<td>(0.40)</td>
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<td>-0.204***</td>
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<tr>
<td>(Corr )</td>
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<td>(0.08)</td>
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<td>Cozy regulatory efficiency</td>
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Table 6-4. Continued

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<td>634.9</td>
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<td>791.9</td>
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</tr>
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<tr>
<td>Pseudo- $R^2$</td>
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<td>0.39</td>
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Notes: * significant at 0.10 level, ** significant at 0.05 level, *** significant at 0.01 level.

The coefficients presented are the pooled, population-averaged with AR(1) error terms, time-specific fixed effects, country-specific fixed effects, and random effects Poisson estimators, respectively.

Standard errors for all models are in parentheses. For the random effects model, standard errors were obtained through bootstrapping with 100 replications. For the population-averaged model, errors were assumed to follow an AR(1) process and robust standard errors were obtained. For the rest of the models cluster-robust standard errors were obtained with clustering on the countries.

Note that the coefficients are not interpreted as in a multiple regression model.
To account for common developments across member states and for changes in the number of applicable environmental directives that a state needs to comply with in each year, year dummies are incorporated in equation (22). This results in a time-specific fixed effects model as presented in equation (11) (without the country-specific dummies) and the results are presented in Table 6-4, where, as before, cluster-robust standard errors with clustering in the countries were obtained to account for potential overdispersion and autocorrelation in the data. Comparing the time-specific fixed effects model with the pooled and population-averaged models, it is observed that the magnitude of the estimated coefficients in the time-specific fixed effects model is lower than the other two models. In terms of statistical significance of the estimated coefficients, all three models obtain similar results with the exception of the coefficients of \(\text{IndEmp}l\) and \(\text{IndEmp}lSq\) that are both statistically significant in the time-specific fixed effects model. This supports the theory of a quadratic effect of industry clout on noncompliance.

Contrary to the pooled Poisson model, the null hypothesis that the data are Poisson distributed cannot be rejected at a 0.01 level of significance (\(\chi^2 = 131.1, \ p\text{-value} = 0.60\)) in the time-specific fixed effects model (Table 6-4). Further, to test the joint significance of the year dummies in the time-specific fixed effects model a Wald \(\chi^2\) test was performed. The null hypothesis in this test is that all coefficients of the year dummies are simultaneously equal to zero, thus they have no effect on noncompliance, and the alternative hypothesis is that at least one coefficient is statistically significantly different than zero. The results support the alternative hypothesis at any level of significance (\(\chi^2(9) = 170.5, \ p\text{-value} = 0.00\)). Therefore, the fixed effects model with time-specific effects provides a better fit than the pooled or the population-averaged Poisson models. This is evident also from the Akaike Information Criterion (AIC) and
the Bayesian Information Criterion (BIC) that are defined as follows (Cameron and Trivedi, 1998, pg. 183)

\[
AIC = -2 \ln L + k \\
BIC = -2 \ln L + \ln(N)k
\]  

(23)

where \( \ln L \) denotes the fitted log-likelihood function in each model, \( k \) the number of independent variables, and \( N \) the number of countries. Since the log-likelihood will increase as independent variables are added to a model, these criteria penalize models with larger number of independent variables. From the results in Table 6-4, the time-specific fixed effects model has a lower AIC even if it has a larger number of independent variables than the pooled model and thus provides a better fit for the data.

To account for heterogeneity across countries that is not captured by the predictors in equation (22) a country-specific fixed effects model was considered. Specifically, country dummies were incorporated in equation (22), as presented in equation (11), but the overall constant term was excluded since it is not identified. One could also append time dummies in the country-specific fixed effects model to estimate the two-way error component model of equation (11) but given the small number of observations across countries/over time (small \( N \) and \( T \)) considered in this study, it would result in a large degrees of freedom loss.

Results for the country-specific fixed effects model, estimated using the conditional maximum likelihood approach (Cameron and Trivedi, 1998, pp. 282-284) with cluster-robust standard errors, are also presented in Table 6-4. Estimates for the regression coefficients differ substantially from the estimates of the pooled and especially of the time-specific fixed effects model. This difference is accentuated for the predictors that are time-invariant for a subset of member states in the sample. For instance, the measure of favorable industry climate (EMAS) is time-invariant for Luxembourg and Ireland (Tables 6-2 and 6-3). This time-invariance, for a
subset of countries, results in the estimated coefficient of \textit{EMAS} under the country-specific fixed effects model to substantially differ than the other models. Similar results are obtained for other predictors that are almost time-invariant such as bargaining power (\textit{CoMV}) and need for regulation (\textit{Emission}).

Further, with the exception of the measure of governmental capacity (\textit{LIFE}) that becomes statistically significant since its ‘within variation’ is almost the same as its ‘between variation’ (Table 6-3), several variables that were statistically significant in the pooled and time-specific fixed effects models have become insignificant (e.g., \textit{ENVI}, \textit{EnvExp}, \textit{Emission}, and the measures for industry employment). This result is explained by the fact that these variables are slowly changing over time (Table 6-2) and so their ‘within variation’ is small (Table 6-3). As such their effect is absorbed by the county-specific effects (Beck, 2001). As Mbaye (2001) noted, since the cross-sectional variables test theory, and if proper theory is examined, then cross-country variance is taken into account by the cross-sectional variables. This is evident in this study by the Wald $\chi^2$ for the country-specific fixed effects model that tests the null hypothesis that all regression coefficients are simultaneously equal to zero. From Table 6-4, it is observed that the $\chi^2$ test statistic is approximately equal to zero suggesting that the country-specific fixed effects model does not provide a good fit for the data ($\chi^2(17) \approx 0$, \textit{p}-value = 0.99) and thus most cross-sectional variation has been accounted for by the independent variables included in the model.

Finally, in the last column of Table 6-4 the results for the random effects model as specified in equation (14) are presented, where standard errors for the estimated coefficients were obtained through bootstrapping with 100 replications. It should be mentioned that a random effects model might not be appropriate for our data since no random sample was drawn to select
the countries in this study, instead the fifteen member states represent the population for the period of study. The estimated coefficients from the random effects model are similar to the ones obtained from the pooled model but several coefficients have become insignificant. To test the random effects specification versus the pooled model a likelihood ratio test is employed, noting that the random effects specification in equation (14) becomes the pooled estimator if the parameter \(1/\theta\) is equal to zero. Specifically, the null and alternative hypothesis are:

\[
H_0 : \alpha = \frac{1}{\theta} = 0, \quad \text{pooled model does not differ than the random effects model}
\]

\[
H_a : \alpha \neq 0, \quad \text{random effects model is a better specification}
\]

To perform this hypothesis test, the log likelihood of each model is obtained to form the likelihood ratio:

\[
LR = 2(\ln L_{\text{random}} - \ln L_{\text{pooled}}),
\]

where \(LR\) stands for likelihood ratio and follows a \(\chi^2\) distribution with one degree of freedom since one parameter \((1/\theta)\) is examined. \(\ln L_{\text{pooled}}\) is the log-likelihood of the pooled model, and \(\ln L_{\text{random}}\) is the log-likelihood of the random effects model. From equation (24) and Table 6-4, we obtain that \(LR = \chi^2(1) = 2(-357.2 + 360.9) = 7.4\). Therefore, the null hypothesis is rejected and thus the random effects model is a better specification than the pooled model, since the observed \(\chi^2(1) = 7.4\) is greater than the critical \(\chi^2_{0.05}(1) = 3.84\) at a 0.05 level of significance (obtained from a chi-square table). This result was expected since the random effects model accounts for both country-specific and time-specific effects, and as shown earlier the time-specific fixed effects model was a better specification than the pooled model.

To compare the random effects model with the time-specific fixed effects model that provides the best fit for the data in this study (according to AIC), the random effects model was
estimated with year dummies (results are presented in Appendix D) and was then compared with
the time-specific fixed effects model using a likelihood ratio test. Specifically, the likelihood
ratio test was \( LR = 2(\ln L_{\text{random}} - \ln L_{\text{timeFE}}) \), where from Appendix D \( \ln L_{\text{random}} = -303.47777 \) and
from Table 6-4 \( \ln L_{\text{timeFE}} = -303.47778 \), resulting in \( LR = \chi^2(1) \approx 0 \). Therefore, the null
hypothesis that the time-specific fixed effects model is a better specification than the random
effects cannot be rejected.

In conclusion, sufficient evidence was obtained to support that the time-specific fixed
effects Poisson estimator provides the best fit for the dataset of this study. To explicitly account
for potential overdispersion in our dataset the pooled and panel negative binomial estimators,
developed previously, were also obtained. The results presented in Table 6-5 are similar to those
obtained from the Poisson estimators. In particular, it is observed that all negative binomial
estimators have similar estimated coefficients and significance with the corresponding Poisson
estimators except for the estimators with country-specific fixed effects. For the latter, the
estimated coefficients of the measures for favorable industry climate (\( EMAS \)), cozy regulatory
efficiency (\( Regqual \)), and corruption (\( Corr \)) have become insignificant under the negative
binomial specification even if, as mentioned in a previous section, the negative binomial
estimator with country-specific fixed effects (as applied in this study) allows for the inclusion of
slowly changing over time or time-invariant variables. This result might suggest a possible
misspecification problem of the negative binomial estimator. According to Cameron and Trivedi
(2005, Chapters 20.2 and 20.4) the negative binomial estimator is less robust to distributional
misspecification than the Poisson. The Poisson estimator is consistent under the weak
assumption that the conditional mean is correctly specified, even if the data are not Poisson
distributed. Instead, the negative binomial estimator will be inconsistent even if the conditional
mean is correctly specified, except for the case of the NB2 model where the variance of the model is considered to be quadratic in the mean. However, in this case, time-invariant variables cannot be included in the model and slowly-changing over time independent variables might become insignificant.

Further, obtaining cluster-robust standard errors for the Poisson estimators corrects for potential problems of overdispersion and autocorrelation. To examine whether the overdispersion problem still exists in the time-specific fixed effects Poisson model that exhibited the best performance among the Poisson estimators a likelihood ratio is applied. Specifically, the following null and alternative hypotheses are examined:

\[ H_0: E(y_{it}) = Var(y_{it}), \text{ which means the negative binomial model reduces to the Poisson} \]
\[ H_a: E(y_{it}) < Var(y_{it}), \text{ which implies overdispersion} \]

To perform this hypothesis test, the log-likelihood of the time-specific fixed effects specification under the Poisson and negative binomial models is obtained to form the likelihood ratio:

\[ LR = 2(ln L_{Poisson} - ln L_{negbin}), \quad (25) \]

where \( LR \) stands for likelihood ratio and follows a \( \chi^2 \) distribution with one degree of freedom since there is only one constraint, \( L_{negbin} \) is the log-likelihood of the negative binomial time-specific fixed-effects model, and \( L_{Poisson} \) is the corresponding log-likelihood of the Poisson model. From Tables 6-4 and 6-5, we obtain that \( LR = \chi^2(1) = 2(-303.5 + 304.7) = 2.4 \).

Since the observed \( \chi^2(1) = 2.4 \) is lower than the critical \( \chi^2_{0.05}(1) = 3.84 \) at a 0.05 level of significance, the null hypothesis cannot be rejected; thereby the Poisson estimator is more suitable for the dataset considered in this study.

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Table 6-5. Estimates of Pooled and Panel Negative Binomial regression models

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pooled Model</th>
<th>PA with AR(1)</th>
<th>Fixed Effects</th>
<th>Random Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bargaining power</td>
<td>0.032***</td>
<td>0.031***</td>
<td>0.024**</td>
<td>0.056***</td>
</tr>
<tr>
<td>(CoMV)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Governmental concern</td>
<td>-0.027***</td>
<td>-0.027***</td>
<td>-0.014***</td>
<td>-0.031***</td>
</tr>
<tr>
<td>(NGOfun)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Contractual environment</td>
<td>0.075***</td>
<td>0.087***</td>
<td>0.043**</td>
<td>0.055***</td>
</tr>
<tr>
<td>(ECJ_{t-1})</td>
<td>(0.02)</td>
<td>(0.02)</td>
<td>(0.02)</td>
<td>(0.02)</td>
</tr>
<tr>
<td>Governmental capacity</td>
<td>0.002</td>
<td>-0.001</td>
<td>0.006</td>
<td>0.009</td>
</tr>
<tr>
<td>(LIFE)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.00)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Approval of EU action</td>
<td>-0.027***</td>
<td>-0.027***</td>
<td>-0.018***</td>
<td>-0.021***</td>
</tr>
<tr>
<td>(EUact)</td>
<td>(0.00)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Citizen groups</td>
<td>0.001</td>
<td>0.001</td>
<td>-0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>(Complaints)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
</tr>
<tr>
<td>ENVI membership</td>
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<td>-0.014</td>
<td>-0.006</td>
<td>0.000</td>
</tr>
<tr>
<td>(ENVI)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.03)</td>
</tr>
<tr>
<td>Salience</td>
<td>-0.051***</td>
<td>-0.045***</td>
<td>-0.028**</td>
<td>-0.056***</td>
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<tr>
<td>(Salience)</td>
<td>(0.02)</td>
<td>(0.02)</td>
<td>(0.01)</td>
<td>(0.02)</td>
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<tr>
<td>Green party membership</td>
<td>0.012</td>
<td>0.008</td>
<td>0.002</td>
<td>0.005</td>
</tr>
<tr>
<td>(Green)</td>
<td>(0.03)</td>
<td>(0.03)</td>
<td>(0.01)</td>
<td>(0.04)</td>
</tr>
<tr>
<td>Overall commitment</td>
<td>-0.552***</td>
<td>-0.556***</td>
<td>-0.240*</td>
<td>0.054</td>
</tr>
<tr>
<td>(EnvExp)</td>
<td>(0.20)</td>
<td>(0.20)</td>
<td>(0.13)</td>
<td>(0.65)</td>
</tr>
<tr>
<td>Favorable industry climate</td>
<td>-22.05***</td>
<td>-21.71***</td>
<td>-11.69**</td>
<td>-37.16</td>
</tr>
<tr>
<td>(EMAS)</td>
<td>(7.84)</td>
<td>(8.22)</td>
<td>(4.64)</td>
<td>(40.64)</td>
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<tr>
<td>Industry clout</td>
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<td>0.146</td>
<td>0.216*</td>
<td>0.401</td>
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<td>(IndEmpl)</td>
<td>(0.21)</td>
<td>(0.23)</td>
<td>(0.12)</td>
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<td>Industry clout squared</td>
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<td>-0.008</td>
<td>-0.009**</td>
<td>-0.010</td>
</tr>
<tr>
<td>(IndEmplSq)</td>
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<td>(0.01)</td>
<td>(0.00)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Need for regulation</td>
<td>0.071***</td>
<td>0.068***</td>
<td>0.050***</td>
<td>-0.066</td>
</tr>
<tr>
<td>(Emission)</td>
<td>(0.01)</td>
<td>(0.02)</td>
<td>(0.01)</td>
<td>(0.23)</td>
</tr>
<tr>
<td>Staffing levels</td>
<td>0.031</td>
<td>0.059</td>
<td>0.046</td>
<td>0.010</td>
</tr>
<tr>
<td>(Compen)</td>
<td>(0.05)</td>
<td>(0.06)</td>
<td>(0.03)</td>
<td>(1.07)</td>
</tr>
<tr>
<td>Corruption</td>
<td>-0.174**</td>
<td>-0.165*</td>
<td>-0.216***</td>
<td>-0.217</td>
</tr>
<tr>
<td>(Corr)</td>
<td>(0.09)</td>
<td>(0.09)</td>
<td>(0.06)</td>
<td>(0.17)</td>
</tr>
<tr>
<td>Cozy regulatory efficiency</td>
<td>1.272***</td>
<td>1.161***</td>
<td>0.842***</td>
<td>1.113</td>
</tr>
<tr>
<td>(RegQual)</td>
<td>(0.44)</td>
<td>(0.42)</td>
<td>(0.31)</td>
<td>(0.91)</td>
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<tr>
<td>Variables</td>
<td>Pooled Model</td>
<td>PA with AR(1)</td>
<td>Fixed Effects Time</td>
<td>Fixed Effects Country</td>
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<td>-----------</td>
<td>--------------</td>
<td>---------------</td>
<td>-------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Year1998</td>
<td>-0.269</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(0.30)</td>
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<td></td>
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<tr>
<td>Year1999</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>(0.16)</td>
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<td></td>
<td></td>
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<tr>
<td>Year2000</td>
<td>-0.364**</td>
<td></td>
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<tr>
<td></td>
<td>(0.17)</td>
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<tr>
<td>Year2003</td>
<td>-0.599***</td>
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<td>(0.16)</td>
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<tr>
<td>Year2004</td>
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<td>Year2005</td>
<td>-0.536***</td>
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<td></td>
<td>(0.15)</td>
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<tr>
<td>Year2006</td>
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<td></td>
<td>(0.26)</td>
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<tr>
<td>Year2007</td>
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<td></td>
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<tr>
<td></td>
<td>(0.25)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Constant ((\alpha))</td>
<td>3.947*** (1.48)</td>
<td>3.910*** (1.47)</td>
<td>3.095*** (1.00)</td>
<td>2.563 (4.27)</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-353.9</td>
<td>-304.7</td>
<td>-283.4</td>
<td>-353.3</td>
</tr>
<tr>
<td>Information Criteria: AIC</td>
<td>735.9</td>
<td>639.4</td>
<td>602.8</td>
<td>746.6</td>
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<tr>
<td>BIC</td>
<td>778.2</td>
<td>684.6</td>
<td>656.9</td>
<td>806.9</td>
</tr>
</tbody>
</table>

Notes: * significant at 0.10 level, ** significant at 0.05 level, *** significant at 0.01 level.

The coefficients presented are the pooled, population-averaged with AR(1) error terms, time-specific fixed effects, country-specific fixed effects, and random effects negative binomial estimators, respectively.

Standard errors for all models are in parentheses. For the random effects and fixed effects with country-specific effects models, standard errors were obtained through bootstrapping with 100 replications. For the population-averaged model, errors were assumed to follow an AR(1) process and robust standard errors were obtained. For the rest of the models cluster-robust standard errors were obtained with clustering on the countries.

Note that the coefficients are not interpreted as in a multiple regression model.

### 6.10 Discussion and Conclusions

As per the above discussion, the time-specific fixed effects Poisson estimator provides the best fit for the dataset of this study (the results are reported in Table 6-4 above). With regard to
the hypotheses offered in this study, the results are mostly consistent with expectations. Starting off with variables under the rubric of international relations, the model begins with bargaining power. States whose bargaining power in the Council of Ministers is high actually commit more non-compliance. This result is consistent with previous findings (Mbaye, 2001), yet the hypothesized relationship under previous studies and the ‘goodness of fit’ hypothesis, that states comply better with European demands because they use their influence to craft policies closer to their preferences, is empirically disconfirmed in this study. It seems more likely, that given the qualified majority rules in the Council of Ministers, power is used to shirk compliance. Under qualified majority voting, member states will not be able to veto a decision that goes against their preferences. For this reason, member states outvoted in the Council of Ministers will have an incentive to delay implementation, which of course is in line with the argument that actors behave strategically. This suggestion goes a long way in settling the ‘goodness of fit’ debate by pointing out that ‘fitness’ does not matter in determining compliance as much as the bargaining power needed to attain it or the power to avoid it (as is shown in this study).

The second variable of the model pertains to the ability of established supranational institutions (the Commission) to affect governmental concern by providing information and resources to specific domestic actors that will in turn press for action. This study finds a statistically significant negative relationship between Commission funding for Environmental Non-Governmental Organizations (ENGOs) and compliance, indicating that increased funding to domestic NGOs is more likely to be associated with increased levels of compliance. This finding is in line with Neoliberal institutionalism’s (management approach) suggestions on the ability of institutions to enhance governmental concern by enhancing the power of sub-national actors. As expected, this finding gives support to the ability of management mechanisms in influencing
compliance. Of course, this finding also lends support to the EU studies literature on the effect of national actors in obstructing or facilitating compliance (Duina, 1997; Haverland, 2000; Mbaye, 2001; Giuliani, 2003; Kaeding, 2006; Perkins and Neumayer, 2007; Konig and Luetgert, 2008). However, the effect of the principal (EU through the Commission) in enhancing compliance by tending to the needs of these domestic forces or recognizing their effect and using it to ensure compliance is largely neglected in the literature. As this finding suggests, regimes can increase governmental concern, and thus compliance, by doing exactly that (using domestic players).

The ability of the EU to offer a reasonable contractual environment by monitoring compliance and assuring states that cheating will be detected and punished, is found to be statistically significant, but stands contrary to the hypothesized relationship. In short, the effect of European Court of Justice (ECJ) cases against member states is found to actually increase non-compliance in the next year. This odd impact may very well be due to the operationalization of this variable, as the filling date rather than the judgment date of a case was selected. This was done or two reasons. First, the filling date is closer to the conditions that created non-compliance, and owing to the backlogs of the ECJ, it would not have been prudent to select judgment dates as those may come several years down the road and would thus influence the time-specific character of this study. Second, filling dates are expected to have a relatively bigger impact that judgment dates on non-compliance because of the reputation effect and the definitive threat of sanctions for directives states did not transpose recently, rather than the effect of a judgment that pertains to non-complied directives from several years earlier. For these two reasons it seems more likely that the indicator was operationalized correctly, rather than that the hypothesized relationship is correct. It seems more sensible to argue that, the filling of a case with the ECJ will affect next year’s transposition record negatively because states are not afraid that the case will
be judged any time soon (owing to ECJ backlogs), or because they hope to resolve the case before it truly reaches the Court, or finally, because they are simply not afraid of the Commission ‘sticks’. It may also be that (some) states are not averted to being ‘named and shamed’ by the Commission. Whatever the reason, this result shows that the Commission’s enforcement mechanisms are ineffective in decreasing future non-transposition. To be precise, states do comply more when ‘named and shamed’ (as shown by the decrease of non-compliance as the Commission moves from Reasoned Opinions to ECJ Referrals), but this does not mean that states ‘learned their lesson’ and will ‘play nice’ next year. Thus, two conclusions should be kept in mind when analyzing the EU contractual environment. First, that it is not ‘reasonable’ enough to avert future non-compliance, and second that ‘sticks’ don’t really work as a compliance instrument for next year’s compliance (in fact they increase non-compliance in the next year).

With regard to the ability of the EU to enhance governmental capacity and thus compliance, this study finds an insignificant positive relationship between EU-funded environment projects and non-compliance. It could be said that the measure of the EU’s ability to enhance governmental capacity is crude, but as argued elsewhere in this study the less environmental problems a state has to deal with, the more resources it can dedicate to other problems (if of course this is what it wants). Nevertheless, this finding fails to provide support for the ability of the EU to enhance governmental capacity. It may very well be that this management mechanism is inadequate, but it may also be that EU funding is enough to enhance the ability of environmental expenditure by the state (addressed with H10 on overall commitment below).

The final hypothesis emanating from international relations theory, on public approval of EU action on environmental policy is found to have a statistically significant negative
relationship with non-compliance. Constructivist explanations have largely been ignored in previous quantitative studies, this study finds however, that constructivism can add to our understanding of what drives non-compliance. States with publics more favorable to EU action on environmental policy are found to have an easier task in implementing EU policy since the public normatively accepts EU policy as legitimate. However, it is the public’s approval of EU action on environmental policy that this study measures and not the sentiments of the public toward the EU in general (Lampinen and Uusikyla, 1998; Mbaye, 2001; Kaeding, 2006; Perkins and Neumayer, 2007). Hence, this study offers a novel and considerable contribution to theory and empirical investigation as it is not wise to assume that states with favorable EU sentiments will invariably comply with all EU activity. The normative acceptance of EU action as legitimate is mediated by the existence of policy entrepreneurs, which may not always be effective in creating and disseminating normative understandings in other sectors of policy. Thus, even though, normative acceptance may work for the environment to increase compliance, it may not work in other sectors of policy, providing us with a possible explanation of non-compliance in other sectors.

Moving to ‘regulatory federalism’ explanations of non-compliance, this study finds that states with more active environmental groups will have more compliance, but the result is statistically insignificant. This may be due to the fact that complaints (the indicator used) are an inadequate measure of the existence of these groups but a different explanation is more plausible. As argued earlier in this chapter, complaints come later in the implementation process (when the directive is transposed and being applied or enforced). Complaints are also a heavily biased indicator of non-compliance when the dependent variable is infringement proceedings. This is
because of the way complaints are reported by the Commission (as a source of detection).\textsuperscript{92}

Given that they are the major way the Commission detects bad application and non-conformity they unusually influence Commission follow-up on infringements, and a such infringements are an unbalanced way to measure non-compliance. This result may provide support to the use of transposition rates to designate non-compliance rather than infringements, but it fails to support top-down (enforcement) theories of non-compliance.

The second ‘top-down’ influence on non-compliance coming from the regulatory federalism literature, also fails to attain statistical significance. This study expected, in line with the EU studies literature on the ‘goodness of fit’, that membership in the European Parliament’s Environment Committee (ENVI) would enhance compliance through stricter scrutiny of Commission action (using petitions and questions as a source of non-compliance detection), but also through the use of their clout in ENVI to attain more favorable results from the legislative process. This did not prove to be the case in this study. It is true, however, that the existence of differential decision making procedures (like qualified majority voting), might serve to decrease the usefulness of membership in the EP Environment Committee as a tool to control the Commissions product (directives), or as a mechanisms to control how close those products will be to the desired ones. This finding is in line with the above finding (Council of Ministers) on the inability of states to affect the regulatory outcomes of EU decision-making using its institutions and complying due the goodness of fit they pursued and attained. As such, it fails to provide support for the ‘goodness of fit’ assumption, as well as for the ability of top-down’ mechanisms to induce compliance (a result consistent with the arguments of this study).

Moving, then, to the ‘bottom-up’ influences on compliance, this study finds a highly significant negative relationship between the salience of the environmental issue and the level of

\textsuperscript{92} For more on this, please refer to section 6.3 of this chapter.
non-compliance. As hypothesized, salience does have an adverse effect on non-compliance, more so than the EU studies literature would suggest. There, the context of the policy becomes important only when there is moderate pressure on administrative styles from European requirements (Knill and Lenschow, 1998). This study finds salience to be more than a mediating factor or a secondary causal factor to the constraints created by the institutional framework in which the policy will take place. According to my argument, in cases where the environment is elevated to a crisis status by ‘interested’ political forces (public and private) then agencies will be pressured to treat the environmental issue at hand as a crisis and thus with an added degree of professionalism, hence increasing compliance. Beyond the added benefit of being the first quantitative study to statistically verify the importance of salience in determining compliance, this finding lends support to the ‘bottom-up’ camp of regulatory federalism, while it also provides evidence against the goodness of fit argument and the purported negative effect of powerful actors (industry) on environmental compliance (more on this below).

The existence of ‘green’ parties in national legislatures has a statistically insignificant effect on non-compliance (albeit a negative one). This finding, also, confirms the power of salience as a standalone variable (among the bottom-up ones) in explaining compliance under the mechanism offered in this study. Salience, does seem to need ‘change agents’ (Versluis, 2003) using their powers or their institutionalized relationships with the political principals of bureaucracies to pressure for change and compliance. It seems that the salience of an issue with the public is enough to attract the attention of politicians without the mediation of other actors, who in turn listen and pressure themselves and the administrative agencies involved in transposition to comply.
As hypothesized, the overall commitment of states to environmental regulation has a negative effect on non-compliance. A state’s commitment to environmental regulation (presumably) has a positive effect on compliance as investment in implementation and pollution abatement rises and reflects this commitment. Additionally, environmental expenditures not only show the level of commitment, but also the capacity of the state to implement such legislation. As such this finding could be shown as providing support to the EU studies literature on administrative constraints to compliance, and to international relations theories on involuntary non-compliance (Chayes and Chayes, 1993). However, a state’s conscious effort to decrease the impact of environmental problems by increasing environmental investment, and thus compliance with EU requirements, provides more direct support to the rationalist (Fearon, 1998) and ‘bottom-up’ camps.

But any increase in compliance with environmental directives from states will have a negative effect on industry. It is, thus, also expected that the industry will push for less legislation or for more non-compliance with EU directives. As hypothesized, industry clout does have a negative effect on compliance. In theory, it is expected as industry employment increases the effect on non-compliance should increase at an increasing rate signifying the importance of the industry sector in the total economy and therefore on policy formulation (transposition). However, this purported effect should reach a plateau wherein after industry employment reaches a certain point, any additional industry employment (clout) and its influence on non-compliance should level off due to elevated sanctioning by the Commission. Conversely, non-compliance reaches its maximum level at a certain corresponding level of industry clout. The findings in the statistical model are consistent with this effect. I find that industry clout has a
positive effect on non-compliance (as per the hypothesized relationship), but this effect levels off and becomes negative with higher levels of industry clout.

On a related front, states with a greater need for regulation actually comply less with environmental directives. It is true that if the environmental problem is big, then the resources need to alleviate it will also be considerable (Zito, 2000). This makes it necessary for states with a big pollution issue to invest more resources than other states, but it does not necessarily mean that states with a greater need for regulation (more pollution) will automatically invest more resources. This is because heavily polluted states will have a corresponding large industrial sector that will mobilize against environmental regulation and investment. Alternatively, given the responsiveness of regulators to various political forces, it is not surprising that the rate of compliance does not reflect the objective need for regulation. Taken together, the significance of these findings on industry clout and need for regulation, suggest that the presence of powerful interests will affect compliance with environmental directives. This lends support to both the EU studies literature on domestic adjustment costs and the roles of domestic actors, and the ‘voluntary’ camp of international relations. More importantly, they provide support to the bottom-up influences on compliance as suggested by the literature on regulatory federalism.

However, even if the negative role of domestic actors on compliance is statistically verified here and in other studies, the assumption that this role will always be negative must be problematized. Manufacturers, or industry at large, may not always be opposed to environmental policies (Wurzel, 2002). Industry may actually be favorable to environmental legislation especially in ‘green’ countries, and push for Europeanization of state environmental regulations to level the playing field with competition in other states. This study finds that when the business climate is favorable to environmental legislation then compliance with environmental directives
increases. This statistically significant relationship has never before been empirically or theoretically addressed in the literature, as such the implications to theory are considerable. Most ‘veto points’ (institutional structures that afford players with the ability to modify and block legislation) or ‘domestic politics’ understandings of compliance seem to suggest an invariably negative relationship between domestic actors and compliance as the level and amount of actor involvement will make the process slower. Especially on business opposition (Underdal, 1998; Grant et al., 2000; Weinthal and Parag, 2003; Beach, 2005; Perkins and Neumayer, 2007) the effect is almost always expected to be negative. This study suggests that we should not always assume a powerful (clout) actors’ stance as objectively true. In this case, even the industry is shown to have a positive effect on compliance with environmental directives. Even if their stance is assumed to hurt their own interests, though, industry favorable to environmental legislation will push for Europeanization of directives and more enforcement by the Commission.

Another route actors may use to block legislation is by directly influencing the state’s capacity to implement legislation using administrative agencies. Understaffed agencies will have a harder time participating in the process of transposition, and be even more susceptible to other players in the process. However, this study does not find a statistically significant relationship between the staffing levels of administrative agencies charged on the environment and levels of compliance. Connected to administrative capacity, this finding suggests that the capacity of administrations is not an important factor in determining compliance. When coupled with the above finding on the significance of governmental commitment, this finding goes against management theories of non-compliance, as it shows that compliance has little to do with administrative capacity and more to do with whether states choose to channel that capacity to environmental legislation or not.
This conclusion ties perfectly with another hypothesized relationship in this study. The existence of a cozy regulatory efficiency focus is highly correlated with non-compliance. The more states are focused on private sector development the less is they comply with environmental directives. The capacity of a state to comply with environmental directives, and bureaucratic efficiency in general, has little to do with actual compliance. It is in fact the ability of powerful interests, in focusing the efficiency of the government toward their own interest that hurts compliance. The EU studies literature has addressed this coziness under such mediating variables as veto points (Haverland, 2000), corporatism (Lampinen and Uusikyla, 1998; Mbaye, 2001; Kaeding, 2006), and the level of partisan conflict and polarization within domestic veto players (Treib, 2003; Kaeding, 2006; Konig and Luetgert, 2008).

The mere presence of actors with political clout or the other mediating variables aforementioned will not be sufficient in blocking or allowing compliance. It is actually the ‘entrance’ of these actors into a cozy relationship with the government that affects compliance, while efficiency has little to do with it. Administrations are efficient in doing what they do, and states do have the capacity to implement legislation. Regardless of the existence of veto points, powerful actors, and the degree of ‘fitness’ between European requirements, it can be argued that some states are simply focused on doing different things (that serve their preferences), and are, indeed, very efficient in doing those. In extension to this, corruption is also found to play a statistically significant positive role on non-compliance. It is true that without the existence of corruption, interests could never enter the cozy relationship mentioned above and focus bureaucratic efficiency to serve their goals.

Finally, what can be said about the relative explanatory power of the model? Given that the time-specific fixed effects Poisson estimation does not lend itself to a measure of fit such as
adjusted R-squared,\textsuperscript{93} statistical information criteria such as the Akaike information criterion (AIC) and the Bayesian information criterion (BIC) can be employed. These criteria assess the goodness of fit by assessing the explanatory power of non-linear models with reference to their log-likelihood\textsuperscript{94} (Cameron and Trivedi, 2005). Given the fact that lower AIC and BIC values are preferred, the full model offered here presents a considerably better fit than previous studies that employ the same techniques,\textsuperscript{95} however other studies have used infringements as the dependent variable, as such the comparability of the scores does not provide for a direct comparison of full model strength. One can instead try to assess ‘within’ model explanatory power, and in this respect regulatory federalism offers a stronger model than international relations, while ‘top-down’ explanations are weaker than ‘bottom-up’ ones, and voluntary explanations are stronger than involuntary ones. However, even if it was theoretically and methodologically possible to differentiate between these models the full model offered here offers the best explanation of non-compliance.\textsuperscript{96} It is an exercise in theoretical futility to separate the effect of top-down mechanisms from voluntary and international relations ones, or from bottom-up mechanisms for that matter. The full picture of compliance would be lost in theoretical differentiation. It is more likely that when images are taken together they provide the full image. As such, all theories add to the model and should not be considered in disjunctive terms.

\textsuperscript{93} Even though the technique does offer a Pseudo- $R^2$ of 0.39 for the full model. Compared to the .16 of Mbaye (2001).
\textsuperscript{94} For more information refers to section 6.9 of this chapter.
\textsuperscript{95} Perkins and Neumayer’s (2007) full model has an AIC of 1176.0 and a BIC of 1304.4, as compared to the AIC of 634.9 and a BIC of 677.1 in this study.
\textsuperscript{96} The international relations model has an AIC of 710.8 and BIC of 752.9 while the Regulatory federalism one has 658.2 and 700.3. The ‘top-down’ model has an AIC of 707.6 and BIC of 749.8 while the ‘bottom-up’ has 647.9 and 690.0. The voluntary model has an AIC of 647.8 and BIC of 690.1 while the involuntary has 716.8 and 759.02. In all cases, the full model has a lower AIC value that the individual ones, as such it is preferred.
CHAPTER 7
CONCLUSION

7.1 Introduction

The past three decades have witnessed a rapid proliferation of studies seeking to explain the implementation deficits of European Union (EU) policy. The main contributions have come from the disciplines of public administration, international relations, and comparative politics. However, the disciplinary lines we have drawn have not proved helpful in understanding and explaining the sources of non-compliance with a high degree of empirical confirmation. Ridden with problems of ambiguous and conflicting results theorists have tried to complement, fix, or expand on previously empirically disconfirmed hypotheses about the source of non-compliance. To be fair, there is a degree of overlap between disciplines, and a considerable diversity within schools of thought (Checkel, 2001; Raustalia and Slaughter, 2002), but the theoretical murkiness created by several attempts to attain empirical reliability has caused theorists to still be muddling through conflicting and divergent explanations of non-compliance that add little to our understanding and to theoretical cumulativeness.

7.2 The Unnecessary Simplification of the ‘Goodness of Fit’

The most notorious such explanation has been the ‘goodness of fit’ hypothesis. Formulated by Heritier (1995), it basically argued that EU Member States attempt to export their policy-making attributes to the EU. This of course implied that Member States will try to protect their administrative and legal traditions by shirking the implementation of EU legislation. Member States are seen as “guardians of the status quo, as the shield protecting national legal-administrative traditions” (Duina, 1997, p. 157). As a consequence governments who failed to “upload” their own policies to the EU level would try to resist during the “downloading” process, when the agreed-upon measures were to be implemented (Borzel, 2002).
However, empirical investigation of the hypothesis has been less encouraging than its promise for theoretical un-ambiguity and parsimony. Various empirically oriented researchers, focusing primarily on environmental policy, investigated the hypothesis’ empirical grounds; unfortunately the results were rather dispiriting. Knill and Lenchow (1998), in an analysis of compliance focusing exclusively ‘on the goodness of fit’ on four environmental directives in Germany and the UK found that their hypothesis was validated in three of the eight cases at hand. Similarly, Haverland (2000) analyzing the implementation of the Packaging Waste directive in Germany, the Netherlands, and the UK found that the country with the greatest misfit (the UK) adopted more successfully than the country that needed only incremental adjustments (Germany), while the latter’s record was even worse than the Dutch, despite the higher adaptation pressure for them (more incompatibility). The final blow on the hypothesis was delivered by Falkner et al. (2005), which reports a ‘failure of the misfit hypothesis’ as only 22% of their cases were in line with the hypothesis.

In this case, this study makes an important contribution. I find that states with increased levels of bargaining power in the Council of Ministers, actually comply less with environmental directives. As the argument goes, when states have the power to bargain an agreement close to their interests and situations, then those states will have no problem implementing that agreement as it is closer to their self-interest (Fearon, 1998). So, supposedly, bargaining power allows states to preempt their ‘goodness of fit’ by Europeanizing already ‘fitting’ policies. Conversely, powerless states may have a hard time bargaining agreements arrangement close to their own interests and, as such, will not comply as well or as often. The results of this study strike a blow to this relationship. Not only is goodness of fit disconfirmed by the fact that more powerful states actually have a worse implementation record (contrary to the expectation that their power would
bring goodness of fit), but also ‘fitness’ does not seem to matter in determining compliance as much as the bargaining power needed to attain it or the power to avoid it.

This result if further strengthened by another finding of this study. In line with the EU studies literature on the ‘goodness of fit’, membership in the European Parliament’s Environment Committee (ENVI) would enhance compliance through stricter scrutiny of Commission action (using petitions and questions as a source of non-compliance detection), but also through the use of state clout in the Committee to attain more favorable results from the legislative process. This also did not prove to be the case in this study. It seems more likely that, given the qualified majority rules in the Council of Ministers and European Parliament, member states will not be able to veto decisions that go against their preferences. For this reason, powerful member states outvoted in the Council of Ministers and European Parliament are better positioned to defy legislation given their relative political and economic weight in the EU system (Sverdrup, 2004). Both findings on the inability of states to affect the regulatory outcomes of EU decision-making by using its institutions and complying due the goodness of fit they pursued and supposedly attained, challenge the goodness of fit argument. In the end, it seems non-compliance has more to do with the power of the state to defy legislation rather than the ability to affect the fit of EU policies with domestic traditions.

To make matters theoretically worse, several researchers decided to complement the original hypothesis with auxiliary ones instead of scrapping it all-together. For instance, Knill and Lenschow (1998) complement the original framework by adding three more variables. They include the degree of embeddedness that national institutions experience, while the explanatory value of the policy context becomes important only in situations where the level of institutional embeddedness suggests the more ambiguous picture of moderate adaptation pressure, and it is
with this picture that such notions as policy salience become important (Knill and Lenschow, 1998: 611).

Heritier et al. (2001) also revise the original hypothesis, this time adding to the impact of pre-existing policies the dynamics of the political process. Such elements as, the stage of liberalization, the national reform capacity, and the dominant belief system or problem-solving approach, are added as the determinant of fit. However, they keep goodness of fit as a necessary (downgraded from sufficient) condition, which nonetheless does not help explain why some states chose to comply and some didn’t without the existence of those auxiliary variables. A similar strategy if followed by Borzel (2003), with her ‘push-pull’ model incorporates policy misfit (as an initial reason for non-compliance), mobilization of domestic actors pressuring for implementation, and pressure from ‘above’ where the Commission may initiate infringement proceedings, as the venues for effective implementation. However, not all cases where goodness of fit was a problem led to implementation problems.

This study makes another important contribution in this case. The salience of an issue in domestic politics has largely been neglected in the EU studies literature, with a few notable exceptions (Knill and Lenschow, 1998; Versluis, 2003). Knill and Lenschow (1998), treat salience as a secondary casual factor to the constraints created by the institutional framework in which the policy will take place. In short, it is argued that policy salience will be an insufficient explanation of what drives compliance, as the institutional framework (goodness of fit between European requirements and regulatory styles) will define whether salience will be effective or not. This study finds that issue salience, is more than a mediating factor. In cases where the environment is elevated to a crisis status by ‘interested’ political forces (public and private) then
agencies will be pressured to treat the environmental issue at hand as a crisis and thus with an added degree of professionalism, hence increasing compliance.

When taken together, two more findings in this study seem to paint the same picture about the importance of what aforementioned studies treat as mediating factors to the goodness of fit. The existence of ‘green’ parties in national legislatures has a statistically insignificant effect on non-compliance (albeit a negative one). Additionally, the existence of environmental groups using the Commission’s complaint mechanisms to induce compliance is also found to be insignificant. These findings, confirm the power of salience, even more, as a standalone variable in explaining compliance under the mechanism offered in this study. Salience does seem to need ‘change agents’ (Versluis, 2003) using their powers or their institutionalized relationships with the political principals of bureaucracies to pressure for change and compliance. It seems that the salience of an issue with the public is enough to attract the attention of politicians without the mediation of other players, who in turn listen and pressure themselves and the administrative agencies involved in transposition to comply.

In this sense it becomes evident that we need not incorporate ‘goodness of fit’ as a necessary (let alone sufficient condition) for implementation. If domestic preferences can be shown to overcome ‘fitness’ then why keep the original hypothesis in theoretical models, even as a necessary condition? One reason for this may be that it is theoretically rigorous while also being focused on empirical confirmation, however, Knill and Lenchow (1998), found that their hypothesis was validated in three of the eight cases at hand. Another reason may be that the effects of the goodness of fit cannot be adequately captured by other explanatory variables in quantitative studies. This study argues, similarly to Mastenbroek and Kaeding (2006), that the purported casual relationship between fitness and implementation is spurious, and offers a
powerful explanation of non-compliance (salience) as a factor that does not need ‘fitness’ and is not mediating to ‘fitness’. The causal effect is then in the misfit (or fit) with underlying beliefs or preferences in domestic politics rather than the fitness of directives with institutional characteristics at home.

7.3 Domestic Politics and the Return of Administrative Explanations

Theorists in the third wave of EU implementation research have moved away from the goodness of fit and focused more on domestic politics variables. Starting with Haverland (2000) variables such as veto points have been offered, arguing that government must satisfy many coalition partners and other actors who shape both the quality and speed of implementation (regardless of ‘goodness of fit’). After being almost universally regarded as invalid (Ferner and Hyman, 1998) in the early 1990s, corporatism is also back in the limelight (Lampinen and Uusikyla, 1998; Mbaye, 2001; Kaeding, 2006). As the argument goes, a high level of corporatism will have an adverse effect on the level of veto players and thus result in increased compliance (Lampinen and Uusikyla, 1998). A close and cooperative arrangement between the state and interest groups will increase compliance while an increased interest group involvement (level of pluralism) will lead to non-compliance (Konig and Luetgert, 2008). Finally, the level of partisan conflict and polarization within domestic veto players (Treib, 2003; Kaeding, 2006; Konig and Luetgert, 2008) are also hypothesized to affect compliance at the domestic level.

However, empirical investigation of the effect of veto points remains in its infancy, while also riddled with empirical ambiguity and mixed results. Some find the existence of veto players a good explanation of non-compliance (Kaeding 2006; Perkins and Neumayer 2007) while others find an insignificant negative relationship between veto players and non-compliance (i.e. the
existence of veto players increases compliance, Mbaye, 2001). Corporatism is found to be insignificant while also shown to have a negative effect on compliance (contrary to the hypothesized relationship, Mbaye, 2001), or with a positive effect on compliance (Kaeding, 2006). Pluralism and partisan conflict is shown to increase non-compliance (Konig and Luetgert 2008), while Kaeding (2006) finds a positive yet insignificant relationship.

Regardless of their empirical rigor, the theoretical insights of the third wave quantitative studies have been rather inconclusive (as was the case with most ‘misfits’). This ‘back and forth’ in empirical confirmation might have to do with comparing different fields of policy or with indicator strength, but this study offers a different explanation. Even though the importance of domestic politics has been recognized, we have missed the importance of several presumably mediating variables by focusing on standalone hypothesis as the goodness of fit. While, even if the focus is taken away from the goodness of fit we still seem to miss the exact way those domestic preferences, actor interests, and the interplay between them and the political principals of bureaucracies and the supranational principals (EU) of the state implementation effort will affect compliance.

In a way, in their attempt to gain statistical significance and theoretical rigor, even domestic politics explanations seem to have forgotten the drama of politics and the intergovernmental setting in which regulation takes place in the European Union. ‘In a federal system bureaucratic agents are pulled in multiple directions by a multitude of political principals, who in turn experience their own pressures and competing role expectations’ (Hedge et al., 1990, p. 1075). Similarly, success of political control depends on the degree of coincidence of national and sub-national preferences (Hedge and Scicchitano, 1994). As such, even though this study

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97 See also: Borzel et al. 2004; Borghetto et al. 2005
98 For a discussion on quantitative measures of corporatism refer to Kenworthy (2000).
follows the third wave of EU implementation research and its focus on domestic politics, it
affords two main criticisms pertaining to both methodological and theoretical shortcomings.

On the one hand, both qualitative and quantitative studies seem to suffer from selection
bias, as they almost invariably exclude states from the analysis. Qualitative researchers tend to
focus on countries with a bad record of compliance (see UK), or countries with supposedly good
records (see Germany), and disregard such countries as France (but see Falkner et al., 2005).
While countries such as Austria, Finland, and Sweden, which, as already shown, possess the best
compliance records on environmental policy in the EU are left out on both qualitative and
quantitative studies. This could lead to inaccurate conclusions supporting the ‘non-existence of
compliance problems’ thesis (Borzel, 2001; 2003), as spatial variation is more evident if we
include the aforementioned ‘compliers’ in environmental policy specifically. From their side,
most quantitative studies either use data from before the 1995 accession, or use data up to 2004
(see Kaeding, 2006) that exclude Austria, Finland, and Sweden from the analysis (for a review of
the literature, see Mastenbroek, 2005). The exclusion of the ‘environmental leaders’ in
quantitative studies creates a gap in the possible hypotheses, as there is much to be said about the
presence of these member states in European political institutions.

On the other hand, although the third wave of research has added considerably to our
understanding of non-compliance, most approaches are rather disjunctive than complementary to
each other. The effect of the European principals on inducing or forcing state compliance have
largely been neglected by the literature, while the challenge is to theorize how and under what
conditions domestic opposition plays a role, in a manner consistent to theory. As argued
elsewhere in this study, the EU has both federal and intergovernmental characteristics. When
research seeks to understand a state’s choice to comply by focusing only on the effect of
international/systemic pressures, it may miss the intricate interplay between systemic and domestic forces.

In this respect this study has a series of additional interesting results to offer. Results that speak both to the international relations and regulatory federalism literatures, while not also losing the important focus on compliance with EU directives and the EU studies literature. Studies have found that the structural properties of domestic politics, such as the number of veto players, have a significant impact on compliance (Lampinen and Uusikyla, 1998; Giuliani, 2003; Linos, 2006; Kaeding, 2006; Perkins and Neumayer, 2007), while others do not (Mbaye, 2001; Borzel et al., 2004; Borghetto et al., 2005), in fact some find an insignificant negative relationship between veto players and non-compliance (i.e. the existence of veto players increases compliance, Mbaye, 2001). Corporatism is found to be insignificant while also shown to have a negative effect on compliance (contrary to the hypothesized relationship, Mbaye, 2001) or with a positive effect on compliance (Kaeding, 2006).99 Pluralism and partisan conflict is shown to increase non-compliance (Konig and Luetgert, 2008), while Kaeding (2006) finds a positive yet insignificant relationship.

Focusing on the third wave of implementation research, this study finds that the existence of veto points (institutional structures that afford players with the ability to modify and block legislation) should not necessarily mean that the process of transposition becomes slower (non-compliance). Five main insights come from the theories on regulatory federalism. First, even the richest and most powerful (clout) of actors (the industry), may not always be opposed to policy that goes against their presumed interests (Wurzel, 2002). Several theorists have falsely presumed the preferences of domestic actors (Underdal, 1998; Grant et al., 2000; Weinthal and Parag, 2003; Beach, 2005; Perkins and Neumayer, 2007). This study argues that the preferences

99 For a discussion on quantitative measures of corporatism refer to Kenworthy (2000).
of actors should always be problematized as, for instance, when industry is favorable to environmental legislation then compliance with environmental directives increases in the EU case. Hence, the business climate of a state should be taken into account as the industry represents one of the stronger players.

The second insight, on the ability or mechanisms of powerful actors’ influence, is offered by the hypothesized relationships on overall commitment, industry clout and need for regulation in this study. A state’s commitment to environmental regulation is found to have a positive effect on compliance as investment in implementation and pollution abatement rises and reflects this commitment. But any increase in compliance with environmental directives from states will have a negative effect on industry. It is, thus, also expected that the industry will push for less legislation or for more non-compliance with EU directives. However, this purported effect should reach a plateau wherein after industry employment reaches a certain point, any additional industry employment (clout) and its influence on non-compliance should level off due to elevated sanctioning by the Commission. The findings in the statistical model are consistent with this effect. I find that industry clout increases non-compliance (as per the hypothesized relationship), but this effect levels off and becomes negative with higher levels of industry clout.

On a related front, states with a greater need for regulation actually comply less with environmental directives. It is true that if the environmental problem is big, then the resources need to alleviate it will also be considerable (Zito, 2000). This makes it necessary for states with a big pollution issue to invest more resources than other states, but it does not necessarily mean that states with a greater need for regulation (more pollution) will automatically invest more resources. This is because heavily polluted states will have a corresponding large industrial sector that will mobilize against environmental regulation and investment. Alternatively, given
the responsiveness of regulators to various political forces, it is not surprising that the rate of compliance does not reflect the objective need for regulation. Taken together, the significance of these findings on industry clout and need for regulation, suggest that the presence of powerful interests will affect compliance with environmental directives.

These findings are consistent with previous research on the effect of domestic actors on implementation but offer a more theoretically rigorous picture of the push-and-pull between private interests and governments, which should help to enhance the consistency of empirical results, a major problem with most studies focusing on the structural properties of domestic politics, as mentioned earlier. However, the ability of players to use veto points to stall compliance, will also depend on the receptivity of the state and its bureaucracy to behavioral modification (Wood, 1988). Hence, an additional insight is offered by the findings of this study on the interplay between administrative capacity, corruption, and the existence of cozy regulatory efficiency.

The only factors that seem to find support in most quantitative analyses in the EU studies literature are the various aspects of administrative capabilities (Mbaye, 2001; Borzel et al., 2004; Linos, 2006; Borghetto et al., 2005; Berglund et al., 2005). Bureaucratic efficiency is thought to decrease non-compliance (also Haverland and Romeijn, 2007), but Perkins and Neumayer (2007) find that efficiency has an insignificant positive effect on non-compliance. Additionally, Pridham (1994, p. 99) argues that 'the southern countries (Spain, Greece, and Italy) do have particular problems of administrative procedure and competence' while Borzel (2000) finds no ‘southern’ problem. Administrative efficiency is notoriously difficult to measure\(^\text{100}\) and the conflicting results in the literature might be due to just bad indicators. However, there may be

\(^{100}\) For a discussion of the difficulties and the inadequacy of most bureaucratic quality indicators, see Van De Walle (2005).
another explanation. As shown earlier, this study finds that when industry is favorable to environmental legislation then compliance will increase. Additionally, when industry has clout in domestic politics, compliance will decrease. This, of course, points to the existence of a cozy relationship between industry and the state.

It may be that administrations are efficient in doing what they do, and states do have the capacity to implement legislation. Regardless of the existence of veto points, and the degree of ‘fitness’ between European requirements, it can be argued that some states are simply focused on doing different things (that serve their preferences), and are, indeed, very efficient in doing those. For instance, it is true that some states (especially the poor ones) are more focused on private sector development rather than environmental protection; hence their bureaucracies will be efficient in promoting private sector development rather than environmental protection.

Even if these two goals are not necessarily mutually exclusive, the efficiency focus of the administration and its capacity is pointed toward different goals and values. It should be then more important, to argue on how administrations internalize new values than whether their structure precludes change (as with the goodness of fit argument). A possible route available to private actors may be to block legislation by directly influencing the state’s capacity to implement legislation using administrative agencies. Understaffed agencies will have a harder time participating in the process of transposition, and be even more susceptible to other players in the process. However, this study does not find a statistically significant relationship between the staffing levels of administrative agencies charged on the environment and levels of compliance. Connected to administrative capacity, this finding suggests that the capacity of administrations is not an important factor in determining compliance. When coupled with the above finding on the significance of governmental commitment, this finding shows that
compliance has little to do with administrative capacity and more to do with whether states choose to channel that capacity to environmental legislation or not.

To be concise, bureaucratic efficiency does not matter as much as whether that efficiency is focused toward environmental legislation or private sector development, which invariably helps industry. The existence of a cozy regulatory efficiency focus is highly correlated with non-compliance in the environmental sector. The more states are focused on private sector development the less is the compliance with environmental directives. The capacity of a state to comply with environmental directives and bureaucratic efficiency in general, have little to do with actual compliance, it is in fact the ability of powerful interests, in focusing the efficiency of the government toward their own interest that hurts compliance. The EU studies literature has addressed this coziness under such mediating variables as veto points (Haverland, 2000), corporatism (Lampinen and Uusikyla, 1998; Mbaye, 2001; Kaeding, 2006), and the level of partisan conflict and polarization within domestic veto players (Treib, 2003; Kaeding, 2006; König and Luetgert, 2008).

The mere presence of veto points and powerful actors utilizing them, or the other mediating variables aforementioned will not be sufficient in blocking compliance. It is actually the ‘entrance’ of these actors into a ‘cozy’ relationship with the government that affects compliance, while efficiency has little to do with it. Additionally, it is true that without the existence of corruption, interests could never enter the cozy relationship mentioned above and focus bureaucratic efficiency to serve their goals. This is because, in systems ridden with corruption, tasks are accomplished only when bureaucrats have a personal incentive to get things done. As such, corruption and cozy efficiencies go hand in hand since non-compliance produces a side-payment to bureaucrats from a much powerful and wealthy industry sector. Consistent
with this assumption, this study finds corruption to play a statistically significant positive role on non-compliance. As a modest advice to practitioners of implementation, it becomes clear that the elimination of corruption closes the door to private interests that might otherwise ‘capture’ not only the political principals of bureaucracies but also the whole regulatory efficiency focus of a state.

Finally, EU compliance is increasingly modeled along the lines of sociological institutionalism. Such studies start from the assumption that a rule will be complied with if it is deemed appropriate by the stakeholders (Mastenbroek, 2005). It is argued that compliance will not be automatic and will dependent on a process whereby the rule becomes internalized through socialization, persuasion, or learning (Finnemore and Sikkink, 1998; Checkel, 2001; Risse, 2000; Sending, 2002). This approach argues for the innate notion of the ‘culture of compliance’, which holds that member states differ in their basic proclivity to comply with EU requirements (Tallberg, 2002, p. 619; Falkner et al., 2005).

However, these propositions are not unlike most quantitative and qualitative studies. To group states according to the most dominant characteristic they exemplify is a rather deterministic approach that neglects the value of both the ‘top-down’ and ‘bottom up’ influences on compliance. To say that Greece, France or Portugal will always behave the same, regardless of the existence of ‘top-down’ mechanisms to induce compliance from the Commission (like monitoring, or enforcement), is to miss half of the explanatory power that these ‘top-down’ mechanisms offer. A typology likes this seems to suggest that any such mechanisms will be inefficient in raising governmental concern, and thus compliance, through the use of non-governmental actors (which are assumed to be absent in these countries). This study argues that both ‘top-down’ and ‘bottom up’ mechanisms will be effective in determining compliance, while
the presence of domestic actors will be the biggest qualifying factor of success in all member states, regardless of the prevailing legal culture or administrative style, or veto points. To be precise, the presence of domestic actors or their relative power to affect results can be influenced by supranational institutions as well, and not only by the domestic legal traditions and institutionalized structures.

Along the same theoretical lines, it has been argued that support for European integration is an important factor that facilitates compliance (Mbaye, 2001: public support; Linos, 2006: support by government parties), while others do not find such a relationship (Lampinen and Uusikyla, 1998). And some have even found statistically significant negative correlation between these two variables (Borzel et al., 2004). However, it can be also argued that support for the EU might not be evident in all policy domains. After all, it would take a lot of entrepreneurship to create the required linkages between policy domains to achieve normative compliance in all sectors of policy. Consequently, decisions to comply in one area must not be confused as normative acceptance of compliance in all policy areas as there is a considerable amount of linkage required to disseminate normative compliance to other policy sectors, which have actors with different interests, ideas and beliefs (Haas, 1998). Hence, this study offers a novel and considerable contribution to theory and empirical investigation as it is not wise to assume that states with favorable EU sentiments will invariably comply with all EU activity. Thus, even though, normative acceptance may work for the environment to increase compliance, it may not work in other sectors of policy, providing us with a possible explanation of non-compliance in other sectors.

Theoretical and empirical investigation, it seems, is not without a sense of irony. At the same time as qualitative studies in the third wave have increasingly accepted the domestic
political dimension of compliance, the results of quantitative research seem to point back to the arguments of the early ‘a-political’ research that stressed the importance of efficient and well-coordinated administrations (Treib, 2006). However, we should not see this as a weakness. This study uses theories of regulatory federalism to illustrate a theoretically and empirically rigorous way to bring politics back into the picture of implementation studies without forgetting that influences might come from above, below, and within administrations; something which is consistent with the intergovernmental setting in which regulation takes place in the European Union.

7.4 Alarms, Patrols, Sticks, and Carrots: Enforcement Versus Management

The EU is a unique type of institution. On the one hand, the EU is not an intergovernmental organization as it has an assortment of supranational institutions, which have the power of ‘co-deciding’ with the governments of the member states in an increasing number of competencies. On the other hand, it is not a federal state either, because it neither has submitted to constitutional law nor do those institutions constitute a strong center with “supreme powers,” as the federal authorities in a federation (Sbragia, 1993), as states play an important role in decision-making. Additionally, the European Union uses an integrated system of governance characterized by a mix of ‘deterrence’ and ‘cooperation’ (Gormley, 1998). Even though in later years the focus and rhetoric has switched to more cooperative models and decentralization in the policy making process, the Commission still uses deterrence instruments by a large extent (Holzinger et al., 2006). The primary centralized enforcement mechanisms (monitoring, sanctions) are complemented with management tools seeking to enhance the capacity of states to comply and prevent involuntary no-compliance.

To address this unique type of institution, this study takes two important steps. If we conceive the issue of non-compliance in the EU as an internal political conflict between a central
authority and a set of semi-autonomous sub-units; then models of state implementation of federal policies drawn from the American context (in particular theories of regulatory federalism and bureaucratic control), may be particularly useful in explaining patterns of non-compliance in the EU context. Under this context, when regulation is centralized the focus is on uniform measures, which must be satisfied in all locations, using a great deal of top-down influence and ‘deterrence’. While, when regulation is decentralized the focus is on local choice and ‘cooperation’ leading to non-uniform implementation and enforcement of regulations. The first image focuses on central controls over agency structure, tasks and emphasizes the importance of elected officials in determining bureaucratic behavior, while the second image focuses on the nature of the policy task and the organizational characteristics of the bureaucracy (Scholz and Wei, 1986, p. 1249).

A similar adaptation exists in the international relations literature. This time, non-compliance can be voluntary (cost-avoidance) or involuntary (lacking capacity). In voluntary non-compliance, state willingness and strategic choice has been shown to be affected by such factors as the goodness of fit, veto points, domestic actor preferences (with limited success and mixed results). The major mechanism to deal with compliance problems, under this approach, is by increasing the likelihood and costs of detection through monitoring and the threat of sanctions (Tallberg, 2002). In in-voluntary non-compliance, the focus is on the domestic administrative capacity to comply, or legal ambiguity and complexity. By consequence, non-compliance is best addressed through a problem-solving strategy of capacity building, rule interpretation, and transparency, rather than through coercive enforcement from supranational institutions (Keohane, Haas, and Levy 1993; Janicke, 1990).
The similarities between theories of regulatory federalism and international relations theories are obvious. These similarities allow for the examination of the EU implementation deficit under both rubrics without necessarily making a distinction between the two from previous studies. However, this study argues that while both theories cannot, and should not, be considered in disjunctive terms, the theoretical murkiness that previous research has created must be addressed. Theorists have offered simple administrative explanations, followed by strategic choice explanations, followed by management explanations complemented with strategic choice and administrative ones. All the while, empirical results are mixed, confusing, and lend little support to the theories used to extract explanations, adding very little to theoretical and empirical cumulativeness. To address these issues, this study, first, decomposes the theoretical underpinnings of previous approaches, second, suggests the use of regulatory federalism and international relations as the guides to research, and third, it recomposes these two theories under a common empirical model focusing on the ability of multiple actors to affect compliance.

The benefit is clear. To understand what affects compliance we need to focus on mechanisms forgotten by previous researchers along the way of empirical and theoretical disconfirmation and patchwork theorizing. For instance, even though offered by international relations theories, the effects of the European principals (Commission) in capacity building or enhancing of governmental concern have been largely neglected. Similarly, even though offered from regulatory federalism, the concept of policy salience was masked under the overarching effect of adaptation pressure.

Guided by international relations theories, this study evaluates for the first time the ability of the EU to condition the behavior of member states using its enforcement and management mechanisms. This study finds a statistically significant negative relationship between
Commission funding for Environmental Non-Governmental Organizations (ENGOs) and non-compliance, indicating that increased funding to domestic NGOs is more likely to be associated with increased levels of compliance. This finding is in line with neoliberal institutionalism’s (management approach) suggestions on the ability of institutions to enhance governmental concern by enhancing the power of sub-national actors. Even though this finding can be associated with the ‘voluntary’ camp of state/actor choice, it is actually the effect of the principal (EU through the Commission) that enhances compliance by tending to the needs of these domestic forces or recognizing their effect and using it to ensure compliance.\textsuperscript{101}

The ability of the EU to offer a reasonable contractual environment by monitoring compliance and assuring states that cheating will be detected and punished, is found to be statistically significant, but the effect of European Court of Justice (ECJ) cases against member states is found to actually increase non-compliance in the next year. It seems that filling of a case with the ECJ will affect next year’s transposition record negatively because states are not afraid that the case will be judged any time soon (owing to ECJ backlogs), or because they hope to resolve the case before it truly reaches the Court, or finally, because they are simply not afraid of the Commission ‘sticks’. It may also be that (some) states are not averted to being ‘named and shamed’ by the Commission. The ineffectiveness of enforcement mechanisms to ensure future compliance should be kept in mind when assessing tools of compliance. Previous literature has neglected the importance of this mechanism and used its output as an indicator of non-compliance. For reasons mentioned elsewhere\textsuperscript{102} in this study, using an enforcement

\textsuperscript{101} The ability of the EU to enhance the capacity of states is found to be insignificant. This may very well be because this management mechanism is inadequate, but it may also be that EU funding is enough to enhance the ability of environmental expenditure by the state.

\textsuperscript{102} For more on this, please refer to Chapter 6 of this study, section 6.3.
mechanism’s proceedings in measuring compliance not only represents a statistical impossibility but it also confounds the importance of those mechanisms in ensuring compliance.

Guided by theories of regulatory federalism, the previous section illuminated the strengths and shortcomings of strategic (voluntary) explanations of non-compliance. What remains here is where we go from here. Taken together, the findings of this study lead to three conclusions. First, the reasons for non-compliance (or compliance) are multiple and complex. It is clear that variations in compliance cannot be reduced to a single explanation, even drawing from a single theory. Evidence for one or the other model hardly constitutes conclusive evidence that it is more important in explaining non-compliance. Adding several variables that represent different theoretical approaches to one full econometric model, allows for capturing the full effect of all variables when taken together rather than disjunctively. The benefit is both theoretical and empirical. Adding all approaches to a single model allows the researcher to determine whether variables capturing predictions might lose their explanatory power once variables from other theoretical approaches are included. This allows for an evaluation of whether a theoretical approach actually adds to explanatory power. If this is the case, then the approach should be thought as complementing existing theoretical approaches (rather than be thought in a disjunctive way), when attempting to gain a full understanding of the bigger picture on what determines non-compliance.

Second, given the contextual nature of several of the variables offered in this study, the results cannot and should not be taken as easily generalizable. Even though the environment sector is the highest in non-compliance and expends most of the Commission and private actor resources in monitoring and enforcement, several variables in this study are contextual. For instance, membership in the European Parliament’s Environment Committee, the salience of the
environment with state publics and the support of state publics for EU environmental policy, among others, are contextual to the environment. This should not be considered a weakness though. As argued earlier, it is a mistake to assume that support for the EU means support for EU involvement in environmental policy. Decomposing support for the EU, as encountered in other studies under the rubric of constructivism (mostly), into its contextual counterpart serves a great purpose. It may very well be that it is the support of state publics for EU involvement in a particular sector of policy that might be held accountable for non-compliance. It could be that the salience of unemployment issues leads to compliance with internal market directives. Different policy types might imply different conflicts and therefore lead to different types of implementation processes (Treib, 2006).

Nevertheless, the caution should be clear. Even though contextual explanations are abundant, cross-sectoral ones are in short supply. Most quantitative implementation studies focus on one sector, while the same is true of qualitative studies (but see Siedentopf and Ziller, 1988; Duina, 1999). It is true that all of us cover cross-sectoral data, but none has sought to test whether there are cross-sectoral differences in compliance patterns. It may very well be that non-compliance in one sector is due to compliance in another sector or even more interestingly due to non-compliance in another sector, which may or may not verify theories of ‘cultures of compliance’ (Falkner et al. 2005) for instance. Treib (2006) also argues on broadening our perspectives to cover policies that have attracted little attention, such as agricultural policy, which might not have so many implementation problems but is the sector where the biggest money games are played.

Finally, even if all quantifiably possible variables are included in this study, it does not expend all the variance in the data. To be fair, this study does provide the largest fit statistics.
ever encountered in quantitative studies, pointing to the benefits of the theoretical approach in
this study, but a considerable amount of variation remains unexplained. To start adding
variables without theoretical background would not be prudent. It may very well be that the EU
case is as unique as the theories needed to explain it. But it may also be that we need to
model the compliance deficit facing EU policy using a more theoretically integrative and
methodologically rigorous design. Mastenbroek (2005) suggests we use using a mixed-method
design, running a statistical model containing as many variables as possible, and then proceeding
to analyze any remaining variance comparing well and poorly explained cases using qualitative
methods.

But another route may also be prudent. Instead of supplementing quantitative studies with
qualitative explanations of the remaining variance, we could conduct collaborative research
projects such as the one from Falkner et al. (2005) which demonstrates that qualitative research
is not always confined to small-N settings. It is true, however, that even quantitative studies can
achieve high levels of understanding, if they stay true to the model of theoretical understanding
offered in this study. Theoretical clarity can be achieved by allowing theories to speak without
muddling them with superfluous and contradictory explanations. Empirical reliability can be
achieved if theories are allowed to see different spaces of implementation troubles. Whether
these are top or bottom, enforcement or management, they all are parts of the full picture as
implementation in the EU is an intergovernmental enterprise and it should be understood in its
own terms, always keeping in mind to look both ways.

103 This study attains a Pseudo- $R^2$ of 0.39 for the full model. Compared to the 0.16 of Mbaye (2001), and 0.26 for
Kaeding (2006). While also, the AIC and BIC values are considerably lower in this study, indicating a better fit.
Perkins and Neumayer’s (2007) full model has an AIC of 1176.0 and a BIC of 1304.4, as compared to the AIC of
634.9 and a BIC of 677.1 in this study.
APPENDIX A
TRANSPOSITION DATA, ISSUES AND CHANGES

Data extraction is straightforward when it comes to years 2001-2007 with only a few changes needed as the Commission switched the columns to rows from 2002-2004 (of course there is no way to download the data in a usable format, and it all has to happen by hand). The situation worsens when it comes to 2001 downward as the commission added more details in the environmental sub-sectors and introduced new sectors in 2001 such as Fisheries and Trade (which do not exist in 2002-2007, at least not in the way reported in 2001). Fisheries and Trade disappear again in 2000 while the remaining data and subsectors remain the same with 2001.

Following is a direct depiction of the existing chapter/sectors/subsectors in 1999 and their rearrangement to match the 2000 data (which matches the 2001 onwards data):

<table>
<thead>
<tr>
<th>Table A-1. Commission categories and sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999 Original Table</td>
</tr>
<tr>
<td><strong>Chapter</strong></td>
</tr>
<tr>
<td>Internal Market</td>
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<td></td>
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<tr>
<td>1999 Original Table</td>
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<td>---------------------</td>
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<tr>
<td><strong>Chapter</strong></td>
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</tbody>
</table>
Starting then from the Enterprise Sector for 1999 (which does not exist), it was created to match its existence in 2000 by using the subsectors as they existed in the Internal Market chapter for 1999. The subsectors of Employment and social Affairs for 2000 where: Employment legislation, Non-discrimination, Free movement of workers, and Safety and hygiene at work. These subsectors do not exist in 1999 so the data were extracted from similar subsectors under different sectors in 1999 that do not exist in 2000 (i.e. Employment and Social Affairs: Safety

Table A-2. Employment and Social Affairs: 1999 to 2000 changes

<table>
<thead>
<tr>
<th>Sector 2000</th>
<th>Subsector 2000</th>
<th>Subsectors in 1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment and Social Affairs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment legislation</td>
<td>Social Affairs</td>
<td></td>
</tr>
<tr>
<td>Safety and hygiene at work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-discrimination</td>
<td>Entry and residence</td>
<td></td>
</tr>
<tr>
<td>Free movement of workers</td>
<td>Commercial agents</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Right to vote and eligibility</td>
<td></td>
</tr>
</tbody>
</table>

Finally, the internal market chapter for 2000 includes such subsectors as: Free movement of goods, Free movement of services, Business environment, Professions regulated as regards qualifications. Which include Special freedom of movement arrangements + Liability for defective products; Financial Services; Company law + Intellectual Property + Data protection + Public procurement; and Regulated professions respectively from 1999. The matching sectors for 1998-99 and 2000-07 where of course left unchanged. The aforementioned changes were also performed for the 1998 data which has identical chapter/sectors/subsectors with 1999.

Table A-3. Internal Market: 1999 to 2000 changes

<table>
<thead>
<tr>
<th>Sector 2000</th>
<th>Subsector 2000</th>
<th>Subsectors in 1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal market</td>
<td>Free movement of goods</td>
<td>Special freedom of movement arrangements, Liability for defective products</td>
</tr>
<tr>
<td>Free movement of services</td>
<td>Financial Services</td>
<td></td>
</tr>
<tr>
<td>Business environment</td>
<td>Company law, Intellectual Property, Data protection, Public procurement</td>
<td></td>
</tr>
<tr>
<td>Professions regulated as regards qualifications</td>
<td>Regulated professions</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX B
FAVORABLE PUBLICS IN THE EUROBAROMETER SURVEY

The 2007 question reads:


Following is a table with all the relevant information for each year:

<table>
<thead>
<tr>
<th>Year</th>
<th>Question Number</th>
<th>Eurobarometer Number</th>
<th>Weblink</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>QA20a</td>
<td>68.1</td>
<td><a href="http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/23368.xml">http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/23368.xml</a></td>
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<td>2006</td>
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<tr>
<td>2005</td>
<td>QA31</td>
<td>64.2</td>
<td><a href="http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/04580.xml">http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/04580.xml</a></td>
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<tr>
<td>2004</td>
<td>Q.35</td>
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<td><a href="http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/04289.xml">http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/04289.xml</a></td>
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<tr>
<td>2003</td>
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<td>60.1</td>
<td><a href="http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/03991.xml">http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/03991.xml</a></td>
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<tr>
<td>2002</td>
<td>Q.25a</td>
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<td><a href="http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/03543.xml">http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/03543.xml</a></td>
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<tr>
<td>2001</td>
<td>Q.30</td>
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<td><a href="http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/03480.xml">http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/03480.xml</a></td>
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<tr>
<td>2000</td>
<td>Q.33</td>
<td>53.0</td>
<td><a href="http://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/03064.xml">http://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/03064.xml</a></td>
</tr>
<tr>
<td>1999</td>
<td>Q.21</td>
<td>51.0</td>
<td><a href="http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/02865.xml">http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/02865.xml</a></td>
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<tr>
<td>1998</td>
<td>Q.36</td>
<td>50.0</td>
<td><a href="http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/02830.xml">http://www.icpsr.umich.edu/coocoon/ICPSR/STUDY/02830.xml</a></td>
</tr>
</tbody>
</table>
APPENDIX C
SALIENCE IN THE EUROBAROMETER SURVEY

The 2007 question reads:

QA6a: What do you think are the two most important issues facing (OUR COUNTRY) -

Following is a table with all the relevant information for each year:

<table>
<thead>
<tr>
<th>Year</th>
<th>Question Number</th>
<th>Eurobarometer Number</th>
<th>Weblink</th>
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</thead>
<tbody>
<tr>
<td>2007</td>
<td>QA6a</td>
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<td>2006</td>
<td>QA23</td>
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<tr>
<td>2005</td>
<td>QA30</td>
<td>64.2</td>
<td><a href="http://www.icpsr.umich.edu/cocoon/ICPSR/STUDY/04580.xml">http://www.icpsr.umich.edu/cocoon/ICPSR/STUDY/04580.xml</a></td>
</tr>
<tr>
<td>2004</td>
<td>Q.33</td>
<td>62.0</td>
<td><a href="http://www.icpsr.umich.edu/cocoon/ICPSR/STUDY/04289.xml">http://www.icpsr.umich.edu/cocoon/ICPSR/STUDY/04289.xml</a></td>
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<tr>
<td>2003</td>
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</tr>
<tr>
<td>2002</td>
<td>Q.2</td>
<td>57.2</td>
<td><a href="http://www.icpsr.umich.edu/cocoon/ICPSR/STUDY/03543.xml">http://www.icpsr.umich.edu/cocoon/ICPSR/STUDY/03543.xml</a></td>
</tr>
<tr>
<td>2001</td>
<td>Q.3</td>
<td>56.3</td>
<td><a href="http://www.icpsr.umich.edu/cocoon/ICPSR/STUDY/03480.xml">http://www.icpsr.umich.edu/cocoon/ICPSR/STUDY/03480.xml</a></td>
</tr>
<tr>
<td>1999</td>
<td>Q.2</td>
<td>51.1</td>
<td><a href="http://www.icpsr.umich.edu/cocoon/ICPSR/STUDY/02865.xml">http://www.icpsr.umich.edu/cocoon/ICPSR/STUDY/02865.xml</a></td>
</tr>
<tr>
<td>1998</td>
<td>Q.21</td>
<td>50.0</td>
<td><a href="http://www.icpsr.umich.edu/cocoon/ICPSR/STUDY/02830.xml">http://www.icpsr.umich.edu/cocoon/ICPSR/STUDY/02830.xml</a></td>
</tr>
</tbody>
</table>

Years 2002-2007 have the same question, while for 2001, 1999, and 1998 the most similar question changes. Unfortunately the most similar question for 2000 from Eurobarometer

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104 Q.3. In your opinion, what are the two most positive aspects of the European Union today?
105 Q.2. Here is a list of things that some people say they are afraid of. Please tell me which one worries you the most? (SHOW CARD - ONE ANSWER ONLY)
106 Twenty five years ago, the member states of the European Community were trying to solve a certain number of common problems together. Here is a list of some of them. Could you please tell me which one of the problems, you think, is the most important at the present time? (SHOW CARD)

b) And next most

b) And which is the next most important problem? (SHOW SAME CARD)
53 reads “Q.43. Here is a list. Can you tell me which policy area, or areas, the European Parliament should pay particular attention to, to defend your interests? You can choose a maximum of three” where the environment choice was lumped protection of the consumer, hence a linear interpolation of the values was necessary for that year.
APPENDIX D
RANDOM EFFECTS POISSON WITH TIME DUMMIES

Table D-1. Random Effects Poisson regression model with time dummies

<table>
<thead>
<tr>
<th>Variables</th>
<th>Random Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bargaining power</td>
<td>0.023*</td>
</tr>
<tr>
<td>(CoMV)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Governmental concern</td>
<td>-0.012**</td>
</tr>
<tr>
<td>(NGOfun)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Contractual environment</td>
<td>0.038*</td>
</tr>
<tr>
<td>(ECJ_{t-1})</td>
<td>(0.02)</td>
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<tr>
<td>Governmental capacity</td>
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<tr>
<td>(LIFE)</td>
<td>(0.01)</td>
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<tr>
<td>Approval of EU action</td>
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</tr>
<tr>
<td>(EUact)</td>
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<tr>
<td>Citizen groups</td>
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<tr>
<td>(Complaints)</td>
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<td>ENVI membership</td>
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<td>Salience</td>
<td>-0.039**</td>
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<tr>
<td>(Salience)</td>
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<td>Green party membership</td>
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<tr>
<td>(Green)</td>
<td>(0.04)</td>
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<tr>
<td>Overall commitment</td>
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</tr>
<tr>
<td>(EnvExp)</td>
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</tr>
<tr>
<td>Favorable industry climate</td>
<td>-10.240</td>
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<tr>
<td>(EMAS)</td>
<td>(16.58)</td>
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<tr>
<td>Industry clout</td>
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<tr>
<td>(IndEmpl)</td>
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<tr>
<td>Industry clout squared</td>
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<tr>
<td>(IndEmplSq)</td>
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<tr>
<td>Need for regulation</td>
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<tr>
<td>(Emission)</td>
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<td>Staffing levels</td>
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<td>(Compem)</td>
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<tr>
<td>Corruption</td>
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<tr>
<td>(Corr)</td>
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<td>Cozy regulatory efficiency</td>
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<td>(RegQual)</td>
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<td>Variables</td>
<td>Random Effects</td>
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<td>Year1998</td>
<td>-0.281 (0.34)</td>
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<tr>
<td>Year1999</td>
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<td>-1.813*** (0.30)</td>
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<td>Year2007</td>
<td>-1.726*** (0.32)</td>
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<tr>
<td>Constant ((\alpha))</td>
<td>3.129 (2.44)</td>
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<td>Log likelihood</td>
<td>-303.4</td>
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<td>Information Criteria: AIC</td>
<td>662.9</td>
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<td>BIC</td>
<td>747.3</td>
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Notes: * significant at 0.10 level, ** significant at 0.05 level, *** significant at 0.01 level. Standard errors obtained through bootstrapping with 100 replications are in parentheses.


Bernstein, S. (2002). Liberal Environmentalism and Global Environmental Governance, Global Environmental Politics, 2:3. MIT.


Pressman, J. and Wildavsky A.. (1973). Implementation: How Great Expectations in Washington are Dashed in Oakland: or, why it's amazing that federal programs work at all, this being the saga of the Economic Development Administration as told by two sympathetic observers who seek to build morals on a foundation of ruined hopes. Berkeley: University of California Press.


BIOGRAPHICAL SKETCH

Ioannis Livanis was born in Athens, Hellas in 1976. After graduating from high school, his quest for knowledge made him take the national examinations for entrance into a Hellenic university. In 1996, he was admitted to the Department of Political Science and Public Administration at the University of Athens. After receiving his Bachelor of Arts with a double major in Political Science and Public Administration, with high honors in the fall of 2000, he entered the national examinations of the Hellenic Scholarship Foundation. He tested first amongst his colleagues and was awarded a prestigious Post Graduate Fellowship for pursuing MA/Ph.D. degrees at the United States (2001-2004). He was also offered an assistantship to pursue graduate studies in policy and administration at the University of Florida (UF).

In the fall of 2001, he enrolled in the Department of Political Science at the University of Florida. He received his M.A. degree in Political Science with a concentration in Public Affairs/Administration in May 2003. He continued on toward his doctoral degree in the Fall of 2003, in the same department, specializing in Policy and Administration, International Relations, and Comparative Politics. In the fall of 2005, he became a part of the Center for European Studies at the University of Florida, where he has taught several courses on European Politics. He fulfilled all the requirements and coursework, with a 3.8 overall G.P.A., and was awarded a Doctor of Philosophy degree in August 2010.